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RGN Voorligtingsreeks VR-5

**university training and career
possibilities
universiteitsopleiding en be-
roepsmoontlikhede**

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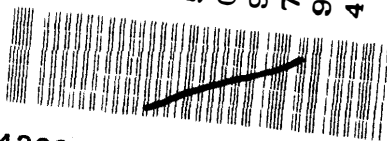


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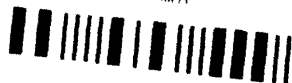
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H S R C Guidance Series GS-5
R G N Voorligtingsreeks VR-5

UNIVERSITY TRAINING AND CAREER POSSIBILITIES
UNIVERSITEITSOPLEIDING EN BEROEPSMOONTLIKHEDE

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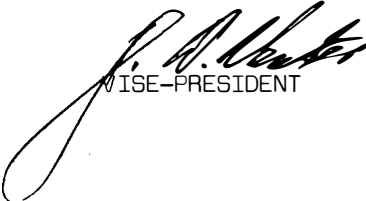
V O O R W O O R D

Ongeveer twaalf persent van die leerlinge wat in 'n bepaalde jaar in st. 6 begin, be= land uiteindelik aan 'n universiteit. Uit die geledere van hierdie seuns en meisies moet die grootste persentasie van die land se hoëvlakmannekrag voorsien word. Afge= sien dus van die verantwoordelikheid wat op elkeen van hierdie leerlinge rus, is dit die plig van diegene wat met hul toekomsbeplanning gemoeid is, om aan elkeen van hulle die beste moontlike beroepsvoorligting en -inligting te verskaf.

Hierdie boek, no. VA-5 in die RGN se Voorligtingsreeks, is 'n hersiene uitgawe van Universiteitsop= leiding en beroepsmoontlikhede/University training and career possibi= lities, wat in 1972 verskyn het. Dit is 'n poging om op sistematiese en samevattende wyse noodsaaklike basiese inligting en voorligting aan hoërskoolleerlinge te verskaf ten opsigte van moontlike universiteitstudie en loopbane wat daarna gevolg kan word. Met hierdie uitgawe, tesame met die twee teenhangers daarvan, Tersiêre opleiding buite die universiteit en beroepsgeleenthede (VA-4) en Opleiding en beroepsgeleenthede vir skoolverlaters voor standaard tien (VA-3), word daar deur die RGN se Voorligtingsreeks oor 'n baie breë terrein inligting oor opleiding en beroepsmoontlikhede verskaf. Die opstellers maak egter geensins aanspraak op volledigheid nie. Daar moet in gedagte gehou word dat universitêre en ander opleiding steeds uitbrei en nuwe kursusse inge= stel word namate die behoefte daaraan ontstaan en fasiliteite geskep kan word. Ge= gewens in hierdie boek is so na moontlik volledig vir die jaar 1975. Wat die afdeling Beroepsmoontlikhede betref, moet onthou word dat die boek nie 'n kommersiële publikasie is nie en gevolglik is die bekendstelling van individuele werkgewers uit die private sektor vanselfsprekend tot die absoluut noodsaaklike minimum beperk.

Met graagte word dank betuig aan alle instansies wat welwillend meegewerk het om in= ligting te verskaf. Besondere erkenning word betuig teenoor die universiteite wat 'n groot aantal inligtingstukke asook van hul eie publikasies in dié verband beskik= baar gestel het; die Departement van Arbeid en die redaksie van die tydskrif My Loopbaan, waaruit waardevolle inligting oor beroepsmoontlikhede verkry is; die Staatsdienskommissie vir regstreekse inligting sowel as inligting wat uit die publi= kasie Loopbane in Staatsdepartemente verkry is, en ander openbare en private instan= sies.

Die RGN vertrou dat skole, universiteite en ander wat met die voorligting van leer= linge en studente te doen het, hierdie uitgawe 'n nog nuttiger inligtingsbron as sy voorganger sal vind.


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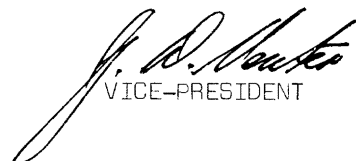
P R E F A C E

Approximately twelve per cent of the pupils who start in Std 6 in a particular year eventually find themselves at a university. The largest percentage of the country's high-level manpower must come from the ranks of these boys and girls. Thus, apart from the responsibility which rests on each of these pupils, it is the duty of those who are concerned with their planning for the future to provide all of them with the best possible vocational guidance and information.

This book, No. GS-5 in the HSRC's Guidance Series, is a revised edition of University training and career possibilities/Universiteitsopleiding en beroepsmoontlikhede, which appeared in 1972. It is an attempt, in a systematic and comprehensive way, to supply high school pupils with essential basic information and guidance in respect of possible university study and occupations which may subsequently be pursued. With this publication, in addition to its two counterparts, Tertiary training outside universities and career opportunities (GS-4) and Training and career opportunities for school-leavers before Standard Ten (GS-3), the HSRC's Guidance Series provides information on training and career opportunities which covers a very wide range of fields. However, the compilers do not lay any claim to completeness. It should be remembered that university and other training is constantly expanding and that new courses are instituted as the demand arises and facilities can be provided. Information given in this book is as complete as possible for the year 1975. As far as the section Career Possibilities is concerned, the fact should be borne in mind that the book is not a commercial publication and the publicising of individual employers in the private sector has, for obvious reasons, consequently been limited to the absolutely necessary minimum.

Thanks are due to all bodies which co-operated willingly to provide information. Particular appreciation is expressed to the universities which made available a large number of information documents as well as some of their own publications in this connection; the Department of Labour and the editorial staff of the periodical My Career, from which valuable information on career possibilities was obtained; the Public Service Commission for direct information as well as information gleaned from the publication Careers in Government Departments, and other public and private bodies.

The HSRC trusts that schools, universities and others who are concerned with the guidance of pupils and students will find this edition an even more useful source of information than its predecessor.


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CHAPTER - 1 - HOOFSTUK
UNIVERSITY TRAINING

INTRODUCTORY

It is a known fact that only about half of the pupils who start in Standard Six in the ordinary secondary schools eventually obtain a Standard 10 or equivalent certificate. These are the boys and girls who can receive tertiary training, including university training, and from whose ranks the country's high-level manpower must come. The responsibility consequently rests on these young people to develop their talents and abilities to the utmost, not only for the sake of their own happiness and prosperity but also for the happiness and welfare of their country and its people. In order to achieve this they must, inter alia, be trained as highly as possible. This matter of training inevitably involves questions which centre around their future: questions on the nature of their training and where it should take place; questions on the career which is to be pursued, the availability of work, the possible employers and many others. Answers must be found to these questions and choices made, since every boy and girl should be equipped by further training in order to make progress in occupational life. The higher the qualifications, the better is the service which can be rendered, the greater is the assurance of more than equal competition for the best posts, and the better also are the chances of obtaining positions in the higher echelons, with superior material rewards. It should also be remembered that the upgrading of career requirements is a constantly continuing process, with the result that those who neglect to develop their potential and ability to the maximum will be left behind. Modern science and technology develop at much too rapid a pace for those who are content to mark time.

For those who do not want to or cannot or should not go to a university for tertiary training, there are other institutions such as the teachers' training colleges and the colleges for advanced technical education. More information on training at these and other institutions is supplied in the HSRC publication, Tertiary training outside universities and career opportunities.

WHY GO TO UNIVERSITY?

What does the university offer? A university is an institution which offers facilities for advanced study, that is to say, study which covers a wider field and is more intensive than that at any other type of institution. People who go to university should therefore, in the first place, have an inclination for this sort of study, be anxious to extend their knowledge in a systematic and scientific manner and to school their thinking, but in addition also to obtain a broad and refined general education. People who do not go to university with these primary objectives do not really belong there.

In the second place, the university, particularly in these days of rapid scientific and technological growth, offers its students manifold opportunities to study in fields which prepare them to occupy advanced positions in specific areas of occupational life. However, the university does not offer narrow, specialized "occupational training" in this respect but rather a fundamental general preparation which equips the candidate with the ability to adjust himself in general to the occupational circumstances and demands of the field in which he is going to work and to have a broad understanding of matters within which framework it will be possible for him to master practical details speedily and efficiently and to become a leader within his occupational field instead of somebody who is only conversant with a narrowly specialized section of the broad occupational area.

Scientific knowledge and technological skill are developing and changing so rapidly nowadays that a broad basic background is becoming increasingly essential in order to enable leaders and planners to keep pace with new developments. Thorough university training of suitable persons is thus becoming more and more indispensable for the future. When persons have completed their university training, they must be able and prepared to continue their studies in order to keep pace with new developments and growth; otherwise they will soon begin to flounder as a result of outmoded concepts and knowledge which no longer has any relevance. What this amounts to is that, when one has completed one's university training, one is really only able to commence studying for one's life-work and this study only terminates when one's life-work comes to an end.

University study consequently imposes high demands and those who are not prepared or able to satisfy these demands are wasting not only their own time and money but that of the state and the community. For this reason, it is essential that we acquire enough guidance and knowledge about ourselves to know what we want to do and whether we are capable of achieving our objective.

One does, of course, specialize at a university, but this occurs especially when a student has made much progress with his studies and then concentrates on a certain subsection within his field of study in order to obtain more knowledge than others as regards that particular subsection and, by so doing, to render his contribution to the general body of knowledge. This type of contribution usually occurs in the form of theses for Master's degrees and doctorates. Even a Master's or Doctor's degree, however, merely paves the way for the true student to continue his studies still further.

Who should go to university? The first and most important answer to this question is: Those who can master university study and benefit by it. But then the question arises: Who are these persons?

In the first place, it is not necessary for the candidate to be exceptionally "clever". Intellectual "geniuses" form a very small percentage of any population. They are the persons who should eventually occupy the most prominent and highest positions of leadership and who, strangely enough, do not always succeed in doing so. If universities were to rely on "geniuses" only, most of them throughout the world would have to close their doors.

The first question, therefore, is not how "clever" someone is but whether he is a student, that is, whether he is suited to advanced study. Being a student implies, among other things, a high degree of ambition; eagerness to acquire knowledge; the ability to work hard, continuously and with dedication; the ability to plan systematically and to think originally and soundly; the ability to identify and use sources of knowledge and to cultivate efficient methods of study, et cetera. In order to achieve all this, the student should naturally at least be of "normal intelligence". The higher his basic intelligence, the better are his chances of making progress in his studies, provided that he possesses or can cultivate the above-mentioned qualities.

There are, of course, institutions other than universities for post-school study which render a service in their respective fields which is just as important and valuable as that rendered by the universities. Too many people still labour under the misapprehension that it is beneath the dignity and status of certain persons to train for an occupation at training institutions other than universities.

The most important point is that prospective students, with all the guidance at their disposal and with all the training institutions existing for their benefit, should very seriously consider the matter of the institution which they should attend for further study. It is indeed essential that nobody should discontinue his studies after leaving school, since further study constitutes the all-important gateway to good education, success, happiness and material well-being. The expression "knowledge is power" is much more than a half-truth.

Is it financially worth while to further one's studies? The answer to this question is an unconditional "yes". In spite of the high costs of study and the loss of salary which could have been earned, it is, generally speaking, financially rewarding to further one's studies. It is sometimes maintained, apparently with some justification, that the artisan and less skilled and more poorly trained person is financially better off than the man with advanced training. Scientific investigation has, however, proved over and over that this view is entirely false and that people are inclined to regard exceptions as the rule. There is a direct relationship between training and level of income.* The higher the level of training, the more advanced are the positions which are and can be filled and the higher the level of income. The man who enters the labour market with little training starts earning at an early stage but his chances of making progress are usually extremely limited, unless he improves his qualifications within his occupation by dint of continued study.

*See e.g. the HSRC publication Die verband tussen inkomsteverskille, beroep en onderwyspeil. Income levels have risen considerably since this investigation was undertaken.

It is he who knows and can and will who progresses, not he who does not know, who cannot and who will not. There are no doubt educated failures too, but then the cause of their failure does not lie in their training.

On the average, people with the highest training also generally have the highest income, although there are differences in the incomes derived from different "learned" occupations. Research by the HSAC* has shown that, if one makes use of averages and supposes that somebody who started working without a Std 8 qualification earns R100 per month by the time he has reached the age of approximately 22 years, the person with a Std 8 qualification will be earning R116 by that time, one with Std 10, R118, one with Std 10 plus a diploma R142, one with a Bachelor's degree R137 and one with a Master's degree R130. However, by the time they have reached their highest salary notch and are in the prime of life, at about the age of 45 years, the picture will be approximately as follows:

Without Std 8	:	R180
With Std 8	:	R240
With Std 10	:	R290
With Std 10 plus diploma	:	R360
With a Bachelor's degree	:	R400
With a Master's degree	:	R480

If persons possessing a Master's degree thus have an average income of, say, R4800 per annum in their prime, the figure for those holding Bachelor's degrees will be R4000, for those with Std 10 plus a diploma R3600, for those with Std 10 only, R2800, for those with Std 8, R2400 and for those without Std 8, R1800. Moreover, it is possible today for capable and enterprising persons with high qualifications to climb to annual incomes of R8 000, R10 000, R12 000 and in many cases much higher.

Although the figures mentioned above are generalizations based on averages, they ought to provide sufficient indication that it is worth while, also from a financial point of view, to continue one's studies, the further the better.

It is true that certain occupational fields are financially more rewarding than others, but it is of the greatest importance to everyone that he choose the occupation for which he is suited and which suits him and not that he should, in the first place, seek the occupation in which the most money is to be made. Happiness in life depends to a very great extent on occupational happiness and no amount of money can buy happiness.

One thing must be stated very clearly: In spite of the fact that some occupational groups offer higher income possibilities than others, there are today practically no occupations in which properly trained workers will not be able to make a decent living worthy of human dignity. The efficient and properly trained artisan who carries out his duties with zest and dedication can be just as proud and valuable a member of society as the famous advocate, surgeon or mining magnate. In the words of the Preacher: "Seest thou a man diligent in his business? He shall stand before kings; he shall not stand before mean men" (Proverbs 22:29).

CHOOSING A FIELD OF STUDY

In an ever growing and changing community, young people have the difficult task of choosing a suitable field of study and career from among the hundreds, if not thousands, of possible fields. There is no doubt about the momentous importance of a choice, as a career does not simply determine what a person is going to do one day, but also the kind of people he will have to work with, his home and place of work, his level of income, but especially whether lasting satisfaction from his career will be his share in life.

Planning a career necessitates an evaluation of the individual's interest and capability, as well as of the demands made by a particular career or occupational field and the

*See e.g. the HSAC publication Die verband tussen inkomsteverskille, beroep en onderwyspeil. Income levels have risen considerably since this investigation was undertaken.

field of study which will have to be taken. Hence, in the words of Langenhoven, every candidate who wants to be warm in winter, must make sure that he gathers enough firewood in summer. Too many students decide to take the "easiest" course without taking into consideration the demands made by professional life or the career possibilities. Such students are bound to be disillusioned, frustrated and incompetent when they enter the practical world. The reverse is also true; hard work at university is usually rewarded by occupational gratification.

A large measure of interest in an occupational field, although important, is not sufficient on its own to justify a choice of career. Aptitude and ability are also required. Naturally, the reverse is also true: a person may have all the necessary ability and aptitude for a certain profession, but may nevertheless not be interested in it. What is required, therefore, is a choice which will be marked by the highest correlation between aptitude and ability for a specific career on the one hand, and on the other hand interest in as well as a sound knowledge of the demands made by that career and the possibilities of promotion.

There are various aspects which the prospective student should consider in order to arrive at a satisfactory conclusion. Some of these are, for example:

- Scholastic achievement: If a pupil's average mark is below, say, 50 per cent, he should seriously consider whether the university is the right place for him. If he has only just complied with the university entrance requirements, the chances are that he will experience frustration at university. There are, of course, people whose performance at school is rather average but who improve as they go on, especially if they find a field in which they are keenly interested. In general, however, people whose academic record at school is not good will do even worse at university.

- School subjects or subject fields: Good performances in particular subjects can provide an indication of the subjects and especially the fields of study in which a student should also do well at university. It may happen that a pupil has the ability to do well in a certain subject at school but for some reason does not do so, for example because he cannot get on well with the teacher concerned. It is consequently possible that he may do well in this field at university, but such cases would be exceptions.

It may also happen that a student is suited to a field of study for which no specific provision is made at school. In such a case aptitude tests, of which there are a great variety nowadays, can be of great assistance.

It is fitting, at this stage, to address a word of warning to those with many talents. There are cases of pupils who are approximately equally gifted in various fields and then cannot decide which one to choose for advanced study. The result is sometimes that they are in two minds, first attempt one field, then another and eventually achieve nothing. It is imperative for such pupils to decide firmly and irrevocably upon a particular field and then to tackle the work with dedication. It will be easy enough for them later to pursue studies in other fields as hobbies or subsidiary interests. There are gifted scientists who can become writers or painters, and mathematicians who can be good musicians, but everyone who wants to carve a niche for himself, must choose a field which will be his life-work. In fact, anyone, even though he may not be brilliant, can and should have subsidiary interests or hobbies. They enrich our lives and lend colour to our existence.

- Actual interest and hobbies: A person sometimes imagines that he is extremely interested in some field but if this "interest" is analysed objectively, it may prove to be false. One sees a film, hears a lecture, reads a book, meets a particular person, attends an exhibition and then has a sudden "revelation" and decides to become a mission worker, a psychologist, a doctor or an atomic scientist or perhaps a teacher, an aviator or a nurse in a lunatic asylum.

These types of emotional decisions should be viewed with suspicion. They may be genuine but can also be false and wrong and it is advisable for you to obtain expert advice in order to learn to know your true desires, aptitude and interest if you cannot do so without the aid of this advice. In the modern world especially, with its multiplicity

by the university, assisted by the community, and approximately 75 per cent by the State, i.e. the taxpayer. This means that the State and the community pay more than 80 per cent of the direct cost of training a student. Students therefore have no reason to complain about their share of less than 20 per cent of current expenditure! One has good reason for referring to people who call themselves students, but who neglect their work and make no progress in their studies, as "subsidized loafers" who "enjoy life" at university at the expense of others who do work.

To be a student, and this phase of life is not begrudged any true student, is therefore not only a great privilege, but also involves tremendous responsibility.

From the point of view of the student: It is practically impossible to give an exact indication of how much money per annum will be sufficient for the needs of each individual student. The amount is determined, inter alia, by the type and duration of a course, the subjects which are studied, the student's personal needs, board and lodging in a hostel, etc. A university is not a school where all the groups of pupils attend the same classes. Students have a free choice of universities, fields of study and subjects. At some universities study, life in general and lodging are more expensive than at others; some courses are more expensive than others at the same university; sometimes fees for the first year differ from fees for the other years of study, and students differ from one another in what they consider essential for their personal needs. However, the following averages for class fees and lodging may serve as a guide:

- Class fees. The average class fees at residential universities for 1975, for example for the following twenty fields of study which result in a first degree after at least three years of full-time study, amount to the following:

- R251 - R300 (lowest to highest average): Ordinary B.A. and B. Com., Law (B. Proc. and B. Iuris);
R301 - R350 (lowest to highest average): Library Science, Social Work, Nursing, Agriculture, Dietetics, Home Economics, B.Sc., Speech Training and Drama, Fine Arts;
R351 - R400 (lowest to highest average): Music, Building Science/Building Management, Quantity Surveying, Architecture;
R401 - R450 (lowest to highest average): Engineering, Land Surveying, Medicine and Dentistry.

Average class fees for the twenty fields of study: R340 p.a.

- Boarding fees: Boarding fees for 1975 vary at the different universities as follows:

- R470 - R499: at two universities,
R500 - R599: at four universities, and
R600 - R699: also at four universities.

Average boarding fees for the ten universities: R570 p.a.

On the average a full-time student may work out his annual budget more or less as follows:

Class fees	R340
Boarding fees	570
Enrolment, etc. (only at some universities)	20
Extramural activities	75
Books and so on	75
Personal expenses	200
Travelling and unforeseen expenses	<u>100</u>
ESTIMATED TOTAL	<u>R1 380</u>

Adjustments will definitely be necessary for individual students and it will be found that for some students the total indicated here is far too high, while for others the total may rise considerably. An additional consideration is the fact that the student could have started work, after matriculating, at a commencing salary, for example in the Public Service, of at least R2 100 per annum. The actual cost of a student's

training is, therefore, something in the region of R3 500 or more per annum. The longer he studies, the greater become the costs since he could, for example, have earned a series of salary increments if he had entered into employment.

The cost of failure: There were approximately 70 000 students at the ten residential universities in 1974. If 25 per cent of them were to fail annually (the percentage is, generally speaking, much higher) a total of 17 500 students could have failed in 1974. One way of calculating the cost of these failures is to multiply R3 500 by 17 500, which gives a total of R61 250 000. If the possible 17 500 students who failed were to be multiplied merely by the R1 100 which, on the average, is the direct cost of training a student, one would arrive at a sum of R19 250 000 which, to all intents and purposes, has been squandered.

Apart from the direct and indirect financial loss and the waste of time involved in failing, one must also consider the personal frustration which it causes, the fact that many students, as a result of failing, embark upon a course which is not really their occupational choice, the loss of or delayed employment of manpower, especially in high-level occupations where there is a constant shortage, and similar negative effects.

It is surely unnecessary to supply any further reasons why our country and our people cannot afford

- to have people at university who cannot cope with their studies;
- to have students at university who have merely gone there for "a nice time";
- to have students who plunge into courses for which they are unsuited, or who completely underestimate university study on the strength of their school achievements;
- to have students who are not set upon viewing their studies as their primary and most important duty to themselves, their community and their country.

This certainly does not mean that university life need not also be pleasant and full of exciting and rewarding activities over and above the formal studies. In fact, "student life" and all its many activities play an extremely important part in the student's education. The true student will, however, be able to maintain the balance and put those things first which should come first.

Sources of financial assistance: From the above it is evident that university training is by no means cheap. However, it is unnecessary for a student to forgo this training because of financial problems, since many sources of financial assistance are available today to those in need of money. There is a country-wide need of trained manpower and to provide for this need bursaries, loans, scholarships, etc. are offered to students by, for example, the Government, the Provincial Administrations, municipalities, large business concerns and the universities themselves. However, it should be remembered that financial aid is more readily available for students with a record of meritorious academic achievement at school and afterwards. The better the progress, the better the chances of awards. This does not mean, however, that only brilliant pupils and students are considered for bursaries. The average student with a fine record of progress can also depend on assistance.

- Bursaries and loans: The concepts bursaries and loans are actually the same thing and amount to awards which are repayable not in cash, but in the form of service. (In exceptional cases no repayment need be made.) Bursaries are normally awarded on the strength of need and academic achievement. When there is a breach of contract, the bursary must be repaid in cash plus interest. Service normally means one year of service for each year for which the award is made.

Study loans must, as the name implies, be repaid as soon as the student starts working. From that date onwards the interest, usually $6\frac{1}{2}$ per cent or more, is also brought into account. Scholarships, also called achievement bursaries, are awarded for academic achievement and are normally not repayable. Some universities also award prizes and medals for excellent work.

Information about bursaries and loans may be obtained from:

- . Brochures on bursaries from the various universities, which are available on request.
- . The publications of the Human Sciences Research Council:

Toekennings beskikbaar vir voorgraadse studie aan Suid-Afrikaanse universiteite vir Blankes Deel I: UOVS, UPE, PU vir CHO, UP, RAU, US, UNISA en Algemeen, 1973.

Awards available for undergraduate study at South African universities for Whites Part II: UCT, UN, UPE, RU, UNISA, WITS and General, 1973.

These books contain the most recent information as obtained from universities, bodies and organizations which make awards available, and information gained from press announcements and other sources. Revised editions will be available at all high schools and universities towards the end of 1975. Two schemes on which information is given, are, inter alia, the Public Service Bursary Scheme and the bursary and loan schemes of the various Education Departments for the training of teachers.

- Full-time study and part-time work: Part-time work for the financial support of the student is possible, provided that the academic achievement is not adversely affected. It is recommended that students should try to find employment which is related to their field of study, since personnel managers are often interested in persons who have also gained practical experience. Much need not be said about the types of part-time work. Normally universities assist students in this respect. It must be remembered that some courses such as, for example, medicine, leave no time for anything except study.

- Part-time study and full-time or part-time work: In this instance a person is employed by a suitable firm or a Government department which pays a salary. Studies are continued at a university after hours. In this way enough money is normally earned to pay for the studies. Parts of the costs, for example in the case of Government departments, are paid by the State.

- Study by correspondence: Students who find it impossible to study full-time or part-time, can study through correspondence at the University of South Africa. The only direct study expenditure which such a student has, is that of class fees and books. Unisa is the only university in the country which offers tuition by means of correspondence.

Note: A few general remarks which may contribute towards facilitating the financing of study, are the following:

- . The better a student/pupil performs academically, the easier it is to obtain financial assistance.
- . It is normally most difficult to obtain money from normal financing sources for the first year of study. After one year's study and proofs of ability and achievement, the chances of obtaining money improve. This means that a student will normally have to make his own provisions for the first year.
- . Part-time study is naturally less expensive than full-time study and many students earn a reasonable amount of money by working part-time. However, it is recommended that priority should be given to study and that part-time work, for example, should not be undertaken during the second semester.
- . Full-time holiday work is strongly recommended by universities.
- . Short-sightedness, for example, by looking only for bursaries to which no service stipulation is attached, should be avoided.
- . It is a good policy to consult possible employers, to whom a field of study may be applicable, directly about financial assistance.
- . Collect all information concerning the cost aspect, so that financial assistance may be applied for in good time.

ADJUSTMENT TO OCCUPATIONAL LIFE

When a student's university studies have been completed, at least for the time being, he will have to adjust to occupational life, and he may find this adjustment rather difficult, particularly at the beginning. In order to facilitate this adjustment the following may, inter alia, be said to the student:

To begin with, you have chosen a field of study which has prepared you for a specific field of occupation, but not necessarily for precisely this or that particular post within the occupational field. If it so happens that you are indeed able to choose within the occupational field, you must once again proceed with common sense.

In the first place you must acquaint yourself as thoroughly as possible with the nature of the work concerned, the prospects offered for promotion, the remuneration involved and so on. Then you must decide whether this occupation will suit you, for there is one thing you must not do: you must not continually change your job merely because you might earn a few rand more per month in the next post, or because you do not much like the boss or the manager, or because it will be slightly more convenient for you and it is a matter of indifference to you whether or not you embarrass your employer or leave him in the lurch, or for whatever reason that has little or nothing to do with your future progress.

It is justifiable to change your job if this entails definite progress within your field and opens up the way to further promotion, but to wander from one post to another for less important or paltry reasons can be fatal for your future. Moreover, employers soon discover who these rolling stones are and their chances of another post steadily diminish.

It might well happen that you initially labour under a misapprehension as regards the job you have accepted, the circumstances under which it must be done, the prospects it offers and so on. Then you must leave as soon as possible and find your proper niche, but see to it, as far as is feasible, that you do not make the same mistake again. The second error might be worse than the first and could easily lead to further ill-advised changes.

If you have obtained a post and it is to your satisfaction, devote yourself to it with all the energy, talent and knowledge at your disposal; see to it that your knowledge and skill constantly improve; do your work with enthusiasm and do not hesitate to sacrifice your own convenience occasionally for the sake of your job; work with others in a good spirit; never make out that you or your work are more important than others or their work or that you can do it more competently, but do not be diffident and lacking in self-confidence either; accept the decisions of your superiors as befits a junior while you are a junior, even if you may think you know better; do not shrink from responsibility, for only those who can and wish to accept responsibility will progress; aim high, for each day and for the future, but not so high that you cannot achieve your aim; strive above all to achieve, to accomplish something, to render a service and not simply to make as much money as possible as soon as possible - the people whose first and primary aim is that of making money do not experience any real joy in life; remember that life is larger than the little world of your own occupation or delineated field of work and take an interest in people and life around you, in your own and other circles, for "no man is an island".

If you proceed in these ways, with this sort of attitude, your future is assured and you can count on progress, promotion and happiness, until you eventually reach the highest rung of which your gifts, talents, training, capacity for work and opportunities render you capable. Perhaps you will become a head, a manager, a managing director, and perhaps not, because the rungs of the ladder become narrower higher up and right at the top there is usually room for only one man. However, if you are worth your salt, there will at least be room for you somewhere above the lowest rungs.

WHAT IS THIS BOOK ABOUT?

This book is an attempt to supply senior high school pupils with concise but comprehensive information on fields of study at university and the various careers and, in particular, occupational fields for which certain fields of study equip candidates.

It is purely a general introduction to supply basic information and arouse interest. If a candidate discovers fields in which he is interested and which he would like to know more about, then the time has arrived to go in search of literature in the library or elsewhere and to obtain further information in other ways, as indicated above.

It will also be noted that the sections on VOCATIONAL SERVICE in this book mainly provide guidance to students on planning for a career after they have obtained a first degree. However, it should be remembered that we are living in an age of specialization and that the Bachelor's degree, in most cases, merely paves the way towards an occupational field which can be followed after further training. In this book, attention is constantly drawn to the necessity for post-graduate study and/or additional professional training. The highest qualification obtained or major subjects for a degree normally correlate with the occupation which will eventually be pursued but this by no means implies that the candidate, having obtained a degree or a diploma or even a degree and a diploma, can regard himself as fully qualified for a position. A person with Economics as a major subject for a degree, for instance, can in no way lay claim to being an economist, and Psychology as a major does not mean that such a person is a fully qualified psychologist. To become an economist or psychologist, for example, requires a great deal of experience and advanced post-graduate study. This is also true of practically all other occupational fields, even those for which specifically defined courses are taken. The early stage of any career is merely a continuation of the person's training.

It is apparently those persons, especially, with an "ordinary" B.A. degree and sometimes even a B.Sc. or B.Com. degree and nothing else, persons with a kind of "general" training without specialization with a view to a particular career field, who, in practice, sometimes (but by no means necessarily) find it difficult to obtain positions which, in their opinion, do justice to their training and talents and who then can become disappointed, frustrated and rebellious.

Students should ascertain, as far as possible, what the demand is for employees in particular occupational fields. It may happen that a large number of persons obtain degrees with certain major subjects, while the occupational possibilities in these fields are slight. The result is that graduates sometimes find themselves side by side with non-graduates in the same posts.

Candidates proceeding to a university are thus strongly recommended to keep themselves well-informed, not only of the fields of study which will suit them best, but also of those career fields which a particular field of study will possibly open up for them. This book and related literature will, among others, assist them in this respect.

U N I V E R S I T E I T S O P L E I D I N G

TER INLEIDING

Dit is bekend dat slegs naasteby die helfte van die leerlinge wat in standerd ses in die gewone sekondêre skool begin, uiteindelik 'n Standaard 10 of gelykwaardige sertifikaat behaal. Hierdie is die groep seuns en meisies wat tersiêre opleiding, onder andere universiteitsopleiding, kan ontvang en uit wie se geledere die land se hoëvlakmannekrag moet kom. Die verantwoordelikheid rus derhalwe op hierdie jongmense om nie net ter wille van hul eie geluk en welvaart nie, maar ook die geluk en welvaart van hul land en sy mense, hul talente en vermoëns ten beste te ontwikkel. Om dit te kan doen, moet hulle onder andere opgelei word, so hoog en so ver as moontlik. Hierdie kwessie van opleiding bring onvermydelik konfrontasie mee met vrae wat om hul toekoms sentreer: vrae oor die aard van hul opleiding en waar dit moet geskied; vrae oor die loopbaan wat gevolg moet word, die beskikbaarheid van werk, die moontlike werkgewers, en talle ander. Antwoorde moet op die vrae gevind en keuses moet gedoen word, want om in die beroepslewes te kan vorder, moet elke seun en meisie deur verdere opleiding toegerus word. Hoe hoër die kwalifikasies des te beter die diens wat gelewer kan word, hoe groter die versekering van meer as ewekansige mededinging om die beste betrekkinge en hoe beter die kans om ook materieel 'n plek in die hoër groepe te verwerf. Daar moet ook onthou word dat die opgradering van loopbaanvereistes 'n proses is wat gedurig voortgaan, sodat diegene wat versuim om hul potensiaal en vermoë ten beste te ontwikkel, sal agterbly.

Die wetenskap en die tegnologie groei vandag maklik onder diegene uit wat die pas markeer.

Vir diegene wat nie vir tersiêre opleiding na 'n universiteit kan of wil of behoort te gaan nie, bestaan daar ander inrigtings, byvoorbeeld die onderwysersopleidingskolleges en die kolleges vir gevorderde tegniese onderwys. Meer inligting oor opleiding aan hierdie en ander inrigtings word verskaf in die RGN-publikasie, Tersiêre opleiding buite die universiteit en beroepsgeleenthede.

WAAROM UNIVERSITEIT TOE?

Wat bied die universiteit? 'n Universiteit is 'n inrigting wat geriewe vir gevorderde studie bied, dit wil sê studie wat wyer strek en dieper gaan as aan enige ander soort inrigting. Persone wat na die universiteit gaan, moet dus in die eerste plek op dié soort studie ingestel wees, moet begerig wees om hul kennis op sistematiese en wetenskaplike wyse uit te brei en te verdiep en hul denke te skool, maar om daarby ook in die algemeen 'n breë en verfynde opvoeding te bekom. Mense wat nie in die eerste plek met hierdie doelstellings na die universiteit gaan nie, hoort nie eintlik daar nie.

Ten tweede bied die universiteit, veral in hierdie dae van snelle wetenskaplike en tegnologiese groei, aan sy studente velerlei geleenthede om aan inrigtings te studeer wat hulle voorberei om op bepaalde terreine van die beroepslewe naderhand gevorderde betrekings te beklee. Maar die universiteit bied nie in hierdie opsig enge, gespesialiseerde "beroepsopleiding" nie, veel eerder 'n fundamentele algemene voorbereiding wat aan die kandidaat die vermoë gee om hom in die algemeen by die beroepsomstandighede en eise van die terrein waarop hy gaan werk aan te pas en 'n breë begrip van sake te hê waarbinne dit vir hom moontlik is om praktiese besonderhede vinnig en doeltreffend baas te raak en 'n leier binne sy beroepsgebied te word in plaas van iemand wat slegs op hoogte is met 'n eng-gespesialiseerde afdeling van die breë beroepsterrein.

Wetenskaplike kennis en tegnologiese kundigheid ontwikkel en verander deesdae so vinnig dat 'n breë basiese agtergrond al hoe meer noodsaaklik word om leiers en beplanners in staat te stel om met nuwe ontwikkelings tred te hou. Deeglike universiteitsopleiding van geskikte persone word dus vir die toekoms al hoe meer onontbeerlik. Wanneer hulle klaar gestudeer het aan die universiteit, moet mense in staat en bereid wees om voort te studeer om met nuwe ontwikkelings en groei tred te hou, anders verstar hulle gou in uitgediende begrippe en kennis wat nie meer betekenis het nie. Eintlik kom dit daarop neer dat wanneer 'n mens aan die universiteit afgestudeer het, jy eintlik maar net in staat daartoe is om vir jou lewenswerk te kan begin studeer, en hierdie studie hou alleen op wanneer jou lewenswerk tot 'n einde kom.

Universiteitstudie stel dus hoë eise, en mense wat nie bereid of in staat is om aan hierdie eise te voldoen nie, mors hul eie en die staat en die gemeenskap se tyd en geld. Daarom is dit so uiters noodsaaklik dat ons oor genoeg voorligting en kennis van onself sal beskik om te weet waarheen ons wil en kan.

Daar word natuurlik ook aan die universiteit gespesialiseer, maar dit gebeur veral wanneer 'n student reeds ver met sy studies gevorder het en hom dan binne sy studieterrein op 'n bepaalde onderafdeling toelê om wat daardie besondere onderafdeling betref meer te wete te kom as ander en om self dan sy bydrae tot die algemene kennisskat te lewer. Hierdie soort bydrae geskied dan gewoonlik in die vorm van proefskrifte vir magisters- en doktorsgrade. Selfs met 'n magisters- of doktorsgraad egter het die ware student maar net vir hom die pad oopgemaak om verder te studeer.

Wie moet universiteit toe gaan? Die eerste en belangrikste antwoord op hierdie vraag is: Dié wat universiteitstudie kan baasraak en daarby baat kan vind. Maar nou is die vraag wie almal van dié soort is.

In die eerste plek is dit nie vir die kandidaat nodig om buitengewoon "slim" te wees nie. Die intellektuele "genieë" is maar 'n heel, heel klein persentasie van enige bevolking, en hulle is die mense wat naderhand in die heel voorste en hoogste leiersposisies behoort te staan en wat, snaaks genoeg, nie altyd en almal in sodanige posisies beland nie. As die universiteite net op die "genieë" moes staat maak, sou die meeste van hulle oor die wêreld heen moes sluit.

Die vraag is dus nie in die eerste plek hoe "slim" 'n mens is nie, maar of hy 'n student is, dit wil sê vir gevorderde studie aangê is, en om student te wees beteken, onder andere, om 'n hoë mate van ambisie te besit; om gretig te wees om kennis te verwerf; om in staat te wees om hard en aanhoudend en met toewyding te werk; om sistematies te kan beplan; om oorspronklik en suiwer te kan dink; om in staat te wees om kennisbronne te identifiseer en te gebruik; om doeltreffende studiegewoontes te kan aankweek, en so meer. Om tot dit alles in staat te wees, moet die student natuurlik basies minstens "normaal intelligent" wees, en hoe hoër sy basiese intelligensie, hoe beter is sy kans om in sy studies te vorder, mits hy die bogemelde eienskappe het of kan aankweek.

Daar is natuurlik die ander inrigtings vir naskoolse studie waarna hierbo verwys is en wat op hul onderskeie gebiede net sulke belangrike en waardevolle werk doen as die universiteite. Dis 'n wanopvatting wat nog by te veel bestaan dat dit benede party mense se waardigheid of status is om hulle deur studie aan ander opleidingsinrigtings as universiteite vir 'n loopbaan te bekwaam.

Die belangrikste is dat aspirant-studente, met al die voorligting wat tot hul beskikking is en met al die opleidingsinrigtings wat vir hulle bestaan, baie deeglik sal oorweeg waarheen hulle vir verdere studie behoort te gaan. Dit is wel noodsaaklik dat niemand sal ophou studeer nadat hy die skool verlaat het nie, want die pad van verdere studie is 'n uiters belangrike pad na goeie opvoeding, sukses, geluk en materiële welvaart. Die uitdrukking "kennis is mag" is baie meer as 'n halwe waarheid.

Is dit finansiële die moeite werd om verder te studeer? Die antwoord op hierdie vraag is ondubbelsinnig ja. Ten spyte van die hoë studiekoste en die verlies aan salaris wat verdien kon geword het, is dit in die algemeen ook uiteindelik finansiële lonend om verder te studeer. Daar word soms beweer, en partykeer skynbaar met reg, dat die ambagsman en die minder geskoolde en swakker opgeleide persoon finansiële beter daaraan toe is as die man met die hoë opleiding. Wetenskaplike ondersoek het egter oor en oor bewys dat hierdie opvatting totaal vals is, en dat mense geneig is om van uitsonderings reëls te maak. Daar is 'n regstreekse verband tussen opleiding en inkomstepeil.* Hoe hoër die opleidingspeil, hoe meer gevorderd is die betrekkinge wat beklee word en kan word en hoe hoër die inkomstepeil. Die man wat met min opleiding gaan werk, verdien gou, maar sy kans om te vorder is gewoonlik uiters beperk, tensy hy hom binne sy beroep hoër bekwaam deur voortgesette studie.

Dit is die man wat weet en kan en wil wat vorder, nie die een wat nie weet en nie kan en nie wil nie. Daar is natuurlik geleerde mislukkinge ook, maar dan is die oorsaak van hul mislukkinge nie hul geleerdheid nie.

Oor die algemeen het die mense met die hoogste opleiding ook gemiddeld die hoogste inkomste, hoewel inkomste van een "geleerde" beroep na 'n ander verskil. As ons op gemiddeldes afgaan en veronderstel dat iemand wat sonder st. 8 gaan werk het, R100 per maand verdien teen die tyd dat hy sowat 22 jaar oud is,* dan sal die een met st. 8 teen daardie tyd R116 verdien, die een met st. 10, R118, die een met st. 10 en 'n diploma R142, die een met 'n B-graad R137 en die een met 'n M-graad R130. Maar teen die tyd dat hulle hul hoogste salariskerf bereik het, in die fleur van hul lewe, so ongeveer op die ouderdom van 45 jaar, sal die prentjie naasteby so lyk:

Sonder st. 8	: R180
Met st. 8	: R240
Met st. 10	: R290
Met st. 10 en diploma	: R360
Met B-graad	: R400
Met M-graad	: R480

As persone met 'n M-graad dus op hul fleur 'n gemiddelde inkomste van sê maar R4 800 per jaar het, sal dit vir dié met B-grade R4 000 wees, vir dié met st. 10 en 'n diploma R3 600, vir dié met net st. 10, R2 800, vir dié met st. 8, R2 400 en vir dié sonder st. 8, R1 800. Buitendien is dit vir knap en ondernemende mense met hoë kwalifikasies vandag moontlik om tot jaarlikse inkomstes van R8 000, R10 000, R12 000 en in baie gevalle heelwat hoër te klim.

*Kyk bv. die AGN se verslag Die verband tussen inkomsteverskille, beroep en onderwyspeil. Sedert hierdie ondersoek gedoen is, het inkomstepeile baie gestyg.

Hoewel die syfers wat hier genoem word, veralgemenings is wat op gemiddeldes berus, behoort dit genoeg aanduiding te wees dat dit ook uit finansiële oogpunt die moeite werd is om te studeer, hoe verder hoe beter.

Dit is so dat sekere beroepsrigtings finansiëel meer lonend is as ander, maar dit is ook vir elke mens van die allergrootste belang dat hy die beroep sal kies waarin hy pas en wat by hom pas, en dat hy nie in die eerste plek sal kyk waar die meeste geld te maak is nie. Lewensgeluk hang in die hoogste mate van beroepsgeluk af, en lewensgeluk kan met geen geld gekoop word nie.

Een ding moet baie duidelik gestel word: Ten spyte daarvan dat sommige beroepsgroepe hoër inkomstemoontlikhede bied as ander, is daar vandag haas geen beroep waarin behoorlik opgeleide werkers nie 'n ordentlike, menswaardige bestaan kan maak nie, en die bekwame, deeglik opgeleide ambagsman wat sy werk met lus en toewyding doen, kan net so 'n trotse en waardevolle lid van die samelewing wees as die beroemde advokaat, chirurg of mynmagnaat. "Wys my 'n man wat vaardig is in sy arbeid", sê die Prediker, "hy kan voor konings staan, hy hoef nie voor geringes te staan nie" (Spreuke 22:29).

KEUSE VAN 'N STUDIERIGTING

Die jeug in 'n steeds groeiende en veranderende gemeenskap het 'n moeilike taak om 'n geskikte studierigting en loopbaan uit die honderde, indien nie selfs duisende, moontlike rigtings te kies. Aan die gewigtigheid van 'n keuse kan nie getwyfel word nie, aangesien 'n loopbaan nie net bepaal wat iemand eendag gaan doen nie, maar ook met watter mense hy sal moet saamwerk, sy woon- en werkplek, sy inkomstepeil, maar veral of blywende bevrediging uit die werk sy deel in die lewe sal wees.

Die beplanning vir 'n beroep noodsaak 'n evaluering van die individu se belangstelling en vermoë sowel as van die eise van 'n besondere beroep of beroepsrigting en die studierigting wat gevolg sal moet word. So sal elke kandidaat, na aanleiding van Langenhoven, moet sorg dat as hy in die winter by die vuur wil sit, hy in die somer genoeg hout bymekaar sal moet maak. Te veel studente besluit ook om die "maklikste" kursus te volg sonder om die eise van die beroepslewe of die beroepsmoontlikhede in aanmerking te neem. Sulke studente is aangewese op ontnugtering, frustrasie en beroepsonbevoegdheid wanneer hulle met die praktyk kennis maak. Omgekeerd word die harde werk op universiteit gewoonlik met arbeidsvreugde beloon.

'n Hoë mate van belangstelling in 'n beroepsrigting, hoewel belangrik, is op sigself nie voldoende om 'n beroepskeuse te regverdig nie. Aanleg en bekwaamheid is ook nodig. Die omgekeerde is natuurlik ook waar: 'n persoon kan al die nodige bekwaamheid en aanleg vir 'n beroep hê, en tog nie daarin belangstel nie. Wat wel nodig is, is dus 'n keuse wat gekenmerk sal word deur die hoogste korrelasie tussen aanleg en bekwaamheid vir 'n bepaalde beroep aan die eenkant, en aan die ander kant belangstelling in asook deeglike kennis van die eise van die beroep en die moontlikhede tot vordering.

Daar is verskillende aspekte wat die aspirant-student in aanmerking kan neem om tot 'n bevredigende besluit te kom. Sommige daarvan is byvoorbeeld:

- Skoolprestasie: As 'n leerling se gemiddelde punt onder sê 50 persent is, moet hy hard dink of die universiteit vir hom die regte plek is, en as hy maar net-net aan die universiteitstoelatingsvereistes voldoen, dan is die kans goed dat frustrasie aan die universiteit sy voorland is. Daar is natuurlik mense wat op skool nie waffers presteer nie maar verbeter hoe verder hulle gaan, veral as hulle 'n rigting vind waarin hulle besonder belang stel; maar oor die algemeen sal mense wat op skool nie akademies goed kan presteer nie, dit aan die universiteit nog minder kan doen.

- Skoolvakke of vakrigtings: Goeie prestasies in bepaalde vakke kan 'n aanduiding wees van die vakke en veral vakrigtings waarin 'n student ook aan die universiteit goed sal vaar. Dit kan wel gebeur dat 'n leerling in dié of daardie vak goed sou kon presteer op skool maar dit om een of ander rede nie doen nie, byvoorbeeld omdat hy nie met die betrokke onderwyser kan klaarkom nie, en dis dan moontlik dat hy in daardie rigting aan die universiteit kan uitblink, maar sulke gevalle sou uitsonderings wees.

Dit kan ook wees dat 'n student vir 'n rigting aangelê is waarvoor daar nie spesifieke voorsiening op skool gemaak word nie. In so 'n geval kan aanlegtoetse, waarvan daar

vandag 'n groot verskeidenheid bestaan, tot groot hulp wees.

'n Woord van waarskuwing aan veelsydig begaafdes is hier gepas. Daar is gevalle van leerlinge wat in verskeie rigtings nagenoeg ewe begaafd is en dan nie kan besluit watter om vir gevorderde studie te kies nie. Die gevolg is soms dat hulle op twee of drie gedagtes hink, eers een ding probeer en dan 'n ander en op die ou end nie eintlik êrens kom nie. Dis vir sodanige leerlinge gebiedend noodsaaklik dat hulle op 'n bepaalde rigting besluit, vas besluit en klaar besluit, en die terrein dan met toewyding betree. Hulle kan maklik gaandeweg studie op ander terreine as stokperdjies of newebelangstelling beoefen. Daar is begaafde wetenskaplikes wat goeie skrywers of skilders kan word en wiskundiges wat goeie musici kan wees, maar elke mens wat iets wil word, moet 'n rigting kies wat in die eerste plek sy lewenswerk sal wees. Trouens, enige mens, al is hy nie briljant nie, kan, en behoort, newebelangstellings of stokperdjies te hê. Dit verryk die lewe en gee kleur aan ons bestaan.

- Werklike belangstelling en stokperdjies: 'n Mens verbeel jou soms jy stel vreeslik belang in een of ander rigting, maar dit kan wel gebeur dat as jy hierdie "belangstelling" nugter ontleed of laat ontleed, dit vals sal blyk te wees. Jy sien 'n rolprent, hoor 'n lesing, lees 'n boek, ontmoet 'n besondere persoon, woon 'n uitstalling by - en dan kry jy 'n skielike "openbaring" en besluit om 'n sendingwerker, 'n sielkundige, 'n dokter of 'n atoomwetenskaplike te word, of miskien 'n onderwyser of 'n vlieënier of 'n verpleër in 'n hospitaal vir sielsiekes.

Hierdie soort emosionele besluite moet met agterdog bejeën word. Hulle kan eg wees, maar hulle kan ook vals en verkeerd wees, en dis vir jou gerade om deskundige advies in te win om jouself en jou ware begeertes, aanleg en belangstelling te leer ken as jy dit nie daarsonder kan doen nie. Veral in die wêreld van vandag met sy veelheid van beroepe en beroepsrigtings is dit noodsaaklik dat die hulp van veral bekwame sielkundige voorligters ingeroep moet word, nie om vir jou te sê wat om te kies nie, maar om vir jou objektiewe inligting te gee wat jou sal help om self te besluit.

Die kandidaat self, sy eie begeerte, belangstelling en skoolprestasies is dus van groot belang in die beplanning van 'n studierigting en beroep. Maar hierby moet hy ook sy ouers en naasbestaandes, sy onderwysers, die voorligtingsdeskundiges van die onderwysdepartement en ander raadpleeg wat bevoeg is om hom te lei; hy moet die beroepsnaslaanbiblioteek deursoek en hierby soveel regstreekse inligting as moontlik verkry van persone wat werklik in beroepe staan en met gesag uit eerstehandse kennis en ondervinding oor bepaalde beroepe kan praat. Daar is geen rede waarom veral skole in groot sentra nie periodiek geskikte verteenwoordigers uit alle moontlike beroepe kan nooi om alle belangstellende leerlinge, maar veral senior leerlinge oor die aard, opleidingsvereistes, bevorderingsmoontlikhede, inkomstepeil en dergelike meer van hul onderskeie beroepe te woord te staan nie. Sodanige persone kan dan ook inligtingstukke saambring om aan belangstellende leerlinge te oorhandig.

Daar word ook deur verskeie instansies soms groot uitstallings oor beroepe en beroepsrigtings georganiseer. Leerlinge behoort hierdie uitstallings nie mis te loop as hulle dit enigsins kan bywoon nie. Daar is vandag so baie beroepe en beroepsrigtings dat dit vir haas niemand meer nodig is om in 'n beroep te beland waarin hy nie pas nie.

- Ander bronne van hulp: Afgesien van deskundige voorligting wat kandidate reeds op skool behoort te kan kry, is die Departement van Arbeid, deur middel van die Afdeling Beroepsdienste, enige jeugdige of volwassene behulpsaam met die keuse van 'n geskikte beroep of studierigting. Waar groot onsekerheid bestaan, word van sielkundige toetse gebruik gemaak om rigtings van belangstelling en aanleg te bepaal. Opgeleide beroepsraadgewers is in al die groter sentrums in die land gestasioneer. Hierbenewens publiseer die Departement 'n kwartaalblad, My Loopbaan, wat gratis aan skole voorsien word en waarin 'n groot verskeidenheid van beroepe beskryf en wye kennis van die beroepswêreld verskaf word.

Verskeie ander instansies verskaf voorligting vir beroepe maar dan slegs in eie verband. Ook die NIPN van die WNNR onderneem toetsing en onderhoudvoering in gevalle waar beroepsleiding nodig is. Die reuse-diens wat op hierdie gebied deur die universiteite self onderneem word, verdien spesiale vermelding. Afgesien van kort oriënteringsprogramme aan die begin van die jaar waarin beginners bekend gestel word met verskillende vakke

en studierigtings, die werking van die universiteitsmasjinerie, ens., word massas voorligtingsmateriaal oor kursusse en beroepe beskikbaar gestel. Aspirant-studente en studente moet dus nie skroom om van hierdie fasiliteite van die universiteite gebruik te maak nie. Alhoewel daar van 'n aspirant-student seker verwag kan word om by sy inskrywing aan 'n universiteit reeds te weet watter leergang hy wil volg en watter vakke hy wil kies, is die studentevoorligtingsburo van die universiteit steeds bereid om hulp te verleen. Aan feitlik alle fasette van die nuweling se lewe aan die universiteit word aandag geskenk. Gou sal die eerstejaars dan ook besef dat die universiteit nie net 'n akademiese masjien is nie, maar 'n inrigting waar daar geleentheid is om gedurende sy vormingsjare tot 'n volwaardige en gebalanseerde opgevoede mens te ontwikkel.

DIE FINANSIERING VAN STUDIES

Die begrip finansiering van studies impliseer vir die doeleindes van hierdie boek die bestryding van die totale uitgawes verbonde aan die opleiding van 'n student aan 'n universiteit, en dit omsluit veel meer as net die bedrag wat dit die student sal kos en die bestryding daarvan. Om die saak in breër perspektief te sien, moet die koste van universiteitsopleiding minstens van twee kante benader word, naamlik van die kant van die universiteit en tweedens van die kant van die student. Met so 'n benadering sal byvoorbeeld die belangrike vraag van waarom klasgelde aan die universiteit so hoog is en telkens verhoog word, ook in 'n mate toegelig word.

Van die kant van die universiteit: Indien die jaarlikse lopende uitgawes (syfers vir 1972, koshuise uitgesluit) van die tien residensiële universiteite saamgetel en deur die totale aantal studente verdeel word, kom die gemiddelde regstreekse opleidingskoste per student per jaar op ongeveer R1 100 te staan. (Vir 1975 sal dit waarskynlik heelwat hoër wees.) Van hierdie bedrag dra die student self gemiddeld ongeveer 19% by, die universiteit, met die bystand van die gemeenskap, sowat 6%, en die staat, dit wil sê die belastingbetaler, sowat 75%. Dit beteken dat die Staat en die gemeenskap meer as 80% van die regstreekse koste betaal om studente op te lei. Studente het gevolglik nie juis rede om te kla oor hul aandeel van minder as 20% aan lopende uitgawe nie! Met reg kan dan ook na mense wat hulself studente noem maar nie hul werk doen en in hul studies vorder nie, verwys word as "gesubsidieerde leeglêers" wat aan die universiteit "die lewe geniet" op die koste van andere wat wel werk.

Om student te wees, en hierdie lewensfase word aan alle ware studente gegun, is dus nie net 'n groot voorreg nie, maar bring ook groot verantwoordelikheid mee.

Van die kant van die student: Dit is haas onmoontlik om 'n presiese antwoord te gee op die vraag hoeveel geld per jaar voldoende sal wees vir die behoeftes van elke individuele student. Die bedrag word onder andere bepaal deur die aard en duur van 'n kursus, die vakke wat bestudeer word, die student se persoonlike behoeftes, koshuisinwoning, ens. 'n Universiteit is nie 'n skool waar al die leerlinggroepe dieselfde klasse bywoon nie. Studente maak 'n vrye keuse uit universiteite, studierigtings en vakke. Aan sommige universiteite is die studie, die lewe en die losies duurder as aan ander; sommige kursusse aan dieselfde universiteit is duurder as ander; gelde vir die eerste jaar verskil soms van dié vir ander studiejare en studente verskil onder mekaar oor wat hulle as noodsaaklik vir hul behoeftes beskou.

Die volgende gemiddeldes van lesgeld en losies kan egter as 'n leidraad dien:

- Lesgeld: Vir 1975 beloop die gemiddelde lesgeld vir byvoorbeeld die volgende twintig rigtings wat na minstens drie jaar voltydse studie uitloop op 'n eerste graad aan die residensiële universiteite, die volgende:

R251 - R300 (laagste na hoogste gemiddelde): Gewone B.A. en B.Com., Regte (B.Proc. en en B. Iuris);

R301 - R350 (laagste na hoogste gemiddelde): Biblioteekkunde, Maatskaplike Werk, Verpleegkunde, Landbou, Dieetkunde, Huishoudkunde, B.Sc., Spraakleer en Drama, Beeldende Kunste;

R351 - R400 (laagste na hoogste gemiddelde): Musiek, Boukunde/Boubestuur/Bouwetenskap, Bourekenkunde, Argitektuur;

R401 - R450 (laagste na hoogste gemiddelde): Ingenieurswese, Landmeetkunde, Geneeskunde en Tandheelkunde.

Gemiddelde lesgeld vir die twintig studierigtings: R340 p.j.

- Koshuisgeld: Koshuisgelde vir 1975, varieer aan die verskillende universiteite soos volg:

R470 - R499 : aan twee universiteite,
R500 - R599 : aan vier universiteite, en
R600 - R699 : ook aan vier universiteite.

Gemiddelde koshuisgelde vir die tien universiteite: R570 p.j.

Gemiddeld gesien, kan 'n voltydse student sy jaarlikse begroting min of meer soos volg opstel:

Lesgeld	R340
Koshuisgeld	570
Inskrywing ens. (slegs sommige universiteite)	20
Buitemuurse bedrywighede	75
Boeke e.d.m.	75
Persoonlike uitgawes	200
Reisgeld en ander uitgawes	<u>100</u>
BERAAMDE TOTAAL	<u>R1 380</u>

Aanpassings vir individuele studente sal beslis nodig wees en daar sal gevind word dat vir sommige die totaal wat hier aangegee word, veels te hoog is, terwyl ander se totaal heelwat kan styg. Hierby moet bedink word dat die student, nadat hy gematrikuleer het, kon gaan werk het teen 'n beginsalaris, byvoorbeeld in die staatsdiens, van minstens R2 100 per jaar. Eintlik kos 'n student se opleiding hom dus in die buurt van R3 500 of meer per jaar. Hoe langer hy studeer, hoe groter word die onkoste, want hy sou in= tussen byvoorbeeld 'n reeks salarisverhogings kon gekry het as hy gaan werk het.

Die koste van druiwing: In 1974 was daar aan die tien residensiële universiteite sowat 70 000 studente. As 25 persent van hulle jaarliks sou druiwing (die persentasie is oor die algemeen gemiddeld heelwat hoër), dan kon daar in 1974 'n totaal van 17 500 studente gedruip word. Een manier om die koste van hierdie druiwing te bereken, is om R3 500 met 17 500 te vermenigvuldig, en dit gee 'n totaal van R61 250 000. As die moontlike 17 500 druiwinge bloot met die R1 100 regstreekse gemiddelde opleidingskoste per student vermenigvuldig word, kom dit op R19 250 000 te staan wat, 'n mens kan maar sê, in die water gegooi word.

Afgesien van die regstreekse en onregstreekse finansiële verlies en die tydvermorsing wat druiwing meebring, is daar die persoonlike frustrasie wat dit veroorsaak, die feit dat baie studente as gevolg van druiwing 'n koers inslaan wat nie werklik hul beroepskeuse is nie, die verlies aan of uitgestelde indiensneming van mannekrag, veral in hoër vlakberoepes, waar daar gedurig tekorte is, en dergelike negatiewe gevolge meer.

Ons hoef seker nie nog meer redes aan te voer waarom ons land en ons mense dit nie kan bekostig dat

- mense na die universiteit gaan wat nie die mas daar kan opkom nie;
- mense na die universiteit gaan net om daar "n lekker tyd te hê" nie;
- studente halsoorkop kursusse gaan volg waarvoor hulle nie aangestel is nie, of universiteitstudie geheel onderskat op grond van hul goeie skoolprestasie, en
- studente nie daarop ingestel is dat vordering in hul studies hul eerste en ver= naamste plig teenoor hulself, hul gemeenskap en hul land is nie.

Dit beteken hoegenaamd nie dat die universiteitslewe nie ook aangenaam en vol opwindende, verrykende bedrywighede om die gewone studies heen hoef te wees nie. Intendeel, die "studentelewe" en al sy baie doenighede speel 'n uiters belangrike rol in die student se opvoeding. Die ware student sal egter die balans kan handhaaf, sal die dinge wat eerste

behoort te kom, eerste plaas.

Bronne van finansiële hulp: Uit die voorgaande is dit duidelik dat universiteitsop= leiding nie goedkoop is nie. Dit is egter onnodig dat 'n student hierdie opleiding weens finansiële probleme moet ontbeer, aangesien daar vandag vele bronne van finansiële hulp bestaan vir diegene wat dit wel nodig het. Daar bestaan 'n landswye behoefte aan opge= leide mannekrag en om hierin te probeer voorsien word beurse, lenings, merietebeurse ens. aan studente gebied deur byvoorbeeld die Staat, die provinsiale administrasies, munisipaliteite, groot sakeondernemings en universiteite self. Daar moet egter onthou word dat finansiële hulp geredeliker beskikbaar is vir voortreflike akademiese prestasie op skool en daarna. Hoe beter die vordering, hoe beter is die kans op toekennings. Dit beteken egter nie dat slegs die briljante leerlinge en studente vir beurse in aan= merking kom nie. Die gemiddelde student met 'n goeie vorderingsrekord kan ewe-eens staat maak op hulp.

- Beurse en lenings: Die begrippe beurse en beurslenings is eintlik maar dieselfde en kom neer op toekennings wat nie in kontant nie maar in die vorm van diens terugbetaal= baar is. (In uitsonderlike gevalle is geen terugbetaling ter sprake nie.) Beurse word gewoonlik toegeken op grond van behoeftigheid en akademiese prestasie. By kontrakbreuk moet die beurs in kontant plus rente terugbetaal word. Diens beteken gewoonlik een jaar diens vir elke jaar van toekenning.

Studielenings moet, soos die naam aandui, terugbetaal word sodra die student begin werk. Van daardie datum af word die rente, gewoonlik $6\frac{1}{2}$ persent of meer, ook in bere= kening gebring.

Merietebeurse, ook genoem prestasiebeurse, word toegeken op grond van akademiese pres= tasie en is gewoonlik nie terugbetaalbaar nie. Sommige universiteite ken ook pryse en medaljes toe op grond van voortreflike werk.

Inligting oor beurse en lenings kan verkry word van:

- . Beursbrosjures van die verskillende universiteite wat op aanvraag beskikbaar is.
- . Die publikasies van die Raad vir Geesteswetenskaplike Navorsing:
Toekennings beskikbaar vir voorgraadse studie aan Suid-Afrikaanse universiteite vir Blankes Deel I: UOVS, UPE, PU vir CHO, UP, RAU, US, UNISA en ALGEMEEN, 1973.
Awards available for undergraduate study at South African universities for Whites Part II : UCT, UN, UPE, RU, UNISA, WITS and GENERAL, 1973.

Die boeke bevat die jongste inligting soos verkry van universiteite, instansies en or= ganisasies wat toekennings beskikbaar stel, en inligting uit persaankondigings en ander bronne. Hersiene uitgawes sal teen die einde van 1975 by alle hoërskole en universi= teite beskikbaar wees. Twee skemas waarvoor onder andere inligting verskaf word, is die Staatsdiensbeursskema en die beurs- en leningskemas van die verskillende Onderwysdepar= temente vir die opleiding van onderwysers.

- Voltydse studie en deeltydse werk: Deeltydse werk vir eie fondse is moontlik solank die akademiese prestasie nie benadeel word nie. Daar word aanbeveel dat studente pro= beer werk vind wat met die studierigting verband hou, aangesien personeelbestuurders dikwels belangstel in persone wat ook praktiese ervaring besit. Oor die soorte deeltydse werk hoef daar nie uitgewei te word nie. Universiteite is ook gewoonlik studente hierin behulpsaam. Daar moet net onthou word dat sommige kursusse soos byvoorbeeld die me= diese kursus, geen tyd laat vir ander dinge as studie nie.

- Deeltydse studie en voltydse of deeltydse werk: In hierdie geval tree 'n persoon in diens by 'n geskikte firma of 'n Staatsdepartement by wie 'n salaris verdien word. Die studie word dan na-uurs aan 'n universiteit voortgesit. Gewoonlik word daar langs hier= die weg genoeg geld verdien om vir die studie te betaal. Gedeeltes van die koste word, byvoorbeeld in die geval van Staatsdepartemente, ook deur die Staat betaal.

- Studie deur korrespondensie: Studente vir wie dit onmoontlik is om voltyds of deel= tyds te studeer, kan deur middel van korrespondensie aan die Universiteit van Suid-Afrika studeer. Die enigste regstreekse studiekoste wat so 'n student het, is dié aan lesgeld en boeke. Unisa is die enigste universiteit in die land wat onderrig deur middel van

korrespondensie aanbied.

Opmerkings: n Paar algemene opmerkings wat kan bydra om die finansiering van n studiebegroting te vergemaklik, is die volgende:

- . Hoe beter n student/leerling akademies presteer, hoe makliker is dit om finansiële hulp te verkry.
- . Vir die eerste studiejaar is dit gewoonlik die moeilikste om geld uit die gewone finansieringsbronne te bekom. Ná een jaar se studie en bewyse van bevoegdheid en prestasie is die kans beter. Dit beteken dat n student normaalweg self voorsiening moet maak vir die eerste jaar.
- . Deeltydse studie is natuurlik goedkoper as voltydse en baie studente verdien ook heelwat geld deur deeltyds te werk. Daar word egter aanbeveel dat aan die studie prioriteit verleen word en dat deeltydse werk byvoorbeeld nie gedurende die tweede semester behoort aangepak te word nie.
- . Voltydse vakansiewerk word deur universiteite sterk aanbeveel.
- . Kortsigtigheid, deur byvoorbeeld slegs te soek na beurse waaraan geen diensbepaling verbonde is nie, behoort vermy te word.
- . Dit is n goeie beleid om moontlike werkgewers op wie n studierigting betrekking het, regstreeks te raadpleeg oor finansiële hulp.
- . Versamel alle inligting oor die kosteaspek, sodat betyds aansoek om finansiële hulp gedoen kan word.

AANPASSING BY DIE BEROEPSLEWE

Wanneer universiteitstudie afgehandel is, in elk geval voorlopig, moet die student hom by die beroepslewe aanpas, en dit kan wees dat hy hierdie aanpassing moeilik vind, veral aan die begin. Oor hoe om die aanpassing moontlik en makliker te maak, kan onder andere aan die student gesê word:

Om mee te begin, het jy n studierigting gekies wat jou vir n bepaalde beroepsrigting voorberei het, maar nie noodwendig juis vir hierdie of daardie spesifieke betrekking binne die beroepsgebied nie. As dit nou n geval is dat jy wel binne die beroepsgebied kan kies, dan moet jy weer eens nugter en verstandig te werk gaan.

In die eerste plek moet jy jou so deeglik moontlik op die hoogte stel met die aard van die besondere werk, die vooruitsigte op bevordering wat dit bied, die besoldiging daaraan verbonde en dergelike meer, en dan moet jy besluit of dit is wat jou sal pas, want een ding moet jy nie doen nie: Jy moenie gedurig van werk verwissel net omdat jy in die volgende betrekking n paar rand meer per maand kan verdien nie, of omdat jy nie van die hoof of die bestuurder te baie hou nie, of omdat dit jou persoonlike gerief n bietjie beter pas en dit nie vir jou saak maak of jy jou werkgewer in die steek laat of in die verleentheid plaas nie, of om watter rede ook al wat niks of nie veel met jou toekomstige vordering te doen het nie.

Dit is wel goed en reg om van betrekking te verwissel as dit vir jou duidelik bevordering binne jou rigting beteken en jou op die pad na moontlike verdere bevordering plaas, maar om sommer om minder belangrike of beuselagtige redes van een betrekking na n ander te dwaal, kan vir jou toekoms fataal wees. Werkgewers kom ook gou agter wie hierdie rondvalers is, en hul kans op n volgende betrekking raak gaandeweg skraler.

Dit kan wel gebeur dat n mens jou aan die begin misgis het oor die aard van die werk wat jy aanvaar het, die omstandighede waaronder dit gedoen moet word, die vooruitsigte wat dit bied, en wat nog meer. Dan moet jy so vinnig moontlik padgee en jou regte koers vind, maar dan moet jy ook sover dit in jou vermoë is, sorg dat jy nie weer n fout begaan nie. Die tweede dwaling kan erger wees as die eerste en verdere dwalings kan maklik daarop volg.

As jy dan jou betrekking het en dit is wat jy wil hê, wy jou dan daaraan toe met al die krag, talente en kennis tot jou beskikking; sorg dat jy jou kennis en vaardigheid gedurig verbeter; doen jou werk met lus, en moenie aarsel om soms n bietjie persoonlike gerief

daarvoor op te offer nie; werk in 'n goeie gees saam met ander; moet nooit maak of jy of jou werk belangriker is as ander of ander se werk, of dat jy dit op bekwaamere wyse doen nie, maar moet ook nie bedeesd en sonder selfvertroue wees nie; aanvaar jou meerderes se beslissings solank as jy 'n junior is soos dit 'n junior betaam, al dink jy ook jy weet beter; moenie wegstroom van verantwoordelikheid nie, want slegs dié wat verantwoordelikheid kan en wil aanvaar, sal vorder; mik hoog, vir elke dag en vir die toekoms, maar nie so hoog dat jy nie kan bykom nie; streef daarna om in die eerste plek te presteer, iets tot stand te bring, 'n diens te lewer, en nie bloot om so gou as moontlik soveel geld as moontlik te maak nie – die mense wie se eerste en vernaamste doelstelling geldmaak is, ken geen werklike lewensvreugde nie; onthou die lewe is groter as die wêreldjie van jou eie beroep of afgebakende werkgebied en stel ook belang in die mense en die lewe om jou, in jou eie en ander kringe, want niemand lewe gelukkig op 'n eiland nie.

As jy op dié maniere, met dié soort houdings te werk gaan, is jou toekoms verseker en kan jy reken op vooruitgang, bevordering en geluk, totdat jy naderhand die hoogste sport bereik waartoe jou gawes, talente, opleiding, werkvermoë en geleentheid jou in staat stel. Miskien word jy 'n hoof, 'n bestuurder, 'n hoofbestuurder, en miskien nie, want die sporte van die leer word nouer boontoe en op die heel boonste is daar gewoonlik net vir een man plek. Maar as jy jou sout werd is, sal daar minstens êrens bokant die onderste sporte vir jou ook ruimte wees.

WAAROM GAAN HIERDIE BOEK?

Hierdie boek is 'n poging om op beknopte, samevattende wyse inligting aan senior hoërskoolleerlinge te verskaf oor studierigtings aan universiteite en die verskillende beroepe en veral beroepsrigtings waarvoor bepaalde studierigtings kandidate voorberei. Dis bloot 'n soort algemene inleiding om basiese inligting te verskaf en belangstelling te prikkel. As 'n kandidaat rigtings vind waarin hy belang stel en waarvan hy meer wil weet, dan is dit tyd om literatuur in die biblioteek of elders te gaan soek en op ander maniere verdere inligting te kry, soos hierbo aangedui.

Daar sal ook opgemerk word dat die afdelings BEROEPSDIENS in hierdie boek hoofsaaklik leiding gee aan studente in hul beplanning ná die verwerwing van 'n eerste graad. Daar moet egter onthou word dat ons in 'n tyd van spesialisasie lewe en dat die B-graad in die meeste gevalle slegs die weg open tot 'n beroepsrigting wat ná verdere opleiding gevolg kan word. Telkens word die aandag in hierdie boek dan ook gevestig op die noodsaaklikheid van nagraadse studie en/of addisionele professionele opleiding. Die hoogste kwalifikasie wat behaal is of hoofvakke vir 'n graad korreleer normaalweg met die beroep wat uiteindelik beoefen gaan word, maar dit beteken geensins dat die kandidaat, nadat hy 'n graad of diploma of selfs 'n graad en 'n diploma behaal het, volleerd in 'n betrekking kan instap nie. Met Ekonomie byvoorbeeld as hoofvak vir 'n graad is iemand nog glad nie 'n ekonoom nie, en Sielkunde as hoofvak beteken nie dat so 'n persoon 'n volleerde sielkundige is nie. Om byvoorbeeld 'n ekonoom of sielkundige te word, is ruim ervaring en gevestigde nagraadse studie nodig. Dit is ook waar vir haas alle ander beroepsrigtings, selfs dié waarvoor spesifiek afgebakende kursusse gevolg word. Die vroeë stadiums in enige loopbaan is maar 'n voortsetting van die persoon se opleiding.

Dit is blykbaar veral mense met 'n "gewone" B.A. en selfs soms B.Sc. of B.Com. en niks meer nie, persone met 'n soort "algemene" opleiding sonder toespitsing op 'n bepaalde loopbaanveld, wat dit in die praktyk partykeer (maar hoegenaamd nie noodwendig nie) moeilik vind om betrekking te kry wat na hul mening aan hul opleiding en talente reg laat geskied, en wat dan teleurgesteld, gefrustreerd en opstandig kan raak.

Studente moet hulself so goed moontlik vergewis van die vraag na werknemers wat daar in bepaalde beroepsrigtings bestaan. Dit kan gebeur dat 'n groot aantal persone grade verwerf met sekere hoofvakke terwyl die beroepsmoontlikhede in hierdie rigtings gering is. Die gevolg is soms dat gegradueerdes hulleself sy aan sy met nie-gegradueerdes in dieselfde betrekking bevind.

Kandidate word dus baie sterk aangeraai om wanneer hulle na die universiteit gaan, nie alleen op die hoogte te kom met watter studierigtings hulle die beste sal pas nie, maar ook van watter loopbaanvelde 'n besondere studierigting moontlik vir hulle sal oopstel. Daartoe sal, onder andere, hierdie boek en verwante literatuur hulle help.

R E S E A R C H

In this day and age, large-scale scientific research in every conceivable field has become indispensable for every progressive country, not only for the expansion and enrichment of knowledge, but for effective planning in every sphere of the country's economy. South Africa is no exception and there are already numerous research facilities and bodies which cover the broad field of activities involving the natural and human sciences.

Among the most important research bodies in the field of the natural sciences are

- various Government departments including those of Forestry, Health, Agricultural Economics and Marketing, Agricultural Credit and Land Tenure, Agricultural Technical Services, Mines, National Education, Industries, Transport, Water Affairs, the SA Railways, the Provincial Administrations and the Administration of South-West Africa;
- statutory bodies such as the Council for Scientific and Industrial Research (CSIR), which controls various institutes and departments and subsidizes research at universities and other institutions, the Atomic Energy Board, the Fuel Research Institute of S.A., the National Institute for Metallurgy, the National Parks Board, the National Road Safety Council (in co-operation with the CSIR), the S.A. Institute for Medical Research, the S.A. Medical Research Council with various research units and groups, the Water Research Commission;
- sixteen universities (the universities themselves or their research institutes and units, acting on their own initiative or in co-operation with the CSIR or the MRC);
- various museums, observatories, botanical and zoological gardens;
- public corporations including Escom, Fisheries Development Corporation of S.A. Ltd., Phoscor, Sasol, Iscor, Soecor and the S.A. Inventions Development Corporation;
- a number of industrial research institutes which are subsidized by the CSIR or the Government or which function independently, as well as more than forty industrial companies with separate research departments.

Research into the human sciences is undertaken by

- the Government Departments of Labour, Agricultural Economics and Marketing, National Education (libraries, art galleries and museums), Social Welfare and Pensions, the Administration of Coloured Affairs, the S.A. Railways, the four Provincial Administrations (museums and education departments);
- statutory bodies such as the Human Sciences Research Council (HSRC), which controls a number of research institutes and, in addition, subsidizes research by universities, other bodies and even private persons on an extensive scale; the Africa Institute of S.A.; the Bantu Investment Corporation of S.A., Ltd.; the Productivity Advisory Council; the S.A. Reserve Bank; the IRS and NIPR of the CSIR;
- sixteen universities (the universities themselves or their research institutes and units, acting on their own initiative or in co-operation with the HSRC);
- some municipalities;
- numerous other organizations with research activities.

Young graduates who strive for recognition for original contributions can make use of the opportunity to do research work on their own initiative under the guidance of experienced persons, some of whom are of international repute. There are numerous opportunities and virtually unlimited possibilities in the natural and human sciences. Well-equipped offices, laboratories and libraries, as well as modern equipment such as computers are at the disposal of researchers.

Experience in research work is of inestimable value in any walk of life and is often also a useful point of departure for a career in the Public Service, at a university, in industry or in the many sections of the private sector. The minimum educational requirement for young researchers is usually a Bachelor's degree but in some cases an Honours or Master's degree, depending on the field of research. Post-graduate study remains important and is often a prerequisite for promotion to a senior rank.

The regular publication of the CSIR Directory of scientific research organizations in South Africa and the HSRC publication Directory of research organizations in the human sciences in South Africa, provide comprehensive information on organizations which undertake research in South Africa.

N A V O R S I N G

Grootskaalse wetenskaplike navorsing op elke denkbare gebied het in die moderne tyd vir elke vooruitstrewende land onontbeerlik geword, nie net vir die uitbreiding en verryking van kennis nie, maar vir doeltreffende beplanning op elke gebied van die staatshuishouding. Ook in Suid-Afrika is daar reeds talle navorsingsfasiliteite en -instansies wat die breë terrein van geestes- en natuurwetenskaplike werksaamhede dek.

Van die vernaamste navorsingsinstansies op die natuurwetenskaplike gebied is

- verskillende Staatsdepartemente waaronder dié van Bosbou, Gesondheid, Landbou-ekonomie en -bemarking, Landboukrediet en -grondbesit, Landbou-tegniese Dienste, Mynwese, Nasionale Opvoeding, Nywerheidswese, Vervoer, Waterwese, die SA Spoorweë, die Provinsiale Administrasies en die Administrasie van Suidwes-Afrika;

- statutêre liggame soos die Wetenskaplike en Nywerheidsnavorsingsraad (WNNR), wat verskillende institute en departemente beheer en navorsing aan universiteite en ander liggame ondersteun, die RAK, die Brandstofnavorsingsinstituut van S.A., die Nasionale Instituut vir Metallurgie, die Nasionale Parkeraad, die Nasionale Padveiligheidsraad (in samewerking met die WNNR), die S.A. Instituut vir Mediese Navorsing, die S.A. Mediese Navorsingsraad met verskeie navorsingseenhede en -groepe, die Waternavorsingskommissie;

- sestien universiteite (die universiteite self of hul navorsingsinstitute en -eenhede op eie inisiatief of in samewerking met die WNNR of die MNR);

- verskeie museums, observatoria, botaniese en soölogiese tuine;

- openbare korporasies waaronder Evkom, Foskor, Sasol, Yskor, Soekor; Visserye Ontwikkelingskorporasie van S.A. en die S.A. Ontwikkelingskorporasie vir Uitvindings;

- 'n aantal nywerheidsnavorsingsinstitute wat deur die WNNR of die Staat ondersteun word of onafhanklik funksioneer, asook meer as veertig nywerheidsmaatskappye met afsonderlike navorsingsdepartemente.

Geesteswetenskaplike navorsing word onderneem deur

- die Staatsdepartemente van Arbeid, Landbou-ekonomie en -bemarking, Nasionale Opvoeding (biblioteke, kunsgalerye en museums), Volkswelsyn en Pensioene, die Administrasie van Kleurlingsake, die S.A. Spoorweë, die vier Provinsiale Administrasies (museums en onderwysdepartemente);

- statutêre liggame soos die Raad vir Geesteswetenskaplike Navorsing (RGN), wat 'n aantal navorsingsinstitute beheer en origens op uitgebreide skaal navorsing deur universiteite, ander instansies en selfs private persone ondersteun; die Afrika-Instituut van S.A.; die Bantoe-Belegingskorporasie van S.A. Bpk.; die Produktiwiteitsadviesraad; die S.A. Reserwebank; die IND en NIPN van die WNNR;

- sestien universiteite (die universiteite self of hul navorsingsinstitute en -eenhede op eie inisiatief of in samewerking met die RGN);

- enkele munisipaliteite;
- talle ander organisasies met navorsingsaktiwiteite.

Jong gegradueerdes wat streef om erkenning vir oorspronklike bydraes kan die geleentheid benut om, onder leiding van ervare persone van wie sommige wêreldaansien geniet, op eie inisiatief navorsingswerk te doen. Talle geleenthede en feitlik onbeperkte moontlikhede bestaan in die natuur- sowel as die geesteswetenskaplike rigtings. Goed toegeruste kantore, laboratoria en biblioteke asook moderne uitrusting soos rekenouto- mate, is tot die beskikking van navorsers.

Navorsingservaring is van onskatbare waarde op enige terrein van die lewe en dit is ook dikwels 'n nuttige beginpunt vir 'n loopbaan in die Staatsdiens, aan 'n universiteit, in die nywerheid of in die talle afdelings van die private sektor. Die minimum opvoedkundige vereiste vir jong navorsers is gewoonlik 'n baccalaureusgraad maar, na gelang van die navorsingsrigting, soms 'n honneurs- of meestersgraad. Nagraadse studie bly belangrik en is dikwels 'n vereiste vir bevordering tot die senior range.

Die gereelde publikasie van die WNNR, Gids van wetenskaplike navorsingsorganisasies in Suid-Afrika asook die publikasie van die RGN, Gids van navorsingsorganisasies in die geesteswetenskappe in Suid-Afrika, verskaf breedvoerige inligting in verband met organisasies wat navorsing in Suid-Afrika onderneem.

CHAPTER - 2 - HOOFSTUK
FACULTIES OF ARTS

UNIVERSITY OF CAPE TOWN

FACULTY OF ARTS

Degrees

Bachelor of Arts	: B.A.
Bachelor of Arts (Honours)	: B.A. (Hons.)
Master of Arts	: M.A.
Doctor of Philosophy	: Ph.D.
Doctor of Literature	: D.Litt.

DEGREES

Bachelor of Arts: B.A.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) passed with an aggregate of at least 50 per cent.

Additional requirements:

- A pass on the Higher or Standard Grade in at least five of the following subjects: Afrikaans, English, Mathematics, Biology, Physical Science, Bantu Languages, French, German, Greek, Hebrew, Italian, Latin, Nederlands, Portuguese, Spanish, Hindi, History, Geography, Music, Biblical Studies, Economics, Art.

- A pass on the Higher Grade or at least 50 per cent on the Standard Grade in either Mathematics or a language other than the official languages.

Curriculum: Three years of full-time study.

An approved curriculum must include at least nine qualifying courses comprising one major course, four senior courses and four courses given in departments established in the Faculty of Arts.

Courses recognized as qualifying towards the degree of B.A.

(An asterisk * denotes subjects which may not be counted as the compulsory major course.)

<u>Subject</u>	<u>Number of Qualifying Courses</u>	<u>Department and Faculty</u>
African Economic History	one	Economics (Arts)
*African History	two	History (Arts)
African Languages	three	African Languages (Arts)
Afrikaans	one	Afrikaans en Nederlands (Arts)
Afrikaans en Nederlands	three	Afrikaans en Nederlands (Arts)
Afrikaans en Nederlands Addisioneel	one	Afrikaans en Nederlands (Arts)
Ancient History and Classical Archaeology	one	Classics (Arts)
*Applied Mathematics	three	Applied Mathematics (Science)
Archaeology	two	Archaeology (Arts)

<u>Subject</u>	<u>Number of Qualifying Courses</u>	<u>Department and Faculty</u>
*Botany	three	Botany (Science)
*Chemistry	three	Chemistry (Science)
Comparative African Government and Law	two	Anthropology (Arts)
Constitutional Law	one	Public Law (Law)
Contemporary History	one	History (Arts)
Drama	two	Speech Training and Dramatic Art (Arts)
Economic Geography	one	Geography (Science)
Economics	three	Economics (Arts)
Economic History	three	Economics (Arts)
English	three	English (Arts)
English Additional	one	English (Arts)
Ethics	two	Philosophy (Arts)
French	four	Romance Studies (Arts)
French Additional	one	Romance Studies (Arts)
Geography	three	Geography (Science)
*Geology	three	Geology (Science)
German	four	German (Arts)
Greek	three	Classics (Arts)
Greek and Roman Literature and Philosophy	one	Classics (Arts)
Hebrew	four	Hebrew (Arts)
History	three	History (Arts)
History Additional	one	History (Arts)
History and Theory of Art	two	School of Fine Art (Fine Art and Architecture)
*Italian	two	Romance Studies (Arts)
Jurisprudence A	one	Roman and Comparative Law (Law)
Latin	three	Classics (Arts)
Latin Additional	one	Classics (Arts)
Logic and Metaphysics	three	Philosophy (Arts)
Mathematics	three	Mathematics (Science)
*Mathematical Statistics	two	Mathematical Statistics (Science)
*Music	two	College of Music (Music)
Netherlands Cultural History	two	Netherlands Cultural History (Arts)
*Physics	three	Physics (Science)
Physiology	one	Physiology (Science)
Political Philosophy	two	Philosophy (Arts)
Political Science	three	Political Science (Arts)
Psychology	three	Psychology (Science)

<u>Subject</u>	<u>Number of Qualifying Courses</u>	<u>Department and Faculty</u>
Public Administration	one	Public Administration (Social Science)
Public International Law	one	Public Law (Law)
Religious Studies	three	Religious Studies (Arts)
Roman Law	two	Roman and Comparative Law (Law)
Roman-Dutch Law I	one	Roman-Dutch Law (Law)
Social Anthropology	two	Anthropology (Arts)
Social Anthropology Additional	one	Anthropology (Arts)
Sociology	three	Sociology (Social Science)
*Zoology	three	Zoology (Science)

(Other subjects may be added at the discretion of the Senate).

In the subjects French, German and Hebrew there are intensive courses for candidates who have not attained the standard required for entrance to French I, German I and Hebrew I. These courses will be allowed to count towards the degree of B.A. in addition to any other course completed in the same language. Intensive courses are also offered in African Languages and Italian; completion of these courses qualifies a candidate for direct entry into course II of these languages.

A student may not take more than four courses in one year. A candidate must also satisfy the conditions regarding the specified auxiliaries for such courses; e.g. (i) in order to complete the second course in Botany, a student must have attended Chemistry I; e.g. (ii) all students wishing to enter Drama I must have first completed at least one course in English.

Bachelor of Arts (Honours): B.A. (Hons.)

Admission requirement: A candidate must be a graduate in Arts who has been awarded the B.A. degree with the subject in which he proposes to proceed to Honours as a major subject.

Curriculum: One year. The degree of B.A. (Hons.) is conferred in one of the following subjects: African Languages, Afrikaans en Nederlands, Archaeology, Classics, Comparative African Government and Law, Economics, Economic History, English Language and Literature, French, Geography, German, Greek, Hebrew, History, Latin, Mathematics, Philosophy, Political Science, Psychology, Religious Studies, Social Anthropology, Sociology.

The degree may also be conferred in a pair of language subjects:

e.g. Afrikaans en Nederlands - English
Afrikaans en Nederlands - German
English - French
French - Latin

A candidate who fails in the Honours examination will not be allowed to present himself for the examination again.

Master of Arts: M.A.

Admission requirement: A candidate must be an Honours graduate in Arts.

Curriculum: A candidate must work under the supervision of a member of the Department concerned for at least one academic year. Examination is by thesis, unless otherwise stated.

Doctor of Philosophy: Ph.D.

Admission requirement: Graduates must hold a Bachelor's degree of at least three years' standing.

Curriculum: This degree is a research degree. Candidates are required to complete two years of post-graduate work under the supervision of the University before presenting themselves for the degree. The candidate's work must be presented in the form of a thesis.

Doctor of Literature: D.Litt.

Admission requirements: The degree of Doctor of Literature may be conferred on the following candidates:

- Bachelor of Arts of not less than eight years' standing
- Graduates possessing a Master's or Doctor's degree in Arts of not less than six years' standing.

Curriculum: Candidates for the degree must present a thesis or published memoir of work which must be a mature study of high quality constituting a major original contribution to his branch of learning.

School of Environmental Studies

This School was established at the University in 1973 in order to stimulate co-ordinate teaching and research on environmental issues in the various departments forming the School. At present 23 departments, drawn from all the University Faculties, are represented on the Inter-faculty Board of Environmental Studies.

The School promotes the study of man's physical and social environment and the effect of human activities on the natural world. It is the aim of the School to provide a comprehensive course of environmental study at the post-graduate level.

The degrees that may be taken through the School are: Master of Arts - M.A.; and Master of Science - M.Sc.

Individual programmes of study are organized within the context of the two general attitudes, viz Environmental Management and Environmental Science.

U N I V E R S I T Y O F N A T A L

FACULTY OF ARTS

Degrees

Bachelor of Arts	:	B.A.
Bachelor of Arts (Honours)	:	B.A. Hons.
Master of Arts	:	M.A.
Master of Arts (Clinical Psychology)	:	M.A.
Doctor of Philosophy	:	Ph.D.
Doctor of Literature	:	D.Litt.

Note:

Admission requirements for all faculties:

In applying selection procedures, preference will be given to those applicants who obtain three Higher Grade passes from groups other than Group F.

DEGREES

Bachelor of Arts: B.A.

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years.

A candidate must obtain credit for at least ten qualifying courses distributed amongst not fewer than five subjects chosen from the following list:

Afrikaans, Afrikaans-Nederlands, Applied Mathematics, Bantu Law, Biblical Studies, Botany, Chemistry, Classical Civilization, Classical Hebrew, Comparative African Government and Administration, Computer Science, Constitutional Law, Criminal Law and Procedure, Ecclesiastical History, Economic History, Economics, Economics of Underdeveloped Regions, Education, English, Fine Art, French, Geography, Geology, German, Greek, Hebrew, History, History of Architecture and the Related Arts, History of Art, Introduction to Roman Dutch Law, Introductory French, Introductory German, Introductory Hebrew, Jewish Studies, Population and Labour, Latin, Mathematical Statistics, Mathematics, Music, Music and Social Anthropology, Native Law, Philosophy, Physics, Political Science, Prehistory of Southern Africa, Principles and Practice of Fine Art, Psychology, Public International Law, Roman Law, Social Anthropology, Sociology, Speech and Drama, Statistics, Theology, Zoology, Zulu, Southern Sotho (or other approved Bantu language).

Every approved curriculum must include at least two subjects known as major subjects, in each of which either two or three full qualifying courses must be taken.

A candidate must select his major subjects from the following groups:

(a) Major subjects in which three qualifying courses must be taken:

Afrikaans en Nederlands, Economics, English, Fine Art, French, Geography, German, Greek, Hebrew, History, History of Art, Latin, Mathematics, Music, Philosophy, Political Science, Psychology, Social Anthropology, Sociology, Speech and Drama, Zulu (or another approved Bantu language).

(b) Major subjects in which two qualifying courses must be taken:

Biblical Studies, Classical Civilization, Comparative African Government and Administration, Economic History, Mathematical Statistics, Theology.

Bachelor of Arts (Honours): B.A. Hons.

Admission requirement: A B.A. degree.

Curriculum: A candidate must attend the University for at least one academic year and pursue a course of advanced study in one subject selected from the following list:

Afrikaans-Nederlands, Classics, Comparative African Government and Administration, Divinity, Economic History, Economics, English, Fine Art, French, Geography, German, Greek, Hebrew and Jewish Studies, History, History of Art, Latin, Mathematical Statistics, Mathematics, Modern Languages, Music, Music and Social Anthropology, Music and Speech and Drama, Philosophy, Political Science, Psychology, Social Anthropology, Sociology, Zulu.

A candidate who offers Modern Language Honours must choose any two of the following subjects:

Afrikaans en Nederlands, English, French, German, Hebrew and Jewish Studies.

The subject of an Honours course must be one which the candidate has completed as a major subject for the B.A. degree.

The Senate may refuse to admit a student to an Honours course in any subject if the standard of proficiency which he has previously attained in that subject is not sufficiently high.

A candidate is required to present himself for all parts of the final examination at one and the same time.

No candidate for the degree may present himself for the final examination more than once.

Master of Arts: M.A.

Admission requirements: A B.A. Hons. degree. A candidate's previous academic attainments must be sufficiently high.

Curriculum: A candidate for the degree must prosecute advanced study, or research, or both, under the guidance of a supervisor, for not less than one academic year.

The examination for the degree consists of a dissertation, or of two or more written papers, or of a dissertation together with a written paper or papers, or together with such practical work as the Senate may prescribe.

No candidate may present himself for examination more than once.

Master of Arts (Clinical Psychology): M.A.

Admission requirements: A B.A. Hons. degree in Psychology and one year's internship at an approved training hospital.

Curriculum: Same as for the ordinary M.A. degree.

Doctor of Philosophy: Ph.D.

Admission requirements: A candidate must be either a Master of Arts of at least two years' standing or a Bachelor of Arts (Honours) of at least three years' standing whom the Senate has specially exempted from the Master's examination.

Before registration, a candidate must submit for the approval of the Senate a statement of the subject of special study or research which he proposes to pursue.

Curriculum: A candidate is required to pursue an approved course of special study or research on some subject connected with Archaeology, Divinity, Economics, Fine Art, Geography, History, Language, Literature, Mathematical Statistics, Music, Philosophy, Political Science, Psychology, Pure Mathematics, Social Anthropology or Sociology.

A candidate is required to submit a thesis embodying the results of his special study or research. A thesis must make a distinct contribution to the knowledge or understanding of the subject and afford evidence of originality shown either by the discovery of new facts or by the exercise of independent critical power.

Doctor of Literature: D.Litt.

Admission requirements: A candidate must be a Bachelor of Arts of not less than six years' standing. An intending candidate for the degree must submit a formal application for registration.

Curriculum: The degree is awarded only for published work in the form of articles, pamphlets, or books which, being obtainable through booksellers, have been accessible to relevant experts and critics for at least one year.

A candidate may be permitted to submit, in partial fulfilment of the requirements for the degree, any thesis previously accepted for a research degree, provided that the work has been published and accessible to relevant experts and critics for at least one year.

UNIVERSITY OF PORT ELIZABETH

FACULTY OF ARTS

Degrees

Baccalaureus Artium	: B.A.
Baccalaureus Artium Honores	: B.A. Hons.
Magister Artium	: M.A.
Doctor Philosophiae	: D.Phil.
Doctor Litterarum	: D.Litt.
Baccalaureus Artium (Youth Leadership)	
Baccalaureus Artium (Educationis)	: B.A. (Ed.)

DEGREES

Baccalaureus Artium: B.A.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements: For admission to the following courses a candidate must have attained the standard indicated in each case:

- Professional Afrikaans I: A pass in Afrikaans on the Higher or the Standard Grade
- English I: A pass in English on the Higher or the Standard Grade
- German I: A pass of at least 45 per cent on the Higher Grade or at least 40 per cent if German had been taken on Mother-tongue level. (Applications for admission of German-speaking students will be considered ad hoc.)
- Latin I: A pass in Latin on the Higher or the Standard Grade
- Mathematics I or Mathematical Statistics I: A pass of at least 40 per cent in Mathematics on the Higher or the Standard Grade.

Curriculum: Three years of full-time study or four years of part-time study. An approved curriculum consists of not less than ten and not more than twelve courses. Such a curriculum must include at least four courses taken at first-year level, at least three courses taken at second-year level and at least two courses, known as the major subjects, taken at third-year level.

An approved curriculum consists of courses selected from the following:

GROUP I

Subjects which may be taken up to a third-year level

Afrikaans, Afrikaans/Nederlands, Computer Science, English, French, General Linguistics, General Literary Theory, German, Greek, Hebrew, Latin, South Sotho, Xhosa.

GROUP II

Subjects which may be taken up to a third-year level

Anthropology, Bantu Administration, Biblical Studies, Computer Science, Economics, Geography, History, History of Music, Mathematics, Mathematical Statistics, Pedagogics, Philosophy, Political Science, Private Law, Psychology or Industrial Psychology, Sociology.

GROUP III

Subjects which may be taken up to a second-year level

Nederlands, Systematic Music Theory, Social Work.

GROUP IV

Subjects which may be taken as first-year courses

General Literary Theory and Linguistics, History of Greek Culture, Economic History, Professional Afrikaans, English Special, Statistical Methods, Introduction to Legal Science and History of Law.

A candidate selects his major subjects either from Group I or from Group II. A candidate may be permitted to combine a major subject selected from Group I with a major subject selected from Group II.

A candidate must also complete the semester course in Philosophy of Science which he must attend during the fifth semester, after he has completed the second-year courses in his major subjects.

For certain courses there are compulsory ancillary subjects e.g. a candidate must complete South Sotho I before he can be admitted to Xhosa III, and vice versa.

Bachelor of Arts Honours: B.A. Hons.

Admission requirement: A B.A. degree.

A person may only be admitted as a candidate in a subject taken by him as a major subject for the Bachelor's degree.

Curriculum: At least two consecutive semesters.

The examination consists of not less than four or more than six written papers as well as such practical and oral examinations as the Senate may prescribe.

The B.A. Hons. degree is conferred in one of the following subjects:

Afrikaans, Afrikaans/Nederlands, Anthropology, Classical Languages, Economics, English, French, Geography, General Linguistics, General Literary Theory, German, Greek, Hebrew, History, Industrial Psychology, Latin, Mathematics, Mathematical Statistics, Pedagogics, Philosophy, Political Science, Psychology, Social Work, Sociology, South Sotho, Xhosa.

Master of Arts: M.A.

Admission requirement: A B.A. Hons. degree.

Curriculum: A candidate must undertake an approved course of study or research, or both, for a period of at least two consecutive semesters.

An M.A. degree can be obtained by a dissertation and an oral examination; or a written examination; or both a dissertation and a written or oral examination.

Master of Arts in Clinical Psychology

Admission requirement: A B.A. Hons. degree.

Curriculum: The curriculum comprises five theoretical courses of which three are two semester courses and the other two are one semester courses.

The examination consists of written papers on the courses and a general oral examination on the whole syllabus.

A minimum of one year of full-time practical training is required under supervision of the University Clinic or other approved organizations.

A dissertation on an approved subject in the field of Clinical Psychology is required.

Doctor of Philosophy: D.Phil. or Doctor of Literature: D.Litt.

Admission requirement: Except by permission of the Senate, only the holder of a Master's degree may be accepted as a candidate for a Doctor's degree.

Curriculum: A candidate shall not be admitted to a degree of Doctor before he has been a registered student of the University for at least four consecutive semesters.

A candidate must submit, for the approval of the Senate, a thesis on an approved subject.

A thesis will not be approved unless it makes a contribution to the knowledge or understanding of the subject and affords evidence of originality.

Bachelor of Arts (Youth Leadership)

Admission requirement: As for the ordinary B.A. degree.

Curriculum: Three years of full-time study. The curriculum consists of eleven courses.

One major subject must be selected from Social Work, Pedagogics, Psychology or Sociology and the second major subject must be either Pedagogics or Sociology, the syllabus of which is determined by the choice of the first major subject.

Baccalaureus Artium (Educationis): B.A.(Ed.)

Admission requirement: As for the B.A. degree.

Curriculum: Four academic years. The course is an integrated academic and professional degree course which fulfils all the requirements for the B.A. degree as well as the requirements for the training of teachers.

The degree of B.A.(Ed.) may be obtained with the endorsement Junior Primary Teaching, Senior Primary Teaching or Secondary Teaching.

R H O D E S U N I V E R S I T Y

FACULTY OF ARTS

Degrees

Bachelor of Arts	: B.A.
Bachelor of Arts with Honours	: B.A. (Hons.)
Master of Arts	: M.A.
Doctor of Philosophy	: Ph.D.
Doctor of Literature	: D.Litt.

Diploma

Post-graduate Diploma in Translation: Dip. Trans.

DEGREES

Bachelor of Arts: B.A.

The degree of Bachelor of Arts may be awarded either as an ordinary degree or as an Honours degree.

The ordinary degree

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements in respect of certain courses:

A candidate may not take any course other than an introductory course in English, Latin, Greek, Afrikaans-Nederlands, French, German, Italian or an African language unless he has obtained a pass on the Higher or on the Standard Grade in that subject. In Latin, Greek, French, German, Italian and the African languages, candidates who have not matriculated in these subjects may take an introductory course. If a sufficiently high standard is reached in the examination, the candidates may be permitted to proceed direct to the second course in that language.

Curriculum: A candidate for the ordinary degree must obtain credit in not less than ten courses; he may present himself for examination in not more than four of these in the first year of study, not more than four in the second year of study, and not more than two in the final year of study.

A candidate may present himself for examination in the following subjects:

GROUP A

Afrikaans, Afrikaans/Nederlands, English, French, German, Greek, Hebrew, Italian, Latin, Shona, Southern Sotho, Xhosa, any other approved African language.

GROUP B

Bantu Law, Constitutional Law, Legal Theory.

GROUP C

Anthropology, Economics, Judaica, Linguistics, Logic, Mathematics, Mathematical Statistics, Philosophy, Political Studies (African), Politics, Psychology, Sociology, Statistics, Systematic Theology.

GROUP D

Biblical Studies, Ecclesiastical History, Economic Geography, Geography, History, History and Appreciation of Music, Economic History, Fine Art Practice, Fine Art Studies, General History of Art, Music, Musical Education, Physical Education, Principles of Classical Culture, Religious Studies, Speech and Drama, Visual Communications.

GROUP E

Biological Science, Chemistry, Computing and Applied Mathematics, Geology, Physics.

A candidate must obtain credit in all the required courses in at least two subjects, to be known as major subjects, which shall be selected from the following:

(a) Major subjects in which three courses are required:

Afrikaans/Nederlands, Biblical Studies, Economics, English, Fine Art Studies, French, Geography, German, Greek, Hebrew, History, Latin, Legal Theory, Mathematics, Music, Philosophy, Political Studies (African), Politics, Psychology, Sociology, Southern Sotho, Speech and Drama, Xhosa, another approved African language.

(b) Major subjects in which two courses are required:

Anthropology, Ecclesiastical History, Economic History, Linguistics, Mathematical Statistics, Systematic Theology.

Two African languages may not be offered as the only two major subjects; and Politics and Political Studies (African) may not be offered as the two major subjects.

Industrial Sociology is a second-year course open to students who have passed Sociology I.

The Honours degree: B.A. (Hons.)

Admission requirement: A candidate who has been awarded the ordinary B.A. degree, or has been admitted to the status thereof, may be admitted.

Curriculum: A candidate must attend the University for not less than one academic year and pursue a course of study in his chosen subject.

The Honours degree may be taken in any subject or combination of subjects approved by the Senate.

The subjects are as follows: African Languages, Afrikaans/Nederlands, Anthropology, Biblical Studies (Old Testament or New Testament), Classics, Ecclesiastical History, Economic History, Economics, English, French, Geography, German, Greek, History, Journalism, Latin, Linguistics, Mathematical Statistics, Mathematics, Philosophy, Physical Education, Political Studies (African), Politics and Economics, Politics, Psychology, Sociology, Systematic Theology, a combination of any two approved languages, or a combination of English and History, or a combination of Linguistics and Anthropology.

As an alternative a candidate may be admitted to the course for the Honours degree from the beginning of the third year of study for the ordinary degree. A candidate attends the University for a further period of not less than two academic years and complies with such further requirements as may be prescribed by the Senate.

A candidate who has been awarded the ordinary degree may be admitted to a two-year course to take the Honours and the Master's degree concurrently. At the end of this period, he shall write the full Honours examination, and if successful may submit his Master's thesis at any subsequent date without further attendance requirements.

Master of Arts: M.A.

Admission requirement: Normally, only students holding an Honours degree will be accepted as candidates.

Curriculum: A candidate must attend an approved course of study or research at the University for one year.

The examination consists of a thesis on a subject approved in advance by the Head of the Department concerned, and or such written or oral examination as may be prescribed by the Department concerned.

Doctor of Philosophy: Ph.D.

Admission requirements: A candidate will not be admitted to the degree until at least three years after admission to the degree or status of Bachelor with Honours, or until at least two years after admission to the degree of Master.

Curriculum: A candidate must attend an approved course of special study or research at the University for the period prescribed in the previous paragraph.

A candidate must submit a dissertation on the results of his special study or research.

Doctor of Literature: D.Litt.

Admission requirements: A candidate will not be admitted to the degree until at least five years after admission to the degree or status of Bachelor with Honours, or until at least four years after admission to the degree of Master.

Curriculum: A candidate must submit, for the approval of the Senate, six copies of published work dealing with some subject falling within the scope of the studies represented in the University.

DIPLOMA

Post-graduate Diploma in Translation: Dip. Trans.

Admission requirements: A candidate must have been admitted to a degree approved for the purpose; or have been admitted to the status of such degree; and have satisfied the requirements for the Translation Aptitude Test.

Curriculum: At least one academic year. Candidates for the Diploma are required to work for at least four weeks in an approved institution for translation during the period of study to gain practical experience.

U N I V E R S I T Y O F S O U T H A F R I C A

FACULTY OF ARTS

Degrees

Bachelor of Arts	: B.A.
Honours Bachelor of Arts	: Hons. B.A.
Master of Arts	: M.A.
Master of Arts in Clinical Psychology	: M.A. (Clinical Psychology)
Master of Arts in Counselling Psychology	: M.A. (Counselling Psychology)
Doctor of Literature and Philosophy	: D.Litt.et Phil.
Bachelor of Arts in Police Science	: B.A. (Pol.)

Diplomas

Diploma for Police
Diploma in Bantu Studies

DEGREES

Bachelor of Arts : B.A.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements: For admission to a first degree course in any language except English, Afrikaans and Hellenistic Greek, a pass is required in the corresponding language either on the Higher Grade or on the Standard Grade.

Curriculum: The curriculum extends over at least three years and consists of at least ten courses divided as follows:

First year	: a maximum of five
Second year	: a maximum of four
Third year	: a maximum of three

The curriculum consists of courses in the following subjects:

GROUP A

N.B. Subjects marked with an asterisk * are one-year courses.

(i) Afrikaans en Nederlands, Arabic, Classical Hebrew, English, French, German, Greek, Hellenistic Greek, Italian, Latin, Linguistics, Modern Hebrew-Judaica, Northern Sotho, Portuguese, Practical Afrikaans*, Practical English*, Russian, Southern Sotho, Spanish, Tsonga, Tswana, Venda, Xhosa, Zulu.

In most of these languages one-year Special Courses are offered which are recognized as full degree courses.

(ii) Anthropology, Ancient History*, Communication, Criminology, Economic History*, Economics, Education, Geography, History, History of Art, History of Music, Logic, Mathematics, Native Administration, Philosophy, Political Science, Principles of Greek Culture*, Psychology, Public Administration, Sociology, South African Archaeology, Statistics.

GROUP B

Biblical Studies, Biology*, Constitutional Law*, General Church History, History of Law*, Introduction to the Theory of Law*, Private Law, Public International Law*, Roman Law, Science of Religion*, South African Bantu and Native Law.

Each curriculum must contain at least two major subjects. Major subjects must be chosen from the following:

(a) Major subjects with three courses:

Afrikaans en Nederlands, Anthropology, Arabic, Biblical Studies, Classical Hebrew, Communication, Criminology, Economics, Education, English, French, General Church History, Geography, German, Greek, History, History of Art, History of Music, Italian, Latin, Linguistics, Logic, Mathematics, Modern Hebrew-Judaica, Native Administration, Northern Sotho, Philosophy, Political Science, Portuguese, Private Law, Psychology, Public Administration, Russian, Sociology, Southern Sotho, Spanish, Systematic Theology, Tsonga, Tswana, Venda, Xhosa, Zulu.

(b) Major subject with two courses:

Roman Law.

Honours Bachelor of Arts: Hons. B.A.

Admission requirement: A B.A. degree. Some departments have specific admission and examination requirements.

Curriculum: No student is admitted to the examination unless he has followed an approved course for at least one year.

In most departments the examination may be written in two parts.

The degree may be conferred in the following departments:

Afrikaans en Nederlands Language and Literature, Anthropology, Arabic, Bantu Languages, Biblical Studies, Classical Hebrew, Classics, Communication, Criminology, Economics, English Language and Literature, French Language and Literature, Geography, German Language and Literature, Greek, History, History of Art, Italian Language and Literature, Latin, Linguistics, Mathematics, Modern Hebrew-Judaica, Native Administration, Philosophy, Political Science, Psychology, Public Administration, Russian, Sociology.

Master of Arts: M.A.

Admission requirement: The degree of Honours Bachelor of Arts.

Curriculum: The degree may not be awarded until at least two years after completion of the Bachelor's degree.

The degree may be conferred in the same departments as the Honours Bachelor's degree, with the exception of Biblical Studies.

The examination consists of written papers and/or a dissertation, or of a dissertation and an oral examination.

Master of Arts in Clinical Psychology: M.A. (Clinical Psychology)

Admission requirement: The degree of Honours Bachelor of Arts in Psychology.

Curriculum: Two years. The course comprises three sections, viz the theoretical course, the practical course and a dissertation.

Upon completion of the course prospective candidates may apply for a one-year internship at various hospitals. A one-year internship is a prerequisite for those who intend to register as clinical psychologists with the Medical Council.

Master of Arts in Counselling Psychology: M.A. (Counselling Psychology)

Admission requirement: The degree of Honours Bachelor of Arts in Psychology.

Curriculum: Three years. The course embraces a theoretical and a practical section as well as a dissertation.

In order to be registered as a counselling psychologist with the South African Medical and Dental Council, an internship must also be completed at an approved institution.

Doctor of Literature and Philosophy: D. Litt. et Phil.

Admission requirements: A candidate must have obtained the Master's degree and have given satisfactory proof of his proficiency in the field of study selected.

Curriculum: A thesis deals with a topic in a subject in which the Master's degree was taken and may not be submitted for examination until two years after completion of the M.A.

Bachelor of Arts in Police Science: B.A. (Pol.)

Admission requirement: As for the B.A. degree.

Curriculum: Three years. The major subjects are Criminology III (including Police Science) and one of the following: Psychology, Sociology, Political Science, Native Administration, Public Administration, Communication, Economics, Anthropology.

DIPLOMAS

Diploma for Police

Admission requirement: Standard 10 Certificate. The Diploma is intended for Police.

Curriculum: Three years. The curriculum comprises, inter alia, the following subjects: Native Administration or Public Administration, Criminal Procedure, Law of Evidence, Interpretation of Statutes, Sociology, Criminology, English or Afrikaans.

Diploma in Bantu Studies

Admission requirement: Standard 10 Certificate.

Curriculum: The student must complete eight courses, but he may not take more than five courses in any single year. The courses comprise, inter alia, a Bantu language, Anthropology and Native Administration.

UNIVERSITY OF THE WITWATERSRAND

FACULTY OF ARTS

Degrees

Bachelor of Arts	: B.A.
Bachelor of Arts with Honours	: B.A. Hons.
Bachelor of Philosophy	: B.Phil.
Master of Arts	: M.A.
Master of Arts in Clinical Psychology	: M.A.(Clin. Psych.)
Doctor of Philosophy	: Ph.D.
Doctor of Literature	: D.Litt.

DEGREES

Bachelor of Arts: B.A.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

- (i) 50 per cent in English or Afrikaans or German or a Bantu language on the Higher Grade.
- (ii) A pass on the Higher Grade in two of the following subjects not presented under (i): Afrikaans, Art*, Bantu Language, Biology, English, French, Geography, German, Hebrew, History, Latin, Mathematics, Music**, Physical Science, Physiology.

*Only for admission as a candidate for the degree of B.A. in Fine Arts or (subject to the approval of the Joint Matriculation Board) to the degree of B.A. with the courses Fine Art I, II and III, History of Art I, II and III and Painting Techniques in the curriculum.

**Only for admission as a candidate for the degree of Bachelor of Music.

Curriculum: Three years of full-time study. A student must include in his curriculum at least ten qualifying courses.

A student must include in his curriculum at least two qualifying courses in one of the languages, other than Afrikaans en Nederlands or English, listed below OR at least one qualifying course in each of two of the languages listed below:

Afrikaans (only a single course); Afrikaans en Nederlands; Bantu Language – Southern Sotho, Zulu; English; French; German; Greek; Hebrew; Italian; Latin; Portuguese; Russian.

A student must include in his curriculum at least two courses in one of the subjects listed below OR one course in each of two subjects listed below:

African Government; Archaeology; Biblical and Religious Studies; Classical Life and Thought; Economic History; Economics; Fine Art; Geography; History; History and Appreciation of Music; History of Art; History of Drama; History of Education; History of Music; Industrial Sociology; International Relations; Legal Theory and Institutions; Mathematical Statistics – Applied Mathematics, Computer Science and Mathematical Statistics I; Mathematical Statistics II, III; Mathematics; Philosophy; Phonetics and Linguistics; Political Science; Psychology; Social Anthropology; Sociology.

A student must include in his curriculum either three courses in each of two subjects selected from list A, or three courses in one subject selected from list A and two courses in each of two subjects selected from all the other subjects listed in A and B.

A

Afrikaans en Nederlands; Bantu Language – Southern Sotho, Zulu; Biblical and Religious Studies, Classical Life and Thought, Economic History, Economics, English, Fine Art, French, Geography, German, Greek, Hebrew, History, History of Art, History of Music, Italian, Latin, Legal Theory and Institutions, Linguistics, Mathematical Statistics, Mathematics, Philosophy, Phonetics, Political Science, Portuguese, Psychology, Social Anthropology, Sociology.

B

African Government, Archaeology, History of Drama, Industrial Sociology, International Relations.

A student must not include in his curriculum:

- (a) More than one of the following qualifying courses: Applied Mathematics, Computer Science and Mathematical Statistics I; Astronomy; Botany; Chemistry; Genetics; Geology; Physics; Zoology;
- (b) three courses in more than one of the Bantu Languages;
- (c) the preliminary course in either French, Hebrew, Latin, German, Italian, Portuguese or Russian if it is his home language or if he has attained the matriculation standard in it.

Bachelor of Arts with Honours: B.A. Hons.

Admission requirements: A candidate must have obtained credit in all the qualifying courses prescribed for the Bachelor's degree.

Curriculum: One academic year of full-time study or two academic years of part-time study. The degree may be obtained in one of the following subjects or an approved combination of two such subjects: (A person must have obtained credit in the final course of the subject, or the nearest corresponding subject.)

African Government, African Languages and Linguistics, African Studies, Afrikaans en Nederlands Language and Literature, Applied Economics, Applied Linguistics, Archaeology, Biblical and Religious Studies (Scripture), Biblical and Religious Studies (History and Philosophy of Religions), Classics, Comparative Literature, Comparative Linguistics, Comparative Philology, Economic History, Economics, English Language and Literature, Fine Art, French Language and Literature, Geography, German Language and Literature, Greek, Hebrew, History, History of Art, History of Music, International Relations, Italian Language and Literature, Latin, Linguistics, Mathematical Statistics, Mathematics, Philosophy, Phonetics, Political Science, Portuguese Language and Literature, Psychology, Social Anthropology, Sociology.

The examination at the end of the course is known as the Honours examination and no candidate may repeat an Honours examination.

Bachelor of Philosophy: B.Phil.

Admission requirement: A first degree.

Curriculum: The B.Phil. provides opportunities to pursue advanced interdisciplinary study in topics from more than one Department or more than one Faculty.

The standard is equivalent to that of an Honours degree and the degree qualifies the holder for admission as a candidate for a Master's degree in an appropriate Faculty.

The course extends over a minimum of one year of study after an appropriate four-year Bachelor's degree or a minimum of two years of study after an appropriate three-year Bachelor's degree.

The degree of B.Phil. is offered in two branches in the Faculty of Arts, in the Philosophy of Science and the History of Science and Technology and in African Studies.

In the Faculty of Science it is offered in the branch of Environmental Science. (See p. 143.)

Master of Arts: M.A.

Admission requirements: A B.A.(Hons.) degree. A person who wishes to be admitted as a candidate for the degree must lodge his application in writing with the Registrar, submitting evidence of his academic and general qualifications and indicating the line of research he wishes to prosecute.

Curriculum: A candidate for the degree must prosecute, for at least one academic year, advanced study or research or both, under the guidance of a supervisor appointed by the Senate.

A candidate must present a dissertation on an approved subject.

A candidate may be required to present himself for an examination or test in regard to the subject of his dissertation.

Master of Arts in Clinical Psychology: M.A.(Clin. Psych.)

Admission requirement: A B.A. Hons. degree in Psychology or a B.Sc. Hons. in Psychology.

Curriculum: A candidate for the degree must prosecute for at least two academic years, such full-time advanced study and clinical training as may be determined by the Senate, and also advanced research under the guidance of a supervisor appointed by the Senate.

A candidate must not submit his dissertation for examination until the Senate is satisfied that he has attained a satisfactory standard in his advanced study and clinical training. See also M.A. above.

Doctor of Philosophy: Ph.D.

Admission requirements: An M.A. degree. A person who wishes to be admitted as a candidate for the degree must lodge his application in writing with the Registrar, submitting evidence of his academic and general qualifications and indicating the line of research which he wishes to prosecute.

Curriculum: A candidate must prosecute, during at least two academic years, full-time research in the University under the guidance of a supervisor appointed by the Senate.

A candidate may be required to attend advanced courses of instruction.

A candidate must present a thesis which must constitute a substantial contribution to

the advancement of knowledge in the subject chosen.

A candidate may be required to present himself for an examination or test, oral or written.

Doctor of Literature: D.Litt.

Admission requirements: A candidate must have held the degree of Bachelor of Arts with Honours for at least five years; or the degree of Master of Arts for at least four years; or the degree of Doctor of Philosophy for at least two years.

Curriculum: A candidate must present for the approval of the Senate at least five copies of original published work, or original work accepted for publication, in an approved field. The work must constitute a distinguished contribution to the advancement of knowledge in that field.

V O C A T I O N A L S E R V I C E

N.B. Also read the section "WHAT IS THIS BOOK ABOUT?" in Chapter 1.

A clearly delimited course of study must usually be followed in fields such as B.A. in Librarianship, Social Work, Fine Art, Logopedics, Music, Nursing, Law, Speech Training and Drama and other professional fields. The career possibilities in these fields are dealt with individually in Chapter 6.

As regards the "ordinary" B.A. degree, the main objective is to equip the student with a broad background in the human sciences and yet, to some extent, prepare him or her for an occupational field. A B.A. degree is normally not a professional qualification. It merely offers students opportunities in a number of fields for which and in which they must then equip themselves professionally. However, students can indeed determine their avenues of interest beforehand and choose their subjects in such a way that one or more of these avenues are open to them. They can then gradually specialize in one or another field of study. Some subjects offer no direct occupational study but nevertheless grant access to different occupations, and the combinations of major and subsidiary subjects will, to a large extent, be determined by the student's interest and the broad occupational field which he intends to pursue.

The following is an indication of possible major subjects for a B.A. degree which, in combination with other major or subsidiary subjects, may grant access to some occupational fields. However, it is not possible, and by no means the intention, to indicate fully for each subject the occupational value or possible combinations with other subjects. It will be to the benefit of all intending B.A. students, after a major subject has been decided upon, and with purposeful planning in mind, to choose a second major and subsidiary subjects in consultation with a student guidance officer of the university and possible employers in the particular field. It is important, however, to choose major and subsidiary subjects which have a bearing on one another, because a knowledge of one subject often leads to a better understanding of another.

MAJOR SUBJECT: LANGUAGES

As a subject, a language is not professionally directed, but it does lead to interesting careers. Apart from this fact, the spiritual and cultural moulding rendered by a language is invaluable, because literature is a particularly accessible treasure not only of beauty, but also of wisdom, and a more profound knowledge of a language reveals unsuspected wonders. Someone once said: "With every language acquired, one becomes reborn, obtains a new mind" (Translation).

Languages normally form a good combination with a variety of other subjects, and a course with one or more languages as a basis can usually be planned without difficulty to correspond with the occupation which the student has in mind.

Some of the vocations which can be practised by candidates with training in languages as majors (excluding Bantu Languages) and who included appropriate subsidiaries in their courses, are the following: Librarian, diplomat, guide (tour, etc.), information officer, journalist, committee clerk, copy-writer (advertising), lexicographer, lecturer, announcer and programme compiler, teacher, organiser of training, personnel officer, politician, private teacher, private secretary, proof-reader (non-artisan), publication officer, editor, travel agent, businessman, senior administrative assistant, public relations officer, sociologist, writer (column, etc.), interpreter, actor, publisher (books, periodicals, etc.), export consultant, translator, language officer.

Examples of the most important employers of graduates who majored in languages are most Government departments and the Provincial Administrations, HSRC, CSIR, SABC, Iscor, Posts and Telecommunications, S.A. Railways, S.A. Defence Force, municipalities, universities, schools, colleges, aviation and other travel agencies, insurance companies, commerce and industry, libraries, publishing firms, advertising agencies, the film industry and international companies.

Note: Candidates should bear in mind that for many of the vocations mentioned above, employers may require further study or training and/or suitable experience.

Occupational value of some language subjects

Afrikaans-Nederlands and English

As Afrikaans and English are the two official languages of the country, they are understandably of particular occupational value. Consequently one or more courses in them is essential for a variety of occupations.

Announcer and programme compiler (Afrikaans, English, other languages, including Bantu languages, Speech and Drama, Music)

The SABC offers employment to graduates in a variety of divergent fields, for example in administration, the programme section, Springbok Radio and regional services, Radio Bantu and the section for foreign services. It is expected, furthermore, that the SABC will employ many graduate men and women to make provision for effective television programmes. However, intending B.A. candidates (male and female) who are interested in a career in broadcasting, must make sure of a suitable subject combination. More information about this may be obtained from the Regional Manager, SABC, at one of the following addresses: P.O. Box 962, Pretoria, 0001; P.O. Box 2551, Cape Town, 8000; P.O. Box 122, Grahamstown, 6140; P.O. Box 321, Windhoek, 9100; P.O. Box 563, Bloemfontein, 9300; P.O. Box 1588, Durban, 4000. Enquiries may also be directed to: The Head, Personnel Administration, SABC, P.O. Box 8606, Johannesburg, 2000 OR The Deputy Director, General Services, P.O. Box 4559, Johannesburg, 2000.

Also see p. 223.

Committee Clerk (Afrikaans, English, Communication, other B.A. subjects and, where possible, Typing)

Various bodies and firms employ women as committee clerks. Although basically their duties are similar, there are particular differences owing to the nature and requirements of the body employing them. Consequently some employers are satisfied with a Standard 10 Certificate as qualification for a Committee Clerk, although others, such as, for example, the SABC, require a B.A. degree. Normally this career demands that women be completely bilingual, with a sound knowledge of English in particular in cases where employers have liaison with overseas countries. The work is interesting and varied, and has the advantage for a young woman that she may return to her occupation after marriage.

Drama work (Afrikaans, English, Speech and Drama)

Also see p. 297.

Editorial work (Afrikaans, English, Communication, Psychology, Sociology, History)

Appropriate experience in journalistic and newspaper or magazine work (in addition to a

degree) is normally required for appointment as an editor. Numerous opportunities for this exist in the private sector, publishing firms as well as the Government Departments of Information, Agricultural Technical Services, National Education, Sport and Recreation and Defence.

Also see p. 44.

Education (Afrikaans, English, History, other languages, other school subjects)

See Chapter 5.

Foreign Service Officer (Diplomat) (Afrikaans, English, French, Economics and certain Law subjects)

The South African diplomatic corps is administered by the Department of Foreign Affairs and is responsible for promoting good international relations.

Foreign missions can be embassies, legations, consulates-general or consulates with such functions as the following: Representation, political and economic duties, commercial functions, consular and shipping obligations, information functions, conference work, liaison, agreements and treaties. Approximately the same functions are covered in the head-office at Pretoria by the following main functional divisions: The Africa Division, Political Division, Consular Division, Protocol Division and Administrative Division.

The qualification for appointment as a diplomat is a recognized university degree that includes courses in Economics and Jurisprudence. Knowledge of foreign languages such as French, for example, is a great advantage. Promotion takes place on the basis of merit as vacancies arise.

Information Officer (Afrikaans, English, Journalism (Communication), Political Science, Economics, History, modern languages such as French, German and Spanish, Bantu languages)

Graduates (male and female) who have a combination of the above-mentioned subjects at their command, are employed by the Department of Information to be further trained as information officers in the foreign and home information services of this Department. A talent for personal liaison is one of the most important qualities which an Information Officer should have. Equally important are: an aptitude for writing and for acquiring languages; an extensive knowledge of the country and its problems; a striking personality; enthusiasm, self-control and patience. National problems and government policy must be conveyed correctly and efficiently.

There are attractive opportunities of promotion for the Information Officer who performs meritorious work and who improves his/her qualifications by further study. The normal order of promotion is as follows: Information Officer, Senior Information Officer, Chief Information Officer, Controller of Information and Senior Controller of Information.

Journalistic work (Afrikaans, English, other languages, Communication, History, Speech and Drama)

Also see p. 228.

Language Officer/Translator (Afrikaans, English, foreign languages such as German, French, Italian, Portuguese)

The language service of the Public Service is supplied by the Language Services Bureau of the Department of National Education and the Language Services divisions of the four Provincial Administrations and the Administration of South-West Africa.

The Language Services Bureau is responsible for translating and editing the language of official publications of all Government departments; for translations from foreign languages into the official languages for Government departments and for the development of the terminology required for publications in the different specialized fields

of the work of these departments. In order to execute these functions, the Bureau is divided into four sections: Afrikaans, English, Foreign Languages and Terminology.

A Translator - or Language Officer, as he is known in the Language Services Bureau - renders a particular service to the inhabitants of the country. The occupation is suitable for men and women and post-graduate studies are always encouraged. The promotion ranks in the Public Service are at present: Senior Language Officer, Chief Language Officer, Assistant Director (Afrikaans, English or Terminology) and Director of the Language Services Bureau.

Bilingualism and the correct use of the two official languages are, however, becoming an increasing requirement and the demand for qualified translators will consequently increase. Most organizations which serve the public, continuously require the services of Translators. These bodies and organizations are, for example, the HSRC, CSIR, Iscor, Unisa, the SA Railways, SABC, large municipalities, several control boards, publishing firms, insurance companies and many other private institutions.

Library work (Afrikaans, English, Library Science, other modern languages)

Also see p. 261.

Organiser of Training/Training Officer (Afrikaans, English, Public Administration, Political Science, Anthropology and subjects covering the natural sciences, economic sciences and law)

When a person has been newly appointed to a post, he can hardly be expected to accomplish his task effectively from the very outset. Therefore the training of personnel has become a primary function of almost every organization. For the effective functioning of the Government machine, for instance, it was essential to appoint full-time Organisers of Training in the Office of the Public Service Commission and full-time Training Officers in all the larger departments and administrations.

The field of the Organisers of Training is exceptionally wide. Apart from numerous other duties, they are responsible for advising and rendering aid to departmental heads, other senior personnel, departmental training officers and instructors. They do liaison work on senior level with departments, organize training, develop new courses, train training officers, do research on aspects of training and so forth.

The departmental Training Officers in their turn do in broad outline for a department what the Organisers of Training do for the Public Service in general.

It is evident that these posts impose high demands as regards self-development. Furthermore, those interested should have a sound knowledge of the functioning of the Government machine. Consequently preference is given to those with appropriate experience and academic qualifications and who have the necessary aptitude, as established by selection procedures. Although recent graduates can therefore not expect to be appointed to one of these posts, they nevertheless offer an ideal objective which may be achieved in time.

Good opportunities for promotion are available to Organisers of Training as well as Training Officers, since after a time they may be taken up in departments in positions where broad insight is of importance.

Personnel Officer (Public Service) (Afrikaans, English, Economics, Public Administration, Political Science, Sociology, Psychology/Industrial Psychology)

Looking after the interests of personnel in the Public Service (and utilizing their services) is known as personnel administration. The Public Service Commission is the central body responsible for the personnel policy of the entire Public Service. Every Government department in its turn has a personnel section which serves as liaison between that department and the Public Service Commission.

The majority of the personnel sections, which together with other sections usually form the head office of a department, are based in Pretoria, but are also found in

Cape Town, Bloemfontein, Pietermaritzburg and Windhoek. For persons attached to personnel administration there are numerous opportunities for self-improvement and achievement. Junior personnel receive effective guidance, while induction and supervisor's training courses are offered to officers to better equip them for their tasks.

Personnel officers have practically unlimited opportunities for promotion. They can compete for promotion in all departments and by doing efficient work may obtain posts of high responsibility in the Public Service.

Also consult Tertiary Training.

Politician (Afrikaans, English, Political Science, History, Anthropology, Economics)

Private Secretary (Afrikaans, English, Speech and Drama, Communication, secretarial courses outside the university)

Also consult Tertiary Training.

Professional Officer (Publications) (Afrikaans, English, Journalism, Psychology, Sociology or the degree B.Sc.(Agric.))

In performing its task of research and guidance, the Department of Agricultural Technical Services makes frequent use of publications and other communication media to disseminate information among farmers. This publication service is undertaken by the special Division of Agricultural Information, in which the activities are divided among five sections, viz: pamphlets, the agricultural radio service, news services, audio-visual services and popular magazines. Professional Officers (Publications) are appointed to all these sections to fill the posts of journalists, sub-editors, radio officers and audio-visual officers.

In addition to in-service training, the professional officers are also enabled to pursue post-graduate studies during their time of service. For the devoted officer there are practically no restrictions in his advancement to the post of Director of the Division or even higher.

Public Relations work (Afrikaans, English, Speech and Drama, Sociology, Psychology, Communication)

Also see p. 228.

Also consult Tertiary Training.

Senior Administrative Assistant (Public Service)
(Afrikaans, English, Economics, Roman Law, Public Administration, Political Science)

Graduates who have an appropriate B.A., B.Admin. or B.Com. degree may be appointed in the Public Service as Senior Administrative Assistants. When they fill the higher administrative posts, they will daily have to investigate matters, carry on negotiations, give orders, take decisions and write memoranda and reports. Newcomers are trained by experienced personnel. They attend an induction course and the more senior officers attend a course on the principles of supervision.

Because of the large variety of duties to be performed, there are administrative personnel scattered in offices all over the country as well as overseas. Thus there is the opportunity to appoint people with a diversity of interest fields and qualifications in such a way that they can find complete fulfilment in their occupations.

Administrative personnel have much scope for promotion. At an early stage in his career the able person is given a position of responsibility in which he can fully realise his personal aptitude and in which his potential may be used to the best advantage. Promotion to higher ranks is not limited to one department only, but candidates may compete for senior positions in other departments as well. A position of high responsibility may eventually be reached in the Public Service. The normal ranks of promotion are: Senior Administrative Assistant, Administrative Officer, Administra=

tive Control Officer, Under Secretary, Deputy Secretary, Secretary.

Also consult Tertiary Training.

Bantu languages

In the Republic there are seven Bantu languages which are recognised as written languages and which may be studied at school and university. They are classified together in four groups, viz:

Group:	<u>Nguni</u>	<u>Sotho</u>	<u>Tsonga</u>	<u>Venda</u>
Language:	Zulu Xhosa	Southern Sotho Northern Sotho Tswana	Tsonga	Venda

The mutual differences and similarities between the different languages in one particular group are more or less the same as those between Afrikaans and Dutch. The Nguni and Sotho-speaking people constitute approximately 94 per cent of all Bantu language speakers in the Republic.

There are attractive prospects for students who have studied Bantu languages as subjects for a B.A. degree. The following are examples of careers open to them:

- Education: The four Education Departments and universities as well as the Department of Bantu Education which at present employs approximately 750 White teachers. Subject combination: Bantu Language(s) and Biblical Studies, History, Afrikaans-Nederlands, Geography, German, English, Latin.
- The Administration: Various Government departments such as those of Bantu Administration and Development, Agricultural Technical Services, Justice and Information; HSRC, SA Railways and the Transvaal Board for the Development of Peri-Urban Areas; various municipalities, mines and industries. Posts which may be held are, for example, those of administrators of Bantu Affairs, researchers, labour officers, personnel officers, compound managers, location superintendents, and so forth. Subject combination: Bantu Language(s) and Bantu Law and Administration, Anthropology, Political Science, Public Administration, Sociology.
- Sport and Recreation Officers: The Department of Sport and Recreation; various mines, municipalities and other bodies which employ large numbers of Bantu. Subject combination: Bantu Language(s) and Physical Education, Anthropology, Sociology.
- Personnel and Training Officers: Various large industries, mines, municipalities, the SA Railways, and so forth. Subject combination: Bantu Language(s) and Psychology, Anthropology, Sociology and other appropriate subjects.
- Broadcasting: The section Radio Bantu of the SABC frequently has vacancies for programme organisers, controllers of programmes, news compilers, etc. Subject combination: Bantu Language(s) and other languages.
- Advertising, Publishing and Printing Industries, as well as Social Work, Mission and Library Services: Subject combination: Bantu Language(s) and Psychology, Sociology, Anthropology, other languages, Economics.

French

For students who choose French as one of their majors, the best combination is with other majors of linguistic, literary, artistic or historical importance: Afrikaans-Nederlands, English, German, Latin, Communication, History, History of Art, Sociology, Anthropology, Political Science.

Apart from the communication value of French for liaison with, for example, various

Western European countries and a large number of African states, a knowledge of French is particularly useful and sometimes even essential for persons interested in careers such as those of teacher, lecturer, translator, journalist, interpreter, or persons who want to enter fields such as international politics, music, librarianship, broadcasting, business and the foreign service.

German

German as a major subject can be combined with another Western language such as Afrikaans-Nederlands, English or French, or with subjects such as General Linguistics and Literature, History, History of Art, Philosophy, Psychology, Sociology or a classic language (Greek or Latin).

Apart from teachers and lecturers in German, German is also necessary or useful for occupations in the diplomatic and information services, the Language Services Bureau, journalism, librarianship, commerce, and for historians and the music science. In most post-graduate studies German is either essential or extremely useful.

Greek

As a second major with Greek, Latin is in all respects an ideal complement. A modern Western European language, particularly German or French, can also be strongly recommended. In practice, however, (particularly because Greek as a major is studied almost exclusively by prospective theologians) Semitic Languages or Philosophy is mostly chosen as the other major.

A degree with Latin and Greek as majors or subsidiaries can lead to the teaching profession. A knowledge of the Greek language, literature, history, government institutions, religion, philosophy, mythology, art, etc. is a very strong recommendation for a career in broadcasting, the press, librarianship, fine arts and linguistics. Greek is a sine qua non for fields of study such as Theology, Philosophy, Linguistics and Literature.

Latin

The subject Latin involves the study of the classical language of the Romans and the cultural language of Western civilization until approximately 1600. The foundations of Western literature, religion, the Christian church, law, administration, etc. were laid during this period. A study of Latin therefore amounts to a study of the origin and evolution of Western European civilization. It is consequently also a cultural study and not only linguistically orientated.

Latin and Greek form a good combination, but Latin is also a valuable subject together with languages such as Afrikaans-Nederlands, English, French, Italian. Since the field of study is that of early Western civilization, Latin can also be effectively combined with History, Anthropology (in the wider sense), Law subjects, Political Science and Philosophy.

With Latin as a major, a student may qualify for teaching, librarianship and various cultural fields. Latin is also a requirement for some fields of Law, for example, for B.Proc. (Latin up to Std 10 level) and for LL.B. (Latin I).

OTHER MAJOR SUBJECTS FOR B.A.

Anthropology/Ethnology: These two concepts, Ethnology and Anthropology, are allied. As the name implies, Ethnology is concerned with a study of ethnic groups, their ways of life and cultures, what these were like in the past, what they are like today and how they have changed, while Anthropology embraces the total study of man.

As in the case of most other subjects, Anthropology can be taken as a major or subsidiary together with other B.A. majors. It can usually be effectively combined with, for example, the following subjects: Applied Anthropology, Development Administration, Bantu Languages, Bantu Law and Administration, History, Geography, Sociology, Communication, Philosophy, Political Science, Economics, Psychology and Public Administration.

A few fields in which a student with academic qualifications in Anthropology and related

subjects may hope to find a career, are, briefly, the following:

Various Government departments such as those of Bantu Administration and Development (with its various ramifications), Bantu Education (certain professional posts), Community Development, Information, Foreign Affairs and Justice; research institutions such as the Human Sciences Research Council (HSRC); sections for Non-White personnel of large organizations such as the Railways and mining companies; local governments (senior officials such as director or manager of Non-White affairs); Radio Bantu of the SABC (with the accent on knowledge of Bantu languages); the Peri-urban Areas Board; the Africa Institute (limited number of posts); on the staff of the commissioners-general and as researchers in the field of ethnology and anthropology. With the transfer of powers, duties, functions and responsibilities of municipalities in respect of the control and administration of urban locations and Bantu to the authorised institutions, the Bantu Affairs Administration Councils, it can be expected that a large number of highly salaried posts will gradually become available.

Graduates in this field of study must normally be deeply interested in research and should be prepared to continue studying.

Archaeology: Archaeology is concerned with a study of man of the past - since his earliest origin (approximately two million years ago) up to the recent past. Amongst other things the Archaeologist is interested in reconstructing human behaviour and the culture of the past by studying man-made objects which have remained intact on top of and under the surface of the earth.

Archaeology is related to other subjects which also study different aspects of human existence. Subjects such as Anthropology, History, Zoology and Geography are important in this connection, but Archaeology is also linked to subjects in the natural sciences.

Since job prospects in this occupation are so limited, it is imperative that candidates who are interested in it should either equip themselves for another career as well or make a judicious choice of major and subsidiary subjects. Vacant posts are mainly limited to the Archaeological Survey Section of the Department of National Education, a number of museums and a few universities.

Occupational archaeology is a new field and by being equipped for another occupation as well, the person who is trained in archaeology can hold himself in readiness for a possible post, should it become available.

Criminology: In Criminology a study is made of certain aspects of crime manifestation. The most important of these are, for example, what constitutes crime, the incidence of crime, the offender as a person, punishment and treatment of criminals and the prevention of crime. Criminology is consequently closely related to subjects such as Sociology, Psychology, Anthropology, Social Work and Criminal Law, and to a lesser extent to Philosophy (particularly Ethics), Education, Political Science, Economics, and so forth.

A knowledge of Criminology is to a larger or smaller extent of value in all occupations in which crime or the criminal is encountered, such as the legal professions (attorneys, advocates, prosecutors, magistrates, judges, the police and prison services) and in all welfare work performed by private organizations, the Departments of Social Welfare and Pensions and National Education (reform schools). This field of study offers particular scope for research at universities or in the service of the HSRC.

History: Students who want to take History as a major, may, for example, choose a second major or subsidiaries from the following subjects: Afrikaans, English, German, (possibly other languages), Geography, Sociology, Psychology, Anthropology, Economics, Political Science and Philosophy. History is useful even as a subsidiary, because it functions as a link between the human and social sciences.

Although a study of History is not really an occupational study, it is particularly valuable because of its moulding influence and the fact that it treats man in his social context and institutions. It consequently provides a very necessary and sometimes indispensable background for several occupational fields such as broadcasting, foreign service, museums, libraries, journalism and the publishing industry, as well as

politics. Historical knowledge must continuously be transferred to each rising generation. Hence the urgent need of highly trained and well-equipped History teachers and lecturers, as well as writers on History at professional and popular levels. People may also be appointed as Archivists or as professional officers (heraldry) in the Department of National Education or as researchers in the Institute for Historical Research of the HSRC.

Philosophy: Every student is indeed a philosopher. But, even if every student should have a philosophy, Philosophy as such is not studied as a subject by everybody. There is therefore, a difference between philosophy as a view of life and Philosophy as a science compared with other sciences. Whereas subject sciences such as, for example, Botany and Anthropology make a study of the particular world of plants and ethnic groups, Philosophy tries to comprehend the world (cosmos) as an orderly whole (totality).

Philosophy offers a general occupational preparation; it does not supply a particular occupational training. A combination with, inter alia, Political Science, Psychology, Librarianship, Sociology, History, Anthropology, History of Art, Communication, modern and classic languages, is admirably suited for preparing a student for careers such as those of teacher, diplomat, law practitioner, minister, librarian, psychologist, journalist, et cetera.

Political Science: Political Science as a subject science offers opportunity for the study of constitutional affairs and political matters. As a social science it is closely related to some other disciplines and particularly to other social sciences. It is therefore a useful major to take together with subjects such as Industrial Psychology, Economics, Geography, History, Communication, Public Administration, Law subjects, Sociology, Anthropology, Philosophy, et cetera. The reverse is also true: Students who study the above-mentioned subjects, may to advantage include one or more courses in Political Science.

Political Science is mostly studied as a background for a large number of occupational fields in, for example, some Government departments, the Provincial Administrations and local authorities; in education, law, journalism, private concerns, practical politics, broadcasting and librarianship.

Psychology: In brief, Psychology as a subject means the study of all aspects of the behaviour of man. In practice Psychologists study the normal and abnormal behaviour of individuals and groups in order to comprehend and explain their conduct more fully. Different methods are used to obtain as much information as possible. In this way some diseases of the human mind are revealed and cured after effective treatment.

The field of Psychology is exceptionally wide and to become a successful Psychologist, a candidate must be prepared to undertake intensive post-graduate study. Candidates normally specialize in one or more fields and psychologists often combine different sections in practice. The different fields of Psychology are, for example, Clinical Psychology, Educational Psychology, Development Psychology, Industrial and Personnel Psychology, Physiological Psychology, Social Psychology, Pastoral Psychology, Experimental Psychology, Guidance Psychology, Psychometrics, Psychopathology, Personality Psychology and many more.

Psychologists find interesting occupational opportunities with the following: The HSRC; the NIPR; the sections for psychological services of, for example, the Railways, the Defence Force, Iscor, Sasol, the mines and large municipalities; the provincial education departments and Government Departments of Labour, National Education, Prisons and Social Welfare and Pensions; hospitals; church associations; commerce and industry; large business concerns; private practice or clinics; institutions for the mentally ill and mentally deficient; organizations such as the S.A. Vrouefederasie and the Child Welfare and Mental Health Society. Post-graduate training can also lead to appointment as a lecturer at an institution for higher education.

Psychology can be taken as a major for B.A., B.Com. or B.Sc. Depending on the regulations of each university and the interest of the student, Psychology can usually be combined with subjects such as Sociology, Anthropology, Languages, Mathematics, Mathematical Statistics, Social Work, Philosophy, Economics, Physiology, Zoology, Physics and Computer Science.

N.B.: The psychiatrist is not mentioned above because, strictly speaking, he is a medical practitioner who, besides his ordinary medical training, has also received training in the treatment of the mentally ill and specializes in this field.

Public Administration: A wide classification of any government's functions is legislative (political body), executive (administrative body) and judicial (the courts). Viewed in broad outline, there are three sciences involved here, viz Political Science for the political aspect, Public Administration for the executive aspect and Public Law for the constitutional aspect.

Public Administration can therefore be combined to good effect with subjects such as Political Science, Economics, Law subjects, et cetera, and is of particular value, for example, to officers in any public service, law practitioners, politicians, journalists, teachers and everybody who wants to know more about the administration of the country, province, city or institution.

Also see p. 99.

Sociology: Sociology is the science of human relationships: As such, it studies human groups such as the family and social processes and phenomena such as social changes, deviate behaviour, racial friction and migration. From this it is evident that Sociology can be combined effectively with a large number of other subjects such as, for example, Geography, Industrial Psychology, Economics, History, Criminology, Education, Public Administration, Psychology, Political Science, Town and Regional Planning, Anthropology, Mathematical Statistics and Philosophy. Furthermore, Sociology is an essential subject for students who wish to study Social Work and extremely useful also for ministers, teachers, doctors, psychiatrists, personnel officers, jurists and others who work professionally with people.

Sociology can also lead to occupational fields. For this purpose Sociologists can be classified into four occupational categories, viz

- academic sociologists (lecturers at universities),
- research sociologists (those who do full-time research at universities, university research institutes, private concerns, Government departments and government-subsidised organizations),
- administrative sociologists (persons working, for example, in the personnel sections of large industries),
- planning sociologists (persons working in organizations and departments where they are concerned with planning and development).

The largest concentration of research sociologists in South Africa is found in the Institute for Sociological, Demographic and Criminological Research of the Human Sciences Research Council (HSRC) in Pretoria. The five sections of this Institute work together closely but it is clear that specialization is already taking place in sociological research.

Sociologists are also employed by Government Departments such as those of Planning and the Environment, Coloured Relations and Rehoboth Affairs and Social Welfare and Pensions; municipalities, and commerce and industry. However, post-graduate studies are of the utmost importance for the Sociologist to be considered, for example, for a post as researcher or any other senior position.

Also see p. 293.

U N I V E R S I T E I T V A N D I E O R A N J E - V R Y S T A A T

F A K U L T E I T V A N L E T T E R E E N W Y S B E G E E R T E

Grade

Baccalaureus Artium	:	B.A.
Honneurs-Baccalaureus Artium	:	B.A. (Hons.)
Magister Artium	:	M.A.
Doctor Litterarum	:	D.Litt.
Doctor Philosophiae	:	D.Phil.

GRADE

Baccalaureus Artium: B.A.

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standard 10-sertifikaat (Matrikulasie=vrystelling).

Leergang: Drie jaar voltydse studie. Die leergang moet minstens elf kursusse bevat, behalwe waar Liggaamlike Opvoeding een van die hoofvakke is, wanneer slegs tien kursusse nodig is.

'n Leergang moet minstens twee hoofvakke insluit.

Die hoofvakke vir B.A. (Algemene Studierigting) moet uit die volgende gekies word:

Aardrykskunde, Afrikaans en Nederlands, Bybelkunde, Duits, Ekonomie, Frans, Geskiedenis, Grieks, Hebreeus, Italiaans, Kriminologie, Kunsgeskiedenis, Latyn, Maatskaplike Werk, Privaatreg, Romeinse Reg en Regsgeskiedenis, Sielkunde, Sosiologie, Staatsleer, Suid-Sotho, Toegepaste Volkekunde, Volkekunde, Wiskunde, Wysbegeerte, Zulu.

'n Student moet saam met sy hoofvakke sodanige byvakke in 'n leergang insluit en voltooi as wat die universiteit voorskryf.

Elke leergang moet saamgestel word in ooreenstemming met die voorgeskrewe groepering van kursusse.

Die hoofvakke vir B.A. (Besondere Studierigtings) behels -

Biblioteekkunde, Dramakunde en Toneelkunde, Kommunikasiekunde, Liggaamlike Opvoeding, Musiek.

Kyk Hoofstuk 6: Ander Studierigtings en Beroepsmoontlikhede vir dié betrokke leergange.

Honneurs-Baccalaureus Artium: B.A. (Hons.)

Toelatingsvereistes: 'n Student moet voldoen aan al die vereistes van die gewone Baccalaureusgraad. 'n Student kan slegs 'n vak aanbied wat hy as hoofvak vir die gewone Baccalaureusgraad afgelê het.

Die Senaat kan weier om 'n student tot 'n Honneursgraadkursus toe te laat indien hy die bekwaamheid van die student in die betrokke vak onvoldoende ag.

Leergang: Elke kandidaat moet 'n goedgekeurde studiekursus vir minstens een jaar volg.

Aan die einde van die kursus moet 'n student 'n universiteitseksamen aflê en gelyktydig in die hele eksamen slaag. 'n Student kan hom slegs twee keer vir die finale eksamen aanmeld.

Die graad word in die volgende vakke toegeken:

Aardrykskunde, Afrikaans en Nederlands, Afrika-aangeleenthede, Bantoetale, Biblioteekkunde, Bybelkunde, Dramakunde en Toneelkunde, Duits, Ekonomie, Engels, Frans, Geskiedenis, Grieks, Hebreeus, Klassieke Tale, Kommunikasiekunde, Kriminologie, Kunstgeskiedenis, Latyn, Liggaamlike Opvoeding, Musiekwetenskap, Sielkunde, Sosiologie, Staatsleer, Toegepaste Volkekunde, Volkekunde, Wiskunde, Wysbegeerte.

Magister Artium: M.A.

Toelatingsvereistes: 'n B.A. (Hons.)-graad. Die student moet die hoof van die betrokke departement oortuig dat die standaard van sy kennis voldoende is om die werk vir die graad te verrig.

Leergang: 'n Student word tot die Magistergraad toegelaat twee jaar nadat hy die gewone B.A.-graad behaal het.

'n Eksamen vir 'n Magistergraad bestaan uit 'n skriftelike eksamen of 'n verhandeling of albei. Die verhandeling word geskryf onder leiding van die hoof van die betrokke departement.

Die M.A.-graad word in dieselfde vakke as vir die B.A. (Hons.)-graad toegeken.

Doctor Philosophiae: D. Phil. of

Doctor Litterarum: D.Litt.

Toelatingsvereiste: 'n Magistergraad.

Leergang: Die Doktorsgraad word aan geen student toegeken nie voordat drie jaar, of twee jaar, waarvan minstens een jaar uitsluitend aan navorsing of voltydse studie gewy word, na die verkryging van die Magistergraad verstryk het.

Binne één jaar ná registrasie van sy onderwerp, moet die kandidaat 'n doktorale eksamen aflê.

'n Student moet 'n proefskrif vir die Doktorsgraad indien. Elke proefskrif word onder die toesig van die promotor/hulpromotor voorberei. 'n Proefskrif moet 'n oorspronklike bydrae tot die bestaande kennis van die gekose onderwerp lewer.

Die Universiteit bied ook nagraadse studie in Afrika-aangeleenthede aan, nl. op Honours-, Magister- en Doktorsgraadvlak.

U N I V E R S I T E I T V A N P O R T E L I Z A B E T H

FAKULTEIT VAN DIE LETTERE EN WYSBEGEERTE

Grade

Baccalaureus Artium	: B.A.
Baccalaureus Artium Honores	: B.A.Hons.
Magister Artium	: M.A.
Doctor Philosophiae	: D.Phil.
Doctor Litterarum	: D.Litt.
Baccalaureus Artium (Jeugleiding)	
Baccalaureus Artium (Educationis)	: B.A.(Ed.)

GRADE

Baccalaureus Artium: B.A.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes: Vir toelating tot die volgende kursusse, moet 'n kandidaat die standaard in elke geval aangedui, bereik het:

- Professionele Afrikaans I: 'n Slaagsyfer in Afrikaans op die Hoër of die Standaardgraad
- Engels I: 'n Slaagsyfer in Engels op die Hoër of die Standaardgraad
- Duits I: 'n Slaagsyfer van minstens 45 persent op die Hoër Graad of minstens 40 persent indien Duits op Moedertaalvlak geneem is. (Duitssprekende studente se aansoek om toelating sal ad hoc oorweeg word.)
- Latyn I: 'n Slaagsyfer in Latyn op die Hoër of die Standaardgraad
- Wiskunde I of Wiskundige Statistiek I: 'n Slaagsyfer van minstens 40 persent in Wiskunde op die Hoër of die Standaardgraad.

Leergang: Drie jaar voltydse of vier jaar na-uurse studie.

'n Goedgekeurde leergang bestaan uit minstens tien en hoogstens twaalf kursusse. So-danige leergang moet minstens vier kursusse op eerstejaarsvlak, minstens drie kursusse op tweedejaarsvlak en minstens twee kursusse, die hoofvakke, op derdejaarsvlak insluit.

'n Kandidaat stel sy leergang saam uit die volgende vakke:

GROEP I

Vakke wat tot op derdejaarsvlak geneem mag word:

Afrikaans, Afrikaans/Nederlands, Algemene Literatuurwetenskap, Algemene Taalwetenskap, Duits, Engels, Frans, Grieks, Hebreeus, Latyn, Rekenaarwetenskap, Suid-Sotho, Xhosa.

GROEP II

Vakke wat tot op derdejaarsvlak geneem mag word:

Aardrykskunde, Bybelkunde, Ekonomie, Geskiedenis, Musiekgeskiedenis, Pedagogiek, Privaatreg, Psigologie of Bedryfopsigologie, Rekenaarwetenskap, Sosiologie, Staatsleer, Volkekunde, Wiskunde, Wiskundige Statistiek, Wysbegeerte.

GROEP III

Vakke wat tot op tweedejaarsvlak geneem mag word:

Maatskaplike Werk, Nederlands, Sistemitiese Musiekleer.

GROEP IV

Vakke wat tot op eerstejaarsvlak geneem mag word:

Algemene Literatuur- en Taalwetenskap, Ekonomiese Geskiedenis, Griekse Kultuurgeskiedenis, Professionele Afrikaans, Engels Spesiaal, Statistiese Metodes, Inleiding tot die Regswetenskap en Regsgeskiedenis.

'n Kandidaat kies sy twee hoofvakke òf uit Groep I òf uit Groep II of hy kan toegelaat word om 'n hoofvak uit Groep I te kombineer met 'n hoofvak uit Groep II.

'n Kandidaat moet ook die semesterkursus in Wysbegeerte (Wetenskapsleer) voltooi. Hierdie kursus word in die vyfde semester geneem nadat die twee hoofvakke tot op tweedejaarsvlak voltooi is.

GRADE

Baccalaureus Artium: B.A.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasie=vrystelling).

Addisionele vereistes: Vir toelating tot die volgende kursusse, moet 'n kandidaat die standaard in elke geval aangedui, bereik het:

- Professionele Afrikaans I: 'n Slaagsyfer in Afrikaans op die Hoër of die Standaardgraad
- Engels I: 'n Slaagsyfer in Engels op die Hoër of die Standaardgraad
- Duits I: 'n Slaagsyfer van minstens 45 persent op die Hoër Graad of minstens 40 persent indien Duits op Moedertaalvlak geneem is. (Duitssprekende studente se aansoeke om toelating sal ad hoc oorweeg word.)
- Latyn I: 'n Slaagsyfer in Latyn op die Hoër of die Standaardgraad
- Wiskunde I of Wiskundige Statistiek I: 'n Slaagsyfer van minstens 40 persent in Wiskunde op die Hoër of die Standaardgraad.

Leergang: Drie jaar voltydse of vier jaar na-uurse studie.

'n Goedgekeurde leergang bestaan uit minstens tien en hoogstens twaalf kursusse. Sodanige leergang moet minstens vier kursusse op eerstejaarsvlak, minstens drie kursusse op tweedejaarsvlak en minstens twee kursusse, die hoofvakke, op derdejaarsvlak insluit.

'n Kandidaat stel sy leergang saam uit die volgende vakke:

GROEP I

Vakke wat tot op derdejaarsvlak geneem mag word:

Afrikaans, Afrikaans/Nederlands, Algemene Literatuurwetenskap, Algemene Taalwetenskap, Duits, Engels, Frans, Grieks, Hebreeus, Latyn, Rekenaarwetenskap, Suid-Sotho, Xhosa.

GROEP II

Vakke wat tot op derdejaarsvlak geneem mag word:

Aardrykskunde, Bybelkunde, Ekonomie, Geskiedenis, Musiekgeskiedenis, Pedagogiek, Privateereg, Psigologie of Bedryfopsigologie, Rekenaarwetenskap, Sosiologie, Staatsleer, Volkekunde, Wiskunde, Wiskundige Statistiek, Wysbegeerte.

GROEP III

Vakke wat tot op tweedejaarsvlak geneem mag word:

Maatskaplike Werk, Nederlands, Sistematiese Musiekleer.

GROEP IV

Vakke wat tot op eerstejaarsvlak geneem mag word:

Algemene Literatuur- en Taalwetenskap, Ekonomiese Geskiedenis, Griekse Kultuurgeskiedenis, Professionele Afrikaans, Engels Spesiaal, Statistiese Metodes, Inleiding tot die Regswetenskap en Regsgeskiedenis.

'n Kandidaat kies sy twee hoofvakke òf uit Groep I òf uit Groep II of hy kan toegelaat word om 'n hoofvak uit Groep I te kombineer met 'n hoofvak uit Groep II.

'n Kandidaat moet ook die semesterkursus in Wysbegeerte (Wetenskapsleer) voltooi. Hierdie kursus word in die vyfde semester geneem nadat die twee hoofvakke tot op tweedejaarsvlak voltooi is.

Vir sekere kursusse is daar verpligte byvakke wat geneem moet word. bv. 'n Eerstejaarskursus in Suid-Sotho word vereis vir studente wat Xhosa III wil aanbied, en andersom.

Baccalaureus Artium Honores: B.A.(Hons.)

Toelatingsvereiste: 'n B.A.-graad. 'n Persoon kan slegs toegelaat word as kandidaat in 'n vak wat hy as hoofvak vir die Baccalaureusgraad geneem het.

Leergang: Minstens twee opeenvolgende semesters. Die eksamen bestaan uit minstens vier en hoogstens ses geskrewe vraestelle sowel as sodanige praktiese en mondelinge eksamens as wat die Senaat mag voorskryf.

Die B.A. Hons.-graad kan in een van die volgende vakke toegeken word:

Aardrykskunde, Afrikaans, Afrikaans/Nederlands, Algemene Literatuurwetenskap, Algemene Taalwetenskap, Bybelkunde, Duits, Ekonomie, Engels, Frans, Geskiedenis, Grieks, Hebreeus, Klassieke Tale, Latyn, Maatskaplike Werk, Pedagogiek, Psigologie, Bedryfspsigologie, Sosiologie, Staatsleer, Suid-Sotho, Volkekunde, Wiskunde, Wiskundige Statistiek, Wysbegeerte, Xhosa.

Magister Artium: M.A.

Toelatingsvereiste: 'n B.A. Hons.-graad.

Leergang: 'n Kandidaat moet vir 'n tydperk van minstens twee opeenvolgende semesters 'n goedgekeurde kursus van studie of navorsing of albei volg.

'n M.A.-graad kan behaal word deur middel van 'n verhandeling en miskien ook 'n mondelinge eksamen; of 'n geskrewe eksamen; of sowel 'n verhandeling as 'n geskrewe of mondelinge eksamen.

Magister Artium in Kliniese Psigologie

Toelatingsvereiste: 'n B.A. Hons.-graad.

Leergang: Die leergang omvat vyf teoretiese kursusse waarvan drie oor twee semesters strek en die ander twee een semester elk duur.

Die eksamen bestaan uit skriftelike vraestelle oor die kursusse en algemene mondelinge eksamens oor die hele sillabus.

'n Minimum van een jaar se voltydse praktiese opleiding onder toesig by die Universiteitsklinik of goedgekeurde instansies word vereis.

'n Verhandeling oor 'n goedgekeurde onderwerp in die veld van die Kliniese Psigologie word voorgeskryf.

Doctor Philosophiae: D.Phil. of Doctor Litterarum: D.Litt.

Toelatingsvereiste: Behalwe met vergunning van die Senaat kan slegs die houer van 'n Magistergraad as kandidaat vir 'n Doktorsgraad toegelaat word.

Leergang: 'n Doktorsgraad word nie aan 'n kandidaat toegeken alvorens hy vir minstens vier opeenvolgende semesters 'n kandidaat vir sodanige graad aan die Universiteit was nie.

'n Kandidaat moet vir goedkeuring deur die Senaat 'n proefskrif oor 'n goedgekeurde onderwerp voorlê. 'n Proefskrif word nie aanvaar nie tensy dit 'n bydrae tot die kennis van en insig in die vak is en bewys van oorspronklikheid lewer.

Baccalaureus Artium (Jeugleiding)

Toelatingsvereiste: Soos vir 'n gewone B.A.-graad.

Leergang: Drie jaar voltydse studie. Die leergang bestaan uit elf kursusse. Een

hoofvak moet gekies word uit Maatskaplike Werk, Pedagogiek, Psigologie of Sosiologie en 'n tweede hoofvak, Pedagogiek of Sosiologie, waarvan die sillabusse bepaal sal word deur die keuse van die eerste hoofvak.

Baccalaureus Artium (Educationis): B.A.(Ed.)

Toelatingsvereiste: Soos vir die B.A.-graad.

Leergang: Vier akademiese jare. Die leergang is 'n samegestelde akademiese en professionele graadkursus wat voldoen aan al die vereistes vir die B.A.-graad asook aan die vereistes vir die opleiding van onderwysers. Die graad B.A.(Ed.) kan met die endossement Junior Primêre Onderwys, Senior Primêre Onderwys of Sekondêre Onderwys behaal word.

P O T C H E F S T R O O M S E U N I V E R S I T E I T V I R C H R I S T E L I K E
H O Ë R O N D E R W Y S

FAKULTEIT LETTERE EN WYSBEGEERTE

Grade

Baccalaureus Artium	:	B.A.
Baccalaureus Philosophiae	:	B.Phil.
Honneurs Baccalaureus Artium	:	Honns. B.A.
Magister Artium	:	M.A.
Doctor Litterarum	:	D.Litt.
Doctor Philosophiae	:	D.Phil.

Diplomas

Laer Universiteitsdiploma in Bantoeïstiek: L.U.D. Bant.

Universiteitsdiploma in Bantoeïstiek: U.D. Bant.

GRADE

Baccalaureus Artium: B.A.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standerd 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar. 'n Student moet in minstens elf kursusse slaag, welke kursusse verdeel moet word tussen minstens vyf vakke. 'n Leergang sluit minstens twee hoofvakke in, in elk waarvan minstens twee of drie volle kursusse gevolg moet word. Die finale kursusse in minstens twee hoofvakke moet nie voor die derde jaar gevolg word nie.

'n Student kan hom vir eksamen in vakke uit die volgende groepe aanmeld:

GROEP A

(i) Hoofvakke en byvakke

Afrikaans-Nederlands, Algemene Taal- en Literatuurwetenskap, Bantoetale, Duits, Engels, Frans, Grieks, Latyn, Portugees, Semitiese Tale, Spraak- en Vertolkingskunde.

(ii) Aanvullende byvakke

Afrikaans, Dramakunde, Engels IB, Spesiale Duits, Spesiale Latyn, Spesiale Frans, Spesiale Italiaans.

GROEP B

(i) Hoofvakke en byvakke

Bedryf- en Personeelsielkunde, Bedryfsosiologie, Bybelkunde, Ekonomie, Etiek, Geografie, Geskiedenis, Internasionale Politiek, Kriminologie, Kultuurkunde, Kunstgeskiedenis, Liggaamlike Opvoedkunde, Logika, Musiekgeskiedenis, Naturelle-administrasie, Privaatreg, Psigologie, Romeinse Reg, Sosiologie, Staatsleer, Teorie van Statistiek, Toneelkunde, Volkekunde, Wiskunde, Wysbegeerte.

(ii) Aanvullende byvakke

Antieke Kultuurgeskiedenis, Bantoereg, Biblioteekkunde, Ekonomiese Geskiedenis I, Fisiologie I (slegs wanneer Bedryf- en Personeelsielkunde, Liggaamlike Opvoedkunde, Psigologie of Verpleegkunde as hoofvak geneem word), Geld- en Bankwese, Harmonie en Kontrapunt, Kommunikasiekunde, Maatskaplike Werk, Musiekgeskiedenis en -waardering, Publieke Administrasie I, Regsleer, Staatsreg, Stads- en Streekbeplanning I, Statistiese Metodes.

Vir sommige hoofvakke is daar verpligte byvakke, bv. vir Geografie III moet minstens een kursus in een van die volgende vakke voltooi word: Ekonomie, Geskiedenis, Sosiologie, Volkekunde.

Honneurs Baccalaureus Artium: Honns. B.A.

Toelatingsvereistes: 'n B.A.-graad. Die vak van 'n Honneurskursus moet een wees wat die student as 'n hoofvak vir die B.A.-graad voltooi het.

Leergang: Die student moet 'n goedgekeurde kursus vir minstens een akademiese jaar aan die Universiteit bywoon. 'n Student kan hom slegs een keer vir die finale eksamen aanmeld.

Die Honneursgraad kan in die volgende afdelings verleen word:

Afrikaans-Nederlandse Taal en Lettere, Algemene Taal- en Literatuurwetenskap, Bantoe-tale, Bedryf- en Personeelsielkunde, Bedryfsosiologie, Biblioteekkunde, Bybelkunde, Duitse Taal en Lettere, Ekonomie/Geld- en Bankwese, Engelse Taal en Lettere, Franse Taal en Lettere, Geografie, Geskiedenis, Grieks, Internasionale Politiek, Klassieke Tale, Kommunikasiekunde, Kultuurkunde, Kunstgeskiedenis, Latyn, Liggaamlike Opvoedkunde, Maatskaplike Werk, Naturelle-administrasie, Psigologie, Romaanse Tale, Semitiese Tale, Sosiologie, Spraak- en Vertolkingskunde, Staatsleer, Toneelkunde, Volkekunde, Wiskunde, Wysbegeerte.

Baccalaureus Philosophiae: B.Phil.

Toelatingsvereistes: 'n Baccalaureusgraad: Met dien verstande dat Wysbegeerte nie een van die hoofvakke is nie.

Leergang: Minstens twee akademiese jare. Die graadkursus word slegs op Saterdag te Potchefstroom aangebied.

Magister Artium: M.A.

Toelatingsvereiste: 'n Honns. B.A.-graad.

Leergang: Die graad word slegs toegeken nadat die kandidaat vir een akademiese jaar 'n goedgekeurde kursus of kursusse van studie of navorsing of albei aan die Universiteit bygewoon het. Die eksamen bestaan uit een of meer vraestelle en 'n verhandeling of skripsie op die gebied van die betrokke vak.

Die graad kan verleen word in dieselfde vakke wat onder Honns. B.A. genoem word. Die graad kan ook verleen word in Stads- en Streekbeplanning, Verpleegkunde en Beeldende Kunste.

Doctor Philosophiae: D.Phil. of

Doctor Litterarum: D.Litt.

Toelatingsvereiste: 'n Magistergraad.

Leergang: 'n Student moet onder toesig van die Universiteit minstens twee jaar lank 'n goedgekeurde program van spesiale studie of navorsing volg in enige vak wat die Senaat goedkeur.

Die eksamen vir die graad bestaan minstens uit 'n proefskrif wat resultate van die kandidaat se studie en navorsing bevat.

'n Proefskrif word nie aanvaar as dit nie 'n besliste bydrae tot die kennis van en insig in die vak is en bewys van oorspronklikheid lewer nie, hetsy deur die vind van nuwe feite, hetsy deur die beoefening van 'n onafhanklike kritiese vermoë.

Die graad is Doctor Philosophiae in die geval van gegradueerdes wat 'n goedgekeurde bydrae gelewer het tot die kennis van Wysbegeerte, Ekonomie, Wiskunde, Geografie, Verpleegkunde of enige verwante vak, en in ander gevalle is dit Doctor Litterarum.

Indien 'n Departement dit nodig ag, kan vir nagraadse Baccalaureusgrade en gevorderde grade van 'n kandidaat 'n sodanige kennis van 'n derde moderne Westerse taal verwag word dat hy maklik werke in daardie taal kan bestudeer.

DIPLOMAS

Laer Universiteitsdiploma in Bantoeïstiek: L.U.D. Bant.

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) of 'n Standaard 10-sertifikaat in die eerste klas behaal.

Leergang: Drie jaar voltydse studie. Die leergang sluit onder andere die volgende vakke in: Volkekunde, Naturelle-administrasie, 'n Bantoe-taal, Geskiedenis van die Bantoe in Suid-Afrika, Bantoe-reg, Die Bantoe in die Westerse beskawing, Bantoe-administrasie en -ontwikkeling.

Universiteitsdiploma in Bantoeïstiek: U.D. Bant.

Toelatingsvereiste: 'n Goedgekeurde Baccalaureusgraad.

Leergang: Minstens een jaar. 'n Kandidaat kies vyf onderwerpe uit 'n aantal aspekte van die Bantoeïstiek soos bv. Materiële kultuur en tegnologie; Religie en lewensbeskouing; Kleding, dieet en huishouding; Musiek; Kontak met die Westerse Kultuur.

U N I V E R S I T E I T V A N P R E T O R I A

FAKULTEIT LETTERE EN WYSBEGEERTE

Grade

Baccalaureus in Lettere en Wysbegeerte	: B.A.
Baccalaureus Honores in Lettere en Wysbegeerte	: B.A. (Hons.)
Magister in Lettere en Wysbegeerte	: M.A.
Magister in Lettere en Wysbegeerte in Kliniese Sielkunde	: M.A. (Kliniese Sielkunde)
Magister in Lettere en Wysbegeerte in Voorligtingsielkunde	: M.A. (Voorligtingsielkunde)
Doktor in Lettere	: D.Litt.
Doktor in Wysbegeerte	: D.Phil.

GRADE

Baccalaureus in Lettere en Wysbegeerte: B.A.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes: (i) 'n Kandidaat moet 'n slaagsyfer in minstens twee van die volgende vakke op die Hoër Graad behaal het: Geskiedenis, Aardrykskunde, Wiskunde, Biologie, Natuur- en Skeikunde, 'n derde taal: Met dien verstande dat waar 'n taal slegs op die Standaardgraad aangebied word, dit vir hierdie doel erken word.

(ii) 'n Kandidaat sal nie tot die kursus Engels IA toegelaat word nie, tensy hy minstens 50 persent in Engels op die Standaardgraad of 'n slaagsyfer in Engels op die Hoër Graad behaal het.

(iii) 'n Kandidaat sal nie tot die kursus Frans IA toegelaat word nie, tensy hy in Frans in die Matrikulasie- of Standaard 10-eksamen geslaag het.

Leergang: Drie jaar. Die leergang, wat minstens elf kursusse moet insluit, word saamgestel uit kursusse in die volgende vakke:

GROEP I

Afrikaans en Nederlands, Duits, Engels, Frans, Grieks, Hebreeus of 'n ander Semitiese taal, Latyn, Sotho, Zoeloe.

GROEP II

Aardrykskunde, Afrikaanse en Nederlandse Kultuurgeskiedenis, Argeologie, Biblioteekkunde, Bybelkunde, Dramakunde, Ekonomie, Geskiedenis, Historiese Pedagogiek, Inligtingkunde, Internasionale Politiek, Kriminologie, Kunstgeskiedenis, Liggaamlike Opvoedkunde, Musiekgeskiedenis, Pedagogiek, Publieke Administrasie, Rekeningkunde, Sielkunde, Sosiologie, Spraakkunde, Spraakwetenskap, Staatsleer, Toneelkunde, Maatskaplike Werk, Toegepaste Volkekunde (Inboorlingadministrasie en ontwikkeling), Volkekunde, Wiskunde, Wiskundige Statistiek, Wysbegeerte.

GROEP III

Bantoereg, Regsleer, Romeins-Hollandse Reg, Romeinse Reg, Staats- en Administratiefreg, Strafreg, Volkereg.

GROEP IV

Biologie, Chemie, Dierkunde, Fisika, Fisiologie, Geologie, Plantkunde, Toegepaste Wiskunde.

Uit groepe I en II moet onderskeidelik minstens een kursus gekies word.

Uit groep III mag nie meer as sewe kursusse gekies word nie.

Uit groep IV mag hoogstens twee kursusse gekies word.

Naas die twee hoofvakke moet elke kandidaat in ten minste nog een vak minstens twee kursusse kies.

'n Kandidaat wat 'n derdejaarskursus in 'n taal kies, moet nog minstens twee ander taal-kursusse aanbied.

Aangesien 'n leeskenis van Duits en/of Frans met die oog op nagraadse studie noodsaaklik is, word, kandidate wat verder wil studeer, aangeraai om Duits I en/of Frans I in te sluit.

Baccalaureus Honores in Lettere en Wysbegeerte: B.A. (Hons.)

Toelatingsvereiste: 'n Baccalaureusgraad.

Leergang: Een jaar.

Die graad word in die volgende vakke toegeken:

Aardrykskunde, Afrikaans, Afrikaanse en Nederlandse Kultuurgeskiedenis, Argeologie, Bantoetale, Bybelkunde, Dramakunde, Duits, Ekonomie, Engels, Frans, Geskiedenis, Grieks, Internasionale Politiek, Kriminologie, Kunstgeskiedenis, Latyn, Publieke Administrasie, Semitiese Tale, Sielkunde, Sosiologie, Spraakwetenskap, Staatsleer, Toegepaste Volkeskunde, Volkekunde, Wiskunde, Wiskundige Statistiek en Wysbegeerte.

Die studie bestaan uit twee dele: Deel I omvat die studie wat aan die eksamen voorafgaan; en deel II is die eksamen (skriftelik of mondeling).

'n Kandidaat mag homself nie sonder toestemming van die Senaat meer as twee keer vir die eksamen aanmeld nie.

Magister in Lettere en Wysbegeerte: M.A.

Toelatingsvereiste: 'n B.A. (Hons.)-graad.

Leergang: 'n Kandidaat moet vir minstens een jaar vir die Magistergraad geregistreer wees. 'n Kandidaat mag sy verhandeling egter voor verstryking van die jaar van registrasie vir beoordeling indien.

Die Magistergraad word in dieselfde studierigting as 'n B.A. (Hons.)-graad toegeken.

Magister in Lettere en Wysbegeerte in Kliniese Sielkunde: M.A. (Kliniese Sielkunde)

Toelatingsvereiste: 'n B.A. (Hons.)-graad in Sielkunde.

Leergang: Die leergang duur twee jaar en bestaan uit een jaar voltydse klasbywoning en praktiese werk; en een verdere jaar voltydse internskap aan 'n inrigting wat vir dié doel deur die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad goedgekeur is; en die indiening van 'n verhandeling.

Magister in Lettere en Wysbegeerte (Voorligtingsielkunde): M.A. (Voorligtingsielkunde)

Toelatingsvereiste: 'n B.A. (Hons.)-graad in Sielkunde.

Leergang: Die graad word toegeken na een jaar voltydse klasbywoning en praktiese werk of twee jaar deeltydse klasbywoning en praktiese werk; en minstens een verdere jaar voltydse internskap aan 'n goedgekeurde inrigting of inrigtings; en die indiening van 'n verhandeling wat handel oor 'n onderwerp wat toepaslik is op Voorligtingsielkunde.

Doktor in Lettere: D.Litt. of

Doktor in Wysbegeerte: D.Phil.

Toelatingsvereiste: 'n Magistergraad. Mits die kandidaat minstens 'n Baccalaureusgraad besit en die betrokke fakulteitsraad van oordeel is dat sodanige kandidaat die peil van 'n Magistergraad bereik het, kan die kandidaat toegelaat word.

Leergang: Die graad word toegeken op grond van 'n proefskrif en 'n eksamen oor die proefskrif. 'n Doktorsgraad word toegeken minstens vier jaar na voltooiing aan al die vereistes vir die Baccalaureusgraad of minstens twee jaar na voltooiing aan al die vereistes vir die Magistergraad.

Wanneer die proefskrif handel oor 'n onderwerp uit die Taal- en/of Letterkunde is die titel van die graad D.Litt. en in alle ander gevalle is die titel D.Phil.

R A N D S E A F R I K A A N S E U N I V E R S I T E I T

FAKULTEIT LETTERE EN WYSBEGEERTE

Grade

Baccalaureus in die Lettere en Wysbegeerte	: B.A.
Honneurs Baccalaureus in die Lettere en Wysbegeerte	: B.A. Hons.
Magister in die Lettere en Wysbegeerte	: M.A.
Doktor in die Lettere en Wysbegeerte	: D.Litt. et Phil.

Diploma

Diploma in Ontwikkelingstudies

GRADE

Baccalaureus in die Lettere en Wysbegeerte: B.A.

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasie=vrystelling).

Addisionele toelatingsvereistes tot kursusse:

- Duits I, Frans I, Latyn I: 'n Slaagsyfer (40 persent) in die ooreenstemmende standerd 10-vak op die Hoër Graad; of

indien 'n kandidaat in die betrokke standerd 10-vak 'n slaagsyfer (minstens $33\frac{1}{3}$ persent) op die Standaardgraad behaal het, kan hy tot die eerstejaarskursus in daardie taal toegelaat word indien hy gedurende die Somertermyn die slotgedeelte van die Universiteit se spesiale kursus volg en 'n slaagpunt behaal; of die spesiale kursus in die betrokke taal aan die Universiteit slaag.

- Wiskunde: 'n Slaagsyfer van minstens 40 persent op die Hoër Graad. Kandidate wat Wiskunde op die Standaardgraad geslaag het, word slegs by uitsondering en nadat 'n toets gestel deur die Departement Wiskunde geslaag is, tot kursusse in Wiskunde toegelaat.

Leergang: Drie jaar voltydse of minstens vier jaar deeltydse studie. 'n Leergang word saamgestel uit 10 of 11 jaarkursusse.

Die graad word in elk van die volgende Leerganggroepe aangebied:

Admissie, Afrikanistiek, Algemeen, Geesteswetenskappe, Kommunikasie, Maatskaplike Werk, Onderwysersopleiding, Ontwikkelingstudies, Regte, Staatswetenskappe, Tale.

'n Student registreer vir 'n Baccalaureusgraad onder 'n bepaalde leerganggroep en sy registrasie en kursuswysigings moet deur die leerganggroepvoorsitter goedgekeur word.

'n Graad Baccalaureus in die Lettere en Wysbegeerte word uit kursusse in die volgende vakke saamgestel:

Administratiefreg, Afrikaans-Nederlands, Praktiese Afrikaans, Algemene Literatuurwetenskap, Algemene Taalwetenskap, Arabies, Bantoe- en Naturellereg, Biblioteekkunde I en II, Bybelkunde, Demografie (slegs nagraads), Duits, Duits Spesiaal, Ekonomie, Etiek, Engels, Praktiese Engels, Frans, Frans Spesiaal, Geografie (Aardrykskunde), Geskiedenis, Grieks, Griekse Kultuurgeskiedenis, Hebreeus, Italiaans, Kommunikasieleer, Kunstgeskiedenis, Latyn, Latyn Spesiaal, Logika, Maatskaplike Werk, Noord-Sotho, Ontwikkelingsadministrasie, Opvoedkunde, Privaatreg, Romeinse Reg, Sielkunde, Sosiologie, Staatsadministrasie, Staatsleer, Staatsreg, Statistiese Metodes, Suid-Afrikaanse Oudheidkunde, Suid-Sotho, Volkekunde, Volkereg, Wysbegeerte, Wiskunde, Wiskundige Statistiek, Zulu.

Verskeie voorvereistes en verpligte byvakke geld vir bepaalde kursusse, bv. vir Sielkunde IIIB is Statistiese Metodes A 'n voorvereiste byvak.

'n Leergang sluit in òf twee primêre hoofvakke òf een primêre plus twee sekondêre hoofvakke. Een versterkte hoofvak mag in plaas van 'n primêre hoofvak geneem word. 'n Primêre hoofvak bestaan uit ses semesterkursusse, waarvan ten minste twee op elke jaarvlak geneem moet word.

'n Sekondêre hoofvak bestaan uit minstens drie semesterkursusse waarvan minstens een semesterkursus op elke jaarvlak geneem moet word.

'n Versterkte hoofvak bestaan uit sewe of agt semesterkursusse waarvan minstens twee op derdejaarsvlak moet wees.

In die leergange vir alle Baccalaureusgrade in die Fakulteit Lettere en Wysbegeerte moet benewens die vereiste kursusse voldoen word aan die vereistes van die kursus Inleiding tot die Universiteitswese en Wetenskapsleer.

Honneurs Baccalaureus in die Lettere en Wysbegeerte: B.A. Hons.

Toelatingsvereistes: 'n Student moet die Baccalaureusgraad verwerf het en die betrokke vak op die vlak van 'n primêre hoofvak geslaag het.

Leergang: Vir voltydse studente duur die Honneursstudie 'n somertermyn en twee semesters; vir deeltydse studente vier semesters en twee somertermyne.

Die eksamen behels minstens vier en hoogstens ses drie-uur-vraestelle. 'n Student wat 'n Honneurseksamen druipt, kan hom slegs met spesiale vergunning van die Fakulteit weer vir die eksamen aanmeld.

Magister in die Lettere en Wysbegeerte: M.A.

Toelatingsvereiste: 'n Student moet die Honneurs Baccalaureusgraad in die betrokke vak verwerf het.

Leergang: Minstens twee semesters. Magisterstudie in Kliniese Sielkunde strek oor twee somertermyne en twee semesters en kan slegs deur voltydse studente gevolg word.

'n Verhandeling word vereis of 'n kort skripsie met 'n studieopgaaf. In gevalle waar 'n eksamen en 'n skripsie vereis word, moet die eksamendeel en die skripsie binne twaalf maande van mekaar afgehandel word.

'n Student wat in 'n Magistereksamen druipt, kan slegs met spesiale vergunning van die fakulteit hom vir 'n tweede keer vir dié eksamen aanmeld.

Doktor in die Lettere en Wysbegeerte: D.Litt. et Phil.

Toelatingsvereiste: 'n Student moet 'n Magistergraad in die betrokke vak verwerf het.

Leergang: Vir voltydse studente duur die studie minstens twee jaar; vir deeltydse studente minstens vier jaar. Die voltydse student moet vir minstens twee jaar voltydse navorsing aan die universiteit of 'n goedgekeurde inrigting doen. Die eksamen bestaan uit die voorlegging van 'n proefskrif wat 'n oorspronklike bydrae tot die kennis van en insig in die vak moet wees. Die student moet voldoende kennis hê van sowel sy navorsingsonderwerp as die betrokke vak in die geheel.

DIPLOMA

Diploma in Ontwikkelingstudies

Toelatingsvereiste: Standaard 10-sertifikaat wat in die eerste klas behaal is.

Leergang: Twee jaar. Die leergang sluit in onder andere die volgende: Ontwikkelingsadministrasie I en II en een uit die volgende: Ekonomie II, vier semesters van Sosiologie, Volkekunde II.

UNIVERSITEIT VAN STELLENBOSCH

FAKULTEIT VAN LETTERE EN WYSBEGEERTE

Grade

Baccalaureus Artium : B.A.
Honneurs-Baccalaureus Artium : Hons.-B.A.
Magister Artium : M.A.
M.A. (Kliniese Sielkunde)
M.A. (Voorligtingsielkunde)
D.Litt.
D.Phil.

Diploma

Diploma in Voorligtingsielkunde

GRADE

Baccalaureus Artium: B.A.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standard 10-sertifikaat (Matrikulasievystelling). In die geval van 'n B.A.-kursus wat Statistiek (halwe kursus) en Wiskunde (halwe kursus) insluit, is 'n slaagsyfer in Wiskunde op die Standaardgraad 'n vereiste.

Leergang: Drie jaar.

Die gewone kursus vir die B.A.-graad omvat gedurende die eerste studiejaar vyf vakke, waarvan drie só gekies behoort te word dat hulle 'n doelmatige inleiding tot die res van die kursus vorm. Die studie gedurende die tweede studiejaar word beperk tot drie vakke wat reeds in die eerste jaar gevolg is. Die studie gedurende die derde studiejaar word aan die hoofvakke gewy, d.w.s. dié twee vakke wat ook in die eerste en tweede jaar gevolg is.

Die vakke vir die B.A.-graad word in die volgende groepe verdeel:

GROEP A

Tale: Afrikaans-Nederlands; Afrikaans; Duits; Engels, Frans; Grieks; Italiaans; Latyn; Semitiese Tale; Bantoetale (Xhosa en Suid-Sotho).

GROEP B

Afrikaanse Kultuur- en Volkskunde; Afrika-studie; Algemene Taalwetenskap; Argeologie; Bantoereg en -administrasie; Bybelkunde; Ekonomie; Filosofie; Geografie; Geskiedenis; Klassieke Kultuur; Maatskaplike Werk; Openbare Administrasie; Privaatreg; Sielkunde; Sosiologie; Staatsfilosofie; Staatsleer; Volkekunde.

GROEP C

Beeldende Kunste; Bedryfsekonomie; Biblioteekkunde; Drama; Fisiologie; Liggaamlike Opvoedkunde; Musiek; Rekeningkunde; Romeinse Reg; Statistiese Metodes A; Statistiese Metodes B; Statistiek (halwe kursus); Wiskunde (halwe kursus).

GROEP D

Slegs in buitengewone gevalle deur die Senaat goedgekeur, en onderhewig aan roostermoontlikhede, word 'n vak uit die Fakulteit van Natuurwetenskappe (afgesien van Statistiek (halwe kursus), Wiskunde (halwe kursus) en Fisiologie (onder groep C genoem) vir B.A. toegelaat.

Behalwe in goedgekeurde gevalle, doen die student aan die einde van die eerste jaar eksamen in twee vakke, aan die einde van die tweede jaar in één vak, en aan die einde van die derde jaar in sy twee hoofvakke.

Die vyf eerstejaarsvakke moet gekies word uit ten minste twee van die groepe hierbo vermeld. As die twee hoofvakke uit A gekies word, moet ten minste één byvak uit B gekies word. As die twee hoofvakke uit B of uit B en C gekies word, moet ook ten minste één taal gekies word, behalwe in die geval van B.A. met Liggaamlike Opvoeding en B.A. in Maatskaplike Werk.

'n Hoofvak mag nie uit Groep D gekies word nie.

Honneurs - B.A.

Toelatingsvereistes: 'n Student moet in besit wees van 'n Baccalaureusgraad en moet skriftelik aansoek doen by die Senaat om toelating tot die betrokke Hons. B.A.-kursus.

Leergang: Die voorgeskrewe kursus duur minstens een jaar ná behaling van die Baccalaureusgraad. Studente moet die vereiste eksamen slaag aan die einde van die jaar.

Magister Artium: M.A.

Toelatingsvereistes: 'n Student moet in besit wees van 'n Honneursgraad en moet skriftelik aansoek doen by die Senaat om toelating tot die betrokke M.A.-kursus.

Leergang: Studente volg 'n goedgekeurde leergang van navorsing en/of gevorderde studie van ten minste een jaar ná behaling van die Honneursgraad aan die Universiteit of op 'n ander goedgekeurde plek.

'n Bevredigende verhandeling moet ingelewer word.

Vir die Hons.-B.A. en M.A.-kursus word voortgesette studie in een van die hoofvakke vir B.A. vereis. Die M.A.-kursus kan direk na die B.A.-kursus gevolg word. Dit duur dan twee jaar en studente moet 'n goedgekeurde leergang van ten minste twee jaar volg, in die voorgeskrewe eksamen slaag, en 'n bevredigende verhandeling inlewer.

M.A. (Kliniese Sielkunde)

Toelatingsvereiste: Soos vir M.A.-graad.

Leergang: Gevorderde studie in die volgende rigtings: Persoonlikheidsielkunde, Diagnostiese toetsing, Psigopatologie, Psigoterapie.

'n Bevredigende werkstuk, die onderwerp waarvan in oorleg met die Hoof van die Departement gekies is.

'n Voltydse internskap van 12 maande by die Stikland-hospitaal.

Finale eksamen aan die einde van die internskap.

M.A. (Voorligtingsielkunde)

Toelatingsvereistes: Studente moet in besit wees van 'n Honneurs-B.A.-graad met Voorligtingsielkunde en moet reeds in betrekking staan waar hulle sielkundige voorligtingswerk verrig, byvoorbeeld as diensdoende sielkundiges, sielkundiges in die Departement van Arbeid, in Maatskaplike Dienste, en moet skriftelik aansoek doen om toelating tot die betrokke kursus.

Leergang: Drie jaar deeltydse studie. Gevorderde werkstukke moet ingedien word.

Doktorsgraad: D.Phil. of D.Litt.

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n Magistergraad of 'n toereikende standaard van bekwaamheid in sy bepaalde studierigting op 'n ander wyse bereik het. Studente moet skriftelik aansoek doen om toelating.

Leergang: Die student moet vir minstens twee jaar lank vir 'n Doktorsgraad aan die Universiteit ingeskryf wees.

'n Proefskrif word van elke kandidaat vereis. Die proefskrif moet oorspronklike navorsing van die kandidaat oor een of ander vraagstuk in verband met sy hoofvak behels.

'n Mondelinge eksamen word in die reël vereis, maar in spesiale gevalle kan vrystelling verleen word.

DIPLOMA

Diploma in Voorligtingsielkunde

Toelatingsvereiste: Gegradeerde persone met Voorligtingsielkunde III wat reeds in 'n betrekking staan waar hulle sielkundige voorligtingswerk verrig, word toegelaat.

Leergang: Drie jaar deeltydse studie. Gedurende die jaar moet 'n voorgeskrewe leesprogram deurgewerk word en werkstukke in die vorm van navorsingsprojekte van beperkte omvang moet voltooi word. Daar moet twee keer per jaar, vir twee weke op 'n keer, intensiewe kursusse aan die Universiteit bygewoon word.

U N I V E R S I T E I T V A N S U I D - A F R I K A

FAKULTEIT LETTERE EN WYSBEGEERTE

Grade

Baccalaureus Artium	: B.A.
Honneurs-Baccalaureus Artium	: Hons.-B.A.
Magister Artium	: M.A.
Magister Artium in Kliniese Sielkunde	: M.A. (Kliniese Sielkunde)
Magister Artium in Voorligtingsielkunde	: M.A. (Voorligtingsielkunde)
Doctor Litterarum et Philosophiae	: D.Litt. et Phil.
Baccalaureus Artium (Polisiekunde)	: B.A. (Pol.)

Diplomas

Diploma vir Polisie

Diploma in Bantoekunde

GRADE

Baccalaureus Artium: B.A.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes: Vir toelating tot 'n eerste graadkursus in enige taal behalwe Afrikaans, Engels en Hellenistiese Grieks, word 'n slaagsyfer in die ooreenstemmende taal op die Hoër of die Standaardgraad vereis.

Leergang: Die leergang duur minstens drie jaar en bestaan uit minstens tien graadkursusse wat soos volg verdeel word:

Eerste jaar	: hoogstens vyf
Tweede jaar	: hoogstens vier
Derde jaar	: hoogstens drie

Die leergang word uit kursusse in die volgende vakke saamgestel:

GROEP A

LET WEL: Vakke met 'n sterretjie * gemerk is eenjarige kursusse.

- (i) Afrikaans en Nederlands, Arabies, Duits, Engels, Frans, Grieks, Hellenistiese Grieks, Italiaans, Klassieke Hebreeus, Latyn, Linguistiek, Moderne Hebreeus-Judaica, Noord-Sotho, Portugees, Praktiese Afrikaans*, Praktiese Engels*, Russies, Spaans, Suid-Sotho, Tsonga, Tswana, Venda, Xhosa, Zulu.

In meeste van dié tale word ook eenjarige Spesiale Kursusse aangebied wat as volwaardige graadkursusse erken word.

- (ii) Aardrykskunde, Antieke Geskiedenis*, Beginself van die Griekse Kultuur*, Ekonomie, Ekonomiese Geskiedenis*, Geskiedenis, Kommunikasiekunde, Kriminologie, Kunstgeskiedenis, Logika, Musiekgeskiedenis, Naturelle-administrasie, Opvoedkunde, Publieke Administrasie, Sielkunde, Sosiologie, Staatsleer, Statistiek, Suid-Afrikaanse Oudheidkunde, Volkekunde, Wiskunde, Wysbegeerte.

GROEP B

Algemene Kerkgeskiedenis, Biologie*, Bybelkunde, Godsdienswetenskap*, Inleiding tot die Regswetenskap*, Privaatreg, Regsgeskiedenis*, Romeinse Reg, Sistematiese Teologie, Staatsreg*, Suid-Afrikaanse Bantoe- en Naturellereg, Volkereg*.

Elke leergang bevat minstens twee hoofvakke. Die hoofvakke word uit die volgende gekies:

- (a) Hoofvakke met drie kursusse:

Aardrykskunde, Afrikaans en Nederlands, Algemene Kerkgeskiedenis, Arabies, Bybelkunde, Duits, Ekonomie, Engels, Frans, Geskiedenis, Grieks, Italiaans, Klassieke Hebreeus, Kommunikasiekunde, Kriminologie, Kunstgeskiedenis, Latyn, Linguistiek, Logika, Moderne Hebreeus-Judaica, Musiekgeskiedenis, Naturelle-administrasie, Noord-Sotho, Opvoedkunde, Portugees, Privaatreg, Publieke Administrasie, Russies, Sielkunde, Sistematiese Teologie, Sosiologie, Spaans, Staatsleer, Suid-Sotho, Tsonga, Tswana, Venda, Volkekunde, Wiskunde, Wysbegeerte, Xhosa, Zulu.

- (b) Hoofvak met twee kursusse:

Romeinse Reg.

Honneurs-Baccalaureus Artium: Honns.-B.A.

Toelatingsvereiste: 'n B.A.-graad.

Sommige departemente het besondere toelatings- en eksamenvereistes.

Leergang: Geen student word tot die eksamen toegelaat nie tensy hy 'n goedgekeurde leergang gedurende minstens een jaar gevolg het.

In die meeste departemente kan die eksamen in twee dele afgelê word.

Die graad word in die volgende departemente toegeken:

Aardrykskunde, Afrikaanse en Nederlandse Taal en Lettere, Arabies, Bantoetale, Bybelkunde, Duitse Taal en Lettere, Ekonomie, Engelse Taal en Lettere, Franse Taal en Lettere, Geskiedenis, Grieks, Italiaanse Taal en Lettere, Klassieke, Klassieke Hebreeus, Kommunikasiekunde, Kriminologie, Kunstgeskiedenis, Latyn, Linguistiek, Moderne Hebreeus-Judaica, Naturelle-administrasie, Publieke Administrasie, Russies, Sielkunde, Sosiologie, Staatsleer, Volkekunde, Wiskunde, Wysbegeerte.

Magister Artium: M.A.

Toelatingsvereiste: Die graad Honneurs-Baccalaureus Artium.

Leergang: Die graad word nie toegeken voor minstens twee jaar na behaling van die Baccalaureusgraad nie.

Die graad word in dieselfde departemente toegeken as die graad Honneurs-Baccalaureus, met uitsondering van Bybelkunde.

Die eksamen bestaan uit skriftelike vraestelle en/of 'n verhandeling, of uit 'n verhandeling en 'n mondelinge eksamen.

Magister Artium in Kliniese Sielkunde: M.A. (Kliniese Sielkunde)

Toelatingsvereiste: Die graad Honneurs-Baccalaureus Artium in Sielkunde.

Leergang: Twee jaar. Die kursus behels 'n teoretiese en 'n praktiese gedeelte, sowel as 'n verhandeling.

By voltooiing van die kursus kan voornemende kandidate aansoek by verskeie hospitale doen om 'n internskap van 'n jaar te deurloop. Laasgenoemde is 'n voorwaarde vir diegene wat as kliniese sielkundiges by die Mediese Raad wil registreer.

Magister Artium in Voorligtingsielkunde: M.A. (Voorligtingsielkunde)

Toelatingsvereiste: Die graad Honneurs-Baccalaureus Artium in Sielkunde.

Leergang: Drie jaar. Die kursus behels 'n teoretiese en praktiese afdeling, sowel as 'n verhandeling.

Ten einde by die Suid-Afrikaanse Mediese en Tandheelkundige Raad as voorligtingsielkundige geregistreer te word, moet benewens die M.A.-kursus nog 'n internskap by 'n goedgekeurde instansie gedoen word.

Doctor Litterarum et Philosophiae: D.Litt. et Phil.

Toelatingsvereistes: 'n Kandidaat moet die graad Magister behaal het en bevredigende bewys gelewer het aangaande sy bekwaamheid in die gekose studierigting.

Leergang: 'n Proefskrif handel oor 'n onderwerp in 'n vak waarin die Magistergraad behaal is en kan eers twee jaar na behaling van die M.A. vir eksaminering ingelewer word.

Baccalaureus Artium (Polisiekunde): B.A. (Pol.)

Toelatingsvereiste: Soos vir die B.A.-graad.

Leergang: Drie jaar. Die hoofvakke is Kriminologie III (wat Polisiekunde insluit) en een van die volgende: Sielkunde, Sosiologie, Staatsleer, Naturelle-administrasie, Publieke Administrasie, Kommunikasiekunde, Ekonomie, Volkekunde.

DIPLOMAS

Diploma vir Polisie

Toelatingsvereiste: Standaard 10-sertifikaat. Die Diploma is vir Polisie-amptenare.

Leergang: Drie jaar. Die leergang behels onder andere die volgende vakke: Naturelle-administrasie of Publieke Administrasie, Strafprosesreg, Bewysreg, Uitleg van Wette, Sosiologie, Kriminologie, Engels of Afrikaans.

Diploma in Bantoekunde

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Die student moet agt kursusse voltooi, maar hy mag nie meer as vyf kursusse in een en dieselfde jaar neem nie. Die kursusse behels onder andere 'n Bantoetaal, Volkekunde en Naturelle-administrasie.

BEROEPSDIENS

L.W. Lees ook in Hoofstuk 1 die gedeelte "WAAROR GAAN HIERDIE BOEK?"

Vir studierigtings soos B.A. in Biblioteekkunde, Maatskaplike Werk, Beeldende Kunste, Spraakheelkunde, Musiek, Verpleegkunde, Regte, Spraakleer en Drama en ander professionele rigtings, moet gewoonlik 'n afgebakende leergang gevolg word. Die beroepsmoontlikhede vir hierdie rigtings word afsonderlik in Hoofstuk 6 behandel.

Wat die "gewone" B.A.-graad betref, is die hoofdoel om die student met 'n breë geesteswetenskaplike agtergrond toe te rus, maar darem ook in 'n mate vir 'n beroepsrigting voor te berei. 'n B.A.-graad is normaalweg nie 'n professionele kwalifikasie nie. Dit bied slegs moontlikhede vir studente in 'n aantal rigtings waarvoor en waarin hulle hul dan verder professioneel moet bekwaam. Studente kan egter wel vooraf hul belangstellingsrigtings bepaal en hul vakke so kies dat een of meer van hierdie rigtings vir hulle oop is. Gaandeweg kan hulle dan ook in een of ander vakgebied spesialiseer. Sommige vakke bied geen regstreekse beroepstudie nie maar verleen tog toegang tot verskillende beroepe, en die kombinasie van hoof- en byvakke sal in 'n hoë mate bepaal word deur die student se belangstelling en die breë beroepsrigting wat hy van plan is om te volg.

Die volgende is 'n aanduiding van moontlike hoofvakke vir die B.A.-graad wat in kombinasie met ander hoof- of byvakke, toegang tot sommige beroepsrigtings kan verleen. Dit is egter nie moontlik, en ook geensins die doel om die beroepswaarde of moontlike kombinasies met ander vakke, vir elke vak ten volle aan te dui nie. Indien moontlik, sal dit vir alle voornemende B.A.-studente die moeite loon om, nadat daar op 'n hoofvak besluit is, en met die oog op doelgerigte beplanning, die tweede hoofvak en byvakke te kies in oorleg met die studentevoorligter van die universiteit en moontlike werkgewers op die betrokke gebied. Dit is egter belangrik om hoof- en byvakke te kies wat met mekaar verband hou, want kennis van die een lei dikwels tot beter insigte in die ander.

HOOFVAK: TALE

As vak is 'n taal nie professioneel gerig nie maar lei dit tog tot interessante beroepe. Verder is die geestelike en kulturele vorming daarvan van onskatbare waarde, want die letterkunde is 'n besonder toeganklike skat van skoonheid, maar ook van wysheid, en diepere kennis van die taal onthul onvermoede wonders. Iemand het dit eenmaal só gestel: "Met elke nuwe taal wat 'n mens aanleer, word hy herbore, kry hy 'n nuwe gees."

Tale het normaalweg 'n goeie kombinasiewaarde met 'n verskeidenheid van ander vakke, en 'n leergang met een of meer tale as kern kan gewoonlik sonder probleme beplan word om ooreen te stem met die loopbaan wat die student in gedagte het.

Sommige van die beroepe wat gevolg kan word deur kandidate met opleiding in tale as hoofvakke (Bantoetale uitgesonder) en wat toepaslike byvakke by hul kursus ingesluit het, is die volgende:

Biblioteekaris, diplomaat, gids (toer- ens.), inligtingsbeampte, joernalis, komiteeklerk, kopieskrywer (reklame), leksikograaf, lektor, omroeper en programopsteller, onderwyser, organiseerder van opleiding, personeelbeampte, politikus, privaat onderwyser, privaat sekretaris, proefleser (nie-ambagsrigting), publikasiebeampte, redakteur, reisagent, sakeman, senior administratiewe assistent, skakelbeampte, skrywer (rubriek- ens.), sosioloog, tolk, toneelspeler, uitgewer (boeke, tydskrifte ens.), uitvoerkonsultant, vertaler/taalbeampte.

Van die vernaamste werkgewers wat gegraduateerdes in tale in diens neem, is byvoorbeeld die meeste Staatsdepartemente en die Provinsiale Administrasies, die RGN, die WNNR, die SAUK, Yskor, die Poswese, die SA Spoorweë, die SA Weermag, munisipaliteite, universiteite, skole, kolleges, lugvaart- en ander reisagentskappe, versekeringsmaatskappye, die handel en nywerheid, biblioteke, uitgewersmaatskappye, reklame-agentskappe, uitvoeragente, die filmnywerheid en internasionale maatskappye.

Let wel: Kandidate moet steeds in gedagte hou dat werkgewers vir sommige van die beroepe wat hierbo genoem is, verdere studie of opleiding en/of toepaslike ervaring mag vereis.

Beroepswaarde van sommige taalvakke

Afrikaans-Nederlands en Engels

Aangesien Afrikaans en Engels die twee amptelike landstale is, het dit begryplikerwyse ook besondere beroepswaarde. Vir 'n verskeidenheid van beroepe word een of meer kursusse hierin dan ook as 'n vereiste gestel.

Biblioteekwerk (Afrikaans, Engels, Biblioteekkunde, ander moderne tale)

Kyk ook p. 319.

Buitelandse diensbeampte (Diplomaat) (Afrikaans, Engels, Frans, Ekonomie en sekere Regsvakke)

Die Suid-Afrikaanse diplomatieke diens word deur die Departement van Buitelandse Sake geadministreer en is verantwoordelik vir die bevordering van goeie internasionale betrekkinge. Buitelandse sendings kan ambassades, gesantskappe, konsulate-generaal of konsulate wees, met onder meer die volgende funksies: verteenwoordiging, politieke en ekonomiese pligte, handelsfunksie, konsulêre en skeepvaartpligte, inligtingsfunksie, konferensiewerk, skakeling, verdrae en ooreenkomste. In die hoofkantoor te Pretoria word ongeveer dieselfde funksies gedek deur die volgende hoof funksionele afdelings: Afrika-afdeling, Politieke Afdeling, Konsulêre Afdeling, Protokolafdeling en Administratiewe Afdeling. Aanstellingskwalifikasies vir 'n diplomaat is 'n erkende universiteitsgraad wat kursusse in Ekonomie en die Regte insluit. Kennis van vreemde tale soos byvoorbeeld Frans is 'n groot voordeel. Bevorderings geskied op 'n grondslag van verdienste, na gelang vakatures ontstaan.

Dramawerk (Afrikaans, Engels, Spraakleer en Drama)

Kyk ook p. 386.

Inligtingsbeampte (Afrikaans, Engels, Joernalistiek (Kommunikasiekunde), Staatsleer, Ekonomie, Geskiedenis, Moderne tale soos Frans, Duits en Spaans, Bantoetale)

Gegradueerdes (mans en dames) wat oor 'n kombinasie van genoemde vakke beskik, word deur die Departement van Inligting in diens geneem om verder opgelei te word as Inligtingsbeamptes vir die buitelandse en binnelandse inligtingsdiens van dié Departement. Persoonlike skakelvermoë is een van die belangrikste eienskappe wat 'n Inligtingsbeampte moet besit. Ewe belangrik is 'n vermoë om te kan skryf, om tale te kan aanleer, 'n omvattende kennis van die land en sy probleme, 'n wakker persoonlikheid; geesdrif, selfbeheersing en geduld. Landsvraagstukke en regeringsbeleid moet korrek en doeltreffend oorgedra kan word.

Vir die Inligtingsbeampte wat verdienstelike werk lewer en wat sy/haar kwalifikasies deur verdere studie verbeter, is daar goeie vorderingsgeleenthede. Die normale vorderingsbaan is soos volg: Inligtingsbeampte, Senior Inligtingsbeampte, Hoofinligtingsbeampte, Inligtingskontroleur en Senior Inligtingskontroleur.

Joernalistieke werk (Afrikaans, Engels, ander tale, Kommunikasiekunde, Geskiedenis, Spraakleer en Drama)

Kyk ook p. 350.

Komiteeklerk (Afrikaans, Engels, Kommunikasiekunde, ander B.A.-vakke en, indien moontlik, Tikskrif)

Verskeie instansies en firmas neem dames in diens as komiteeklerke. Hoewel hul pligte basies ooreenstem, bestaan daar tog onderling verskille as gevolg van die aard en behoeftes van die instansie waarvoor gewerk word. Sommige werkgewers is gevolglik tevrede met 'n Standaard 10-sertifikaat as kwalifikasie vir 'n Komiteeklerk, hoewel ander, soos byvoorbeeld die SABS, 'n B.A.-graad as vereiste stel. Normaalweg vereis die beroep dat dames ten volle tweetalig sal wees, met veral 'n deeglike kennis van Engels in gevalle waar werkgewers ook met oorsese lande skakel. Die werk is interessant en afwisselend en hou vir die jong dame dié voordeel in dat sy na haar huwelik gewoonlik tot die beroep kan terugkeer.

Omroeper en programopsteller (Afrikaans, Engels, ander tale, met inbegrip van Bantoe=tale, Spraakleer en Drama, Musiek)

Die SAUK bied werkgeleentheid aan gegradueerdes in 'n verskeidenheid van uiteenlopende rigtings in byvoorbeeld die administratiewe afdeling, programafdeling, Springbokradio en streekdienste, Radio Bantoe en die afdeling eksterne dienste. Hierby word verwag dat die SAUK vir die voorsiening van doeltreffende televisieprogramme, talle gegra= dueerde mans en dames in diens sal neem. Voornemende B.A.-kandidate (mans en dames) wat in 'n loopbaan in die uitsaaiwese belangstel, moet egter seker maak van 'n toepaslike vakkombinasie. Meer inligting hieroor kan verkry word van die Streeksbestuurder, SAUK, by een van die volgende adresse: Posbus 962, Pretoria, 0001; Posbus 255¹, Kaapstad, 8000; Posbus 122, Grahamstad, 6140; Posbus 321, Windhoek, 9100; Posbus 563, Bloem= fontein, 9300; Posbus 1588, Durban, 4000. Navrae kan ook gerig word aan: Die Hoof: Personeeladministrasie, SAUK, Posbus 8606, Johannesburg, 2000 OF Die Adjunk-direkteur, Algemene Dienste, Posbus 4559, Johannesburg, 2000.

Kyk ook p. 360.

Onderwys (Afrikaans, Engels, Geskiedenis, ander tale, ander onderwysvakke)
Kyk Hoofstuk 5.

Openbare skakelwerk (Afrikaans, Engels, Spraakleer en Drama, Sosiologie, Sielkunde, Kommunikasiekunde)

Kyk ook p. 350.

Raadpleeg ook Tersiêre Opleiding.

Organiseerder van Opleiding/Opleidingsbeampte (Afrikaans, Engels, Publieke Administra= sie, Staatsleer, Volkekunde en vakke versprei oor natuurwetenskappe, ekonomiese weten= skappe en regte)

Nadat 'n persoon in 'n pos aangestel is, kan daar nouliks van hom verwag word om sy taak onmiddellik doelgerig uit te voer. Die opleiding van personeel het gevolglik 'n primêre funksie van feitlik elke organisasie geword. Vir die doeltreffende funksionering van die Staatsmasjinerie was dit byvoorbeeld noodsaaklik om poste van voltydse Organiseer= ders van Opleiding in die Kantoor van die Staatsdienskommissie en voltydse Opleidings= beamptes in al die groter departemente en administrasies in te stel.

Die terrein van die Organiseerders van Opleiding is besonder wyd. Benewens talle ander pligte is hulle verantwoordelik vir advies en hulpverlening aan departementshoofde, ander senior personeel, departementele opleidingsbeamptes en instruktors. Hulle ver= rig skakelwerk op senior vlak met departemente, organiseer opleiding, ontwikkel nuwe kursusse, lei opleidingsbeamptes op, doen navorsing oor opleidingsaspekte en so meer.

Die Departementele Opleidingsbeamptes doen op hul beurt vir 'n departement in breë trek= ke wat die Organiseerders van Opleiding vir die breë Staatsdiens doen.

Dit is duidelik dat hierdie poste hoë eise stel met betrekking tot selfontwikkeling. Hierby sal belangstellendes 'n intensiewe kennis van die werking van die Staatsmasjinerie moet hê. Voorkeur word gevolglik verleen aan diegene met toepaslike ondervinding en akademiese kwalifikasies en wat oor die nodige aanleg beskik, soos by wyse van keurings= prosedure vasgestel. Alhoewel pasgegradueerdes dus nie kan verwag om in een van hierdie poste aangestel te word nie, bied dit tog 'n ideale mikpunt wat mettertyd bereik kan word.

Die vorderingsgeleenthede vir Organiseerders van Opleiding sowel as dié van Opleidings= beamptes is goed, aangesien hulle na 'n tydperk weer in departemente opgeneem word in poste waar breë insig van belang is.

Personeelbeampte (Staatsdiens) (Afrikaans, Engels, Ekonomie, Staatsadministrasie, Staatsleer, Sosiologie, Sielkunde/Bedryfsielkunde)

Die behartiging van die belange van personeel in die Staatsdiens (en die aanwending van hul dienste) staan bekend as personeeladministrasie. Die Staatsdienskommissie is die sentrale liggaam wat die personeelbeleid vir die hele Staatsdiens bepaal. Elke Staats= departement beskik op sy beurt oor 'n personeelafdeling wat as skakel dien tussen die

departement en die Staatsdienskommissie.

Die meerderheid van die personeelafdelings, wat saam met ander afdelings gewoonlik die hoofkantoor van 'n departement vorm, setel in Pretoria, maar word ook in Kaapstad, Bloemfontein, Pietermaritzburg en Windhoek aangetref. Vir diegene verbonde aan personeeladministrasie bestaan daar talle geleenthede vir selfverbetering en -verwesenliking. Junior personeel ontvang doeltreffende leiding, terwyl inlywingskursusse en toesighoudingskursusse aangebied word om beampptes beter vir hul take toe te rus.

Vorderingsgeleenthede vir personeelbeampptes is feitlik onbeperk. Hulle kan in alle departemente meeding om bevordering en deur bekwame dienslewering kan 'n baie verantwoordelike posisie in die Staatsdiens bereik word.

Raadpleeg ook Tersiêre Opleiding.

Politikus (Afrikaans, Engels, Staatsleer, Geskiedenis, Volkekunde, Ekonomie)

Privaat Sekretaris(esse) (Afrikaans, Engels, Spraakleer en Drama, Kommunikasiekunde, sekretariële kursusse buite die universiteit)

Raadpleeg ook Tersiêre Opleiding.

Redaksionele werk (Afrikaans, Engels, Kommunikasiekunde, Sielkunde, Sosiologie, Geskiedenis)

Benewens 'n graad word gewoonlik ook toepaslike ervaring in joernalistiek en koerant- of tydskrifwerk vir aanstelling as 'n redakteur vereis. Hiertoe word talryke geleenthede gebied deur die private sektor (uitgewersmaatskappye) asook die Staatsdepartemente van Inligting, Landbou-tegniese Dienste, Nasionale Opvoeding, Sport en Ontspanning en Verdediging.

Kyk ook p. 70.

Senior Administratiewe Assistent(e) (Staatsdiens) (Afrikaans, Engels, Ekonomie, Romeinse Reg, Staatsadministrasie, Staatsleer)

Graduandi wat oor 'n toepaslike B.A.-, B.Admin.- of B.Com.-graad beskik, word in die Staatsdiens aangestel as Senior Administratiewe Assistent. Wanneer hulle die hoër administratiewe poste beklee, sal hulle van dag tot dag sake moet ondersoek, onderhandelings moet voer, bevele moet gee, beslissings moet neem en memoranda en verslae moet skryf. Nuwe toetreders word deur ervare personeel opgelei. Hulle woon ook 'n inlywingskursus by en die meer gevorderde beampptes volg 'n kursus in die grondbeginsels van toesighouding.

Weens die groot verskeidenheid van pligte wat behartig moet word, is daar administratiewe personeel in kantore oor die hele land asook in die buiteland versprei. Daar is dus geleentheid om persone met uiteenlopende belangstellingsrigtings en kwalifikasies so te plaas dat hulle hul ten volle in hul werk kan uitleef.

Administratiewe personeel beskik oor 'n wye vorderingsveld. Die verdienstelike persoon word reeds in 'n vroeë stadium in 'n verantwoordelike posisie geplaas waarin hy sy persoonlike aanleg ten volle kan uitleef en sy potensiaal die beste benut kan word. Verdering tot die hoër range is nie tot een departement beperk nie, maar daar kan ook om senior betrekings in ander departemente meegeding word. 'n Baie verantwoordelike posisie kan uiteindelik in die Staatsdiens bereik word. Die huidige vorderingsbaan is: Senior Administratiewe Assistent, Administratiewe Beampte, Administratiewe Beheerbeampte, Ondersekretaris, Adjunk-sekretaris, Sekretaris.

Raadpleeg ook Tersiêre Opleiding.

Taalbeampte/Vertaler (Afrikaans, Engels, vreemde tale soos Duits, Frans, Italiaans, Portugees)

Die taaldiens van die Staatsdiens word gelewer deur die Taaldiensburo van die Departement van Nasionale Opvoeding en die Taaldiensafdelings van die vier Provinsiale Administrasies en die Administrasie van Suidwes-Afrika.

Die Taaldiensburo is verantwoordelik vir die vertaling en versorging van die taal van

amptelike publikasies van alle Staatsdepartemente; vir vertalings uit vreemde tale in die amptelike tale vir Staatsdepartemente en vir die ontwikkeling van die terminologie wat nodig is vir publikasies op die verskillende gespesialiseerde gebiede van die werk van hierdie departemente. Vir die uitvoering van hierdie funksies is die Buro in vier afdelings verdeel: Afrikaans, Engels, Vreemde Tale en Terminologie.

'n Vertaler - of Taalbeampte, soos hy in die Taaldiensburo bekend staan - lewer 'n besondere diens aan die inwoners van die land. Die beroep is geskik vir mans en dames en nagraadse studie word steeds aangemoedig. Die bevorderingsrange in die Staatsdiens is tans: Senior Taalbeampte, Hooftaalbeampte, Assistent-direkteur (Afrikaans, Engels of Terminologie) en Direkteur van die Taaldiensburo.

Tweetaligheid en die korrekte gebruik van die twee amptelike tale word egter al meer 'n vereiste en gevolglik sal die vraag na gekwalifiseerde vertalers steeds toeneem. Die meeste van die organisasies wat dienste aan die publiek lewer, het dan ook voortdurend die dienste van Vertalers nodig. Hierdie instansies en organisasies is byvoorbeeld die RGN, die WNNR, Yskor, Unisa, die SA Spoorweë, die SAUK, groot munisipaliteite, verskeie beheerrade, uitgewersmaatskappye, versekeringsmaatskappye en talle ander privaat instansies.

Vakkundige Beampte (Publikasies) (Afrikaans, Engels, Perswetenskap, Sielkunde, Sosiologie of die graad B.Sc.(Agric.))

In die uitvoering van sy navorsings- en voorligtingstaak maak die Departement van Landbou-tegniese Dienste ruimskoots van publikasies en ander kommunikasiemedie gebruik om inligting effektief onder die boere te versprei. Hierdie publikasiedienste word deur 'n spesiale Afdeling Landbou-inligting onderneem waarin die werksaamhede in vyf seksies verdeel is, naamlik pamflette, landbouradio, nuusdiens, oudiovisuele diens, en populêre tydskrifte. In al hierdie seksies word Vakkundige Beamptes (Publikasies) aangestel om die poste van joernaliste, subredakteurs, radiobeamptes en oudiovisuele beamptes te beklee.

Afgesien van indiensopleiding word vakkundiges ook in die geleentheid gestel om gedurende hul dienstyd nagraadse studie te onderneem. Vir die toegewyde beampte is daar feitlik geen beperkings op sy vordering tot die pos van Direkteur van die Afdeling en selfs hoër nie.

Bantoetale

Daar is sewe Bantoetale wat as skryftale in die Republiek erkenning geniet en op skool en universiteit bestudeer kan word. Hulle word in vier groepe saamgegroeper, naamlik:

Groep:	<u>Nguni</u>	<u>Sotho</u>	<u>Tsonga</u>	<u>Venda</u>
Taal:	Zulu Xhosa	Suid-Sotho Noord-Sotho Tswana	Tsonga	Venda

Die onderlinge verskille en ooreenkomste tussen die verskillende tale in een bepaalde groep is min of meer soos dié tussen Afrikaans en Nederlands. Die Nguni- en Sotho-sprekendes maak ongeveer 94 persent van alle Bantoetaal-sprekendes in die Republiek uit.

Vir studente wat Bantoetale as vakke vir die B.A.-graad geneem het, is daar 'n goeie toekoms in die vooruitsig, waarvan die volgende enkele voorbeelde is:

- **Onderwys:** Die vier Onderwysdepartemente en universiteite asook die Departement van Bantoe-onderwys, waar tans ongeveer 750 Blanke onderwysers werksaam is.
Vakkombinasie: Bantoetaal of -tale en Bybelkunde, Geskiedenis, Afrikaans-Nederlands, Geografie, Duits, Engels, Latyn.

- **Die Administrasie:** Verskeie Staatsdepartemente soos dié van Bantoe-administrasie en -ontwikkeling, Landbou-tegniese Dienste, Justisie en Inligting; die RGN, die SA Spoorweë en die Transvaalse Raad vir die Ontwikkeling van Buitestedelike Gebiede; verskillende munisipaliteite, myne en nywerhede. Die poste wat beklee kan word, is byvoorbeeld dié van Administrateurs van Bantoesake, navorsers, arbeidsbeamptes, personeel-

beamptes, kampongbestuurders, lokasiesuperintendente e.d.m.

Vakkombinasie: Bantoetaal of -tale en Bantoereg en -administrasie, Volkekunde, Staatsleer, Publieke Administrasie, Sosiologie.

- Sport- en ontspanningsbeamptes: Die Departement van Sport en Ontspanning; verskillende myne, munisipaliteite en ander instansies wat groot getalle Bantoes in diens het.

Vakkombinasie: Bantoetaal of -tale en Liggaamlike Opvoeding, Volkekunde, Sosiologie.

- Personeel- en opleidingsbeamptes: Verskillende groot nywerhede, myne, munisipaliteite, die SA Spoorweë en so meer.

Vakkombinasie: Bantoetaal of -tale en Sielkunde, Volkekunde, Sosiologie en ander toepaslike vakke.

- Die Uitsaaiwese: Die SAUK se afdeling Radio Bantoe het gereeld vakatures vir programorganiseerders, kontroleurs van programme, nuusopstellers, ens.

Vakkombinasie: Bantoetaal of -tale en ander tale.

- Reklame-, uitgewers- en drukkersbedryf, asook Maatskaplike Werk, Sending en Biblioteekdienste:

Vakkombinasie: Bantoetaal of -tale en Sielkunde, Sosiologie, Volkekunde, ander tale, Ekonomie.

Duits

Duits as hoofvak kan gekombineer word met 'n ander Westerse taal soos Afrikaans-Nederlands, Engels of Frans, of met vakke soos Algemene Taal- en Literatuurwetenskap, Geskiedenis, Kunstgeskiedenis, Wysbegeerte, Sielkunde, Sosiologie of 'n klassieke taal (Grieks of Latyn).

Afgesien van Duits-onderwysers en -dosente is Duits nodig of nuttig vir betrekkings in die diplomatieke diens, inligtingsdiens, die taaldiensburo, die joernalistiek, biblioteekwese, handelswêreld, en vir geskiedkundiges en die musiekwetenskap. Vir die meeste nagraadse studie is Duits òf noodsaaklik òf uiters waardevol.

Frans

Vir studente wat Frans as een van hul hoofvakke kies, is die beste skakeling met ander hoofvakke van taalkundige, literêre, artistieke of geskiedkundige belang: Afrikaans-Nederlands, Engels, Duits, Latyn, Kommunikasiekunde, Geskiedenis, Kunstgeskiedenis, Sosiologie, Volkekunde, Staatsleer.

Afgesien van die kommunikasiewaarde daarvan vir skakeling met byvoorbeeld verskeie Wes-Europese lande en 'n groot aantal Afrikastate, is die kennis van Frans besonder nuttig en soms selfs noodsaaklik vir diegene wat belangstel in beroepe soos onderwyser, dosent, vertaler, joernalis, tolk, of persone wat tot terreine soos die internasionale politiek, musiek, biblioteekwese, uitsaaiwese, sakewêreld en buitelandse diens wil betree.

Grieks

As ander hoofvak saam met Grieks, is Latyn in alle opsigte die ideale aanvulling. 'n Moderne Wes-Europese taal, veral Duits of Frans, kan ook sterk aanbeveel word. In die praktyk egter (omdat Grieks veral as hoofvak byna uitsluitlik deur aspirant-teoloë geneem word) word meestal Semitiese Tale of Wysbegeerte as die ander hoofvak gekies.

'n Graad met Grieks en Latyn as (hoof)vakke kan lei tot die onderwysberoep. Kennis van die Griekse taal, lettere, geskiedenis, staatsinstellinge, godsdiens, wysbegeerte, mitologie, kuns ens. is 'n baie sterk aanbeveling vir 'n loopbaan in die uitsaaiwese, pers, biblioteekwese, skone kunste en taalwetenskap. Grieks is 'n sine qua non vir studierigtings soos Teologie, Wysbegeerte, Taalkunde en Letterkunde.

Latyn

Die vak Latyn behels die studie van die klassieke taal van die Romeine en die kultuurtaal van die Westerse beskawing tot ongeveer 1600. Die fundamente van die Westerse

literatuur, godsdiens, die Christelike kerk, regsweese, administrasie ens. is gedurende hierdie periode vasgelê. Die studie van Latyn kom dus ook neer op die studie van die ontstaan en wording van die Wes-Europese beskawing. Dit is gevolglik ook 'n kultuur=studie en is nie net linguisties ingestel nie.

Latyn en Grieks vorm 'n mooi eenheid, maar Latyn is ook 'n waardevolle vak saam met tale soos Afrikaans-Nederlands, Engels, Frans, Italiaans. Aangesien die studieterrein dié van die vroeë Westerse beskawing is, kombineer dit ook goed met Geskiedenis, Volkekunde (in die breë sin), Regsvakke, Staatsleer en Wysbegeerte.

Met Latyn as hoofvak kan 'n student kwalifiseer vir die onderwys, die biblioteekweese en verskeie kultuurrigtings. Latyn is ook 'n vereiste vir sommige rigtings in die Regte, byvoorbeeld vir B.Proc. (Latyn op st. 10-vlak) en vir LL.B. (Latyn I).

ANDER HOOFVAKKE VIR B.A.

Argeologie: Argeologie is gemoeid met 'n studie van die mens van die verlede - van sy vroegste ontstaan (ongeveer twee miljoen jaar gelede) tot in die jongste verlede. Die argeoloog is onder andere daarin geïnteresseerd om menslike gedrag en kultuur van die verlede te rekonstrueer deur 'n studie te maak van mensgemaakte voorwerpe wat bo en onder die oppervlakte van die aarde behoue gebly het.

Argeologie is verwant aan ander vakke wat ook verskillende aspekte van die menslike bestaan bestudeer. Vakke soos Volkekunde, Geskiedenis, Dierkunde en Geografie is in dié verband belangrik, maar dit skakel ook met vakke in die natuurwetenskappe.

Werksvooruitsigte in hierdie rigting is egter beperk en dit word dus as noodsaaklik beskou dat kandidate wat daarin belangstel hulle òf vir 'n ander beroep ook sal bekwaam òf 'n oordeelkundige keuse van hoof- en byvakke sal doen. Vakante poste is hoofsaaklik beperk tot die Afdeling Argeologiese Opname in die Departement van Nasionale Opvoeding, 'n aantal museums en 'n paar universiteite. Beroepsargeologie is maar 'n jong rigting, en deur vir 'n ander beroep ook bekwaam te wees, kan die persoon wat in die argeologie opgelei is, homself in gereedheid hou vir 'n moontlike pos wanneer dit beskikbaar mag raak.

Geskiedenis: Studente wat Geskiedenis as hoofvak wil neem, kan byvoorbeeld uit die volgende vakke 'n tweede hoofvak of byvakke kies: Afrikaans, Engels, Duits, (moontlik ander tale), Geografie, Sosiologie, Sielkunde, Volkekunde, Ekonomie, Staatsleer, Wysbegeerte. Selfs as byvak het Geskiedenis nut omdat dit soos 'n bindsteen vir die geestes- of sosiale wetenskappe funksioneer.

Hoewel die studie van Geskiedenis nie juis 'n beroepstudie is nie, is dit tog besonder waardevol vanweë die vormende invloed daarvan en die feit dat dit oor die mens in sy sosiale verbande en instelling handel. Dit verskaf gevolglik 'n baie noodsaaklike en soms onontbeerlike agtergrond vir etlike beroepsgebiede soos die radiowese, buitelandse diens, museums, biblioteke, die joernalistiek en uitgewersbedryf, asook die politiek. Historiese kennis moet ook voortdurend aan elke opkomende geslag oorgedra word. Van daar die dringende behoefte aan goed opgeleide en onderlegde Geskiedenisonderwysers en -dosente, asook skrywers oor die Geskiedenis op professionele en populêre vlakke. Persone kan ook aangestel word as Argivarisse of as vakkundige beamptes (heraldiek) in die Departement van Nasionale Opvoeding of ook as navorsingsbeamptes in die Instituut vir Geskiedenisnavorsing van die RGN.

Kriminologie: In die Kriminologie word 'n studie gemaak van sommige aspekte van die misdadverskynsel. Die belangrikste hiervan is byvoorbeeld wat misdaad is, die voorkoms van misdaad, die oortreder as mens, die straf en behandeling van die oortreder en die voorkoming van misdaad. Die Kriminologie sluit dan ook nou aan by vakke soos Sosiologie, Sielkunde, Volkekunde, Maatskaplike Werk, Strafreg; en in 'n mindere mate by Wysbegeerte (veral die etiek), Opvoedkunde, Staatsleer, Ekonomie en so meer.

Kennis van die Kriminologie is in 'n mindere of meerdere mate van waarde in alle beroepe waar met misdaad of die misdadiger te doen gekry word, soos die regsberoepe (prokureurs, advokate, vervolgers, landdroste, regters, die polisie- en gevangensdiens) en in alle welsynswerk deur private organisasies, die Departemente van Volkswelsyn en Pensioene en Nasionale Opvoeding (verbeteringskole). Die studierigting bied ook besondere navorsingsgeleentheid aan universiteite of in diens van die RGN.

Publieke Administrasie/Staatsadministrasie: Die breë klassifikasie van enige owerheid se funksies is wetgewend (politieke liggaam), uitvoerend (administratiewe liggaam) en regsprekend (die howe). Breedweg gesien is hier drie wetenskappe betrokke, naamlik Staatsleer vir die politieke aspek, Publieke Administrasie vir die uitvoerende aspek en Publieke Reg vir die staatsregtelike aspek.

Publieke Administrasie kan gevolglik met vrug gekombineer word met vakke soos Staatsleer, Ekonomie, Regsvakke en so meer, en is van besondere waarde vir byvoorbeeld amptenare in enige openbare diens, regspraktisyns, politici, joernaliste, onderwysers en almal wat meer wil weet van die bestuur van die land, die provinsie, stad of inrigting.

Kyk ook p. 128.

Sielkunde: Sielkunde as vak kom, kortliks gestel, neer op die studie van alle aspekte van die gedrag van die mens. In die praktyk bestudeer Sielkundiges die normale en abnormale gedrag van individue en groepe ten einde hul optrede beter te verstaan en te verklaar. Verskillende metodes word aangewend om soveel inligting as moontlik te bekom. Sodoende word sommige siektes van die menslike gees blootgelê en na doeltreffende behandeling, genees.

Die terrein van die sielkunde is besonder wyd en om 'n suksesvolle Psigoloog te word moet 'n kandidaat bereid wees om intensiewe nagraadse studie te onderneem. Gewoonlik word in een of meer rigtings gespesialiseer en dikwels kombineer psigoloë ook verskillende afdelings in die praktyk. Die verskillende terreine van die Sielkunde is byvoorbeeld die Kliniese Sielkunde, Opvoedkundige Sielkunde, Ontwikkelingsielkunde, Bedryf- en Personeelsielkunde, Fisiologiese Sielkunde, Sosiale Sielkunde, Pastorale Sielkunde, Eksperimentele Sielkunde, Voorligtingsielkunde, Psigometrika, Psigopatologie, Persoonlikheidsielkunde en vele meer.

Sielkundiges vind interessante beroepsgeleenthede by die volgende: Die RGN; die NIPN; die afdelings vir sielkundige dienste van byvoorbeeld die Spoorweë, die Weermag, Yskor, Sasol, die myne en groot munisipaliteite; die Provinsiale Onderwysdepartemente en Staatsdepartemente van Arbeid, Nasionale Opvoeding, Gevangenis en Volkswelsyn en Pensioene; hospitale; kerkgenootskappe; die handel en nywerheid; groot sakeondernemings; 'n eie praktyk of kliniek; inrigtings vir sielsiektes en swaksinniges; organisasies soos die S.A. Vrouefederasie en die Kindersorg- en Geestesgesondheidsvereniging. Na graadse opleiding kan ook lei tot 'n aanstelling as dosent aan 'n hoër opvoedkundige inrigting.

Sielkunde kan as hoofvak vir B.A., B.Com. of B.Sc. geneem word. Na gelang van die bepalings van elke universiteit en die belangstelling van die student, kan dit gewoonlik gekombineer word met vakke soos Sosiologie, Volkekunde, Tale, Wiskunde, Wiskundige Statistiek, Maatskaplike Werk, Wysbegeerte, Ekonomie, Fisiologie, Dierkunde, Fisika en Rekenaarwetenskap.

LET WEL: Die psigiater is nie hierbo genoem nie omdat hy, streng gesproke, 'n medikus is wat, benewens gewone mediese opleiding, ook opleiding ontvang het in die behandeling van geestesiektes en daarin spesialiseer.

Sosiologie: Sosiologie is die wetenskap van menslike verhoudings: As sodanig bestuur dit menslike groepe soos die gesin en maatskaplike prosesse en verskynsels soos maatskaplike verandering, afwykende gedrag, rassewrywing en migrasie. Hieruit blyk dat Sosiologie goed kombineer met 'n groot aantal ander vakke soos byvoorbeeld Aardrykskunde, Bedryfsielkunde, Ekonomie, Geskiedenis, Kriminologie, Opvoedkunde, Openbare Administrasie, Sielkunde, Staatsleer, Stads- en Streekbeplanning, Volkekunde, Wiskundige Statistiek en Wysbegeerte. Afgesien hiervan is die Sosiologie 'n noodsaaklike vak vir die student wat Maatskaplike Werk wil bestudeer en ook baie nuttig vir predikante, onderwysers, geneeshere, psigiaters, personeelbeamptes, regsgeleerdes en ander persone wat professioneel met mense werk.

Sosiologie kan ook lei tot beroepsrigtings. Vir dié doel kan sosioloë in vier beroeps-kategorieë ingedeel word, naamlik

- akademiese sosioloë (dosente aan universiteite),

- navorsings sosioloë (diegene wat voltyds navorsing doen aan universiteite, universiteëre navorsingsinstitute, private ondernemings, staatsdepartemente en staatsondersteunde organisasies),
- administratiewe sosioloë (persone werksaam in byvoorbeeld die personeelafdelings van groot nywerhede),
- beplannings sosioloë (diegene wat in organisasies en departemente werk waar hulle gemoeid is met beplanning en ontwikkeling).

Die grootste konsentrasie navorsings sosioloë in Suid-Afrika word aangetref in die Instituut vir Sosiologiese, Demografiese en Kriminologiese Navorsing van die Raad vir Geesteswetenskaplike Navorsing (RGN) wat in Pretoria gesetel is. Die vyf afdelings van hierdie Instituut werk nou saam maar dit toon dat daar in sosiologiese navorsing reeds spesialisasie plaasvind.

Sosioloë word ook in diens geneem deur Staatsdepartemente soos dié van Beplanning en die Omgewing, Kleurlingbetrekkings en Rehoboth-aangeleenthede en Volkswelsyn en Pensioene; munisipaliteite, en die handel en nywerheid. Nagraadse studie bly egter vir die sosioloog uiters belangrik om byvoorbeeld vir 'n pos as navorser of enige ander senior betrekking in aanmerking te kom.

Kyk ook p. 380.

Staatsleer: Die Staatsleer as vakwetenskap bied die geleentheid tot studie van staatkundige aangeleenthede en politieke vraagstukke. As 'n sosiale wetenskap sluit dit nou aan by sommige ander dissiplines en veral by ander sosiale wetenskappe. Dit is dus 'n nuttige hoofvak om te neem saam met vakke soos Bedryfsielkunde, Ekonomie, Geografie, Geskiedenis, Kommunikasiekunde, Publieke Administrasie, Regsvakke, Sosiologie, Volkekunde, Wysbegeerte en so meer. Die omgekeerde is ook waar, sodat studente wat bogenoemde vakke bestudeer, met vrug een of meer kursusse in Staatsleer in hul leergange kan insluit.

Staatsleer word meestal bestudeer as agtergrond vir 'n groot aantal beroepsrigtings, byvoorbeeld in sommige Staatsdepartemente, die provinsiale administrasies en plaaslike besture; in die onderwys, regte, joernalistiek, private ondernemings, praktiese politiek, radiowese en biblioteekwese.

Volkekunde/Antropologie: Dié twee begrippe Volkekunde en Antropologie is aan mekaar verwant. Soos die naam aandui, hou Volkekunde sig besig met die studie van volke, hul lewenswyse en kulture, hoe dit in die verlede was, hoe dit vandag is en hoe dit verander het, terwyl Antropologie die studie van die hele mens omvat.

Soos in die geval van die meeste ander vakke, kan Volkekunde as hoofvak of as byvak saam met ander B.A.-hoofvakke geneem word. Dit kombineer gewoonlik goed met byvoorbeeld die volgende vakke: Toegepaste Volkekunde, Ontwikkelingsadministrasie, Bantoe-tale, Bantoe-reg en -administrasie, Geskiedenis, Geografie, Sosiologie, Kommunikasiekunde, Wysbegeerte, Staatsleer, Ekonomie, Sielkunde en Publieke Administrasie.

Enkele rigtings waarin 'n student met akademiese kwalifikasie in Volkekunde en verwante vakke kan hoop om te beweeg, is kortliks die volgende:

Verskeie Staatsdepartemente, waaronder dié van Bantoe-administrasie en -ontwikkeling (met sy verskillende vertakkings), Bantoe-onderwys (sekere vakkundige betrekkings), Gemeenskapsbou, Inligting, Buitelandse Sake en Justisie; navorsingsinrigtings soos die Raad vir Geesteswetenskaplike Navorsing (RGN); afdelings vir Nie-Blanke personeel van groot organisasies soos die Spoorweë en mynmaatskappye; plaaslike owerhede (senior amptenare soos direkteur of bestuurder van Nie-Blanke sake); Radio Bantoe van die SAUK (met die klem op kennis van Bantoe-tale); die Raad vir Buite-stedelike Gebiede; die Afrika-Instituut (geringe aantal poste); in die Personeel van die kommissarisse-generaal en as navorsers op die gebied van die etnologie en antropologie. Met die oordra van die magte, pligte, funksies en verantwoordelikhede van munisipaliteite met betrekking tot die beheer en administrasie van stedelike lokasies en Bantoes na die statutêre liggame, die Bantoesake-administrasierade, kan verwag word dat 'n hele aantal hoog besoldigde poste mettertyd beskikbaar sal raak.

Gegradueerdes in hierdie studierigting moet normaalweg baie belang stel in navorsing en bereid wees om verder te studeer.

Wysbegeerte/Filosofie: In der waarheid is elke student ook 'n filosoof. Maar, al het elke student 'n filosofie, word die Filosofie (Wysbegeerte) as sodanig nie deur almal as vak bestudeer nie. Daar is dus 'n verskil tussen filosofie as lewensuitkyk en die Filosofie as 'n soort wetenskap naas ander wetenskappe. Wysbegeerte en Filosofie het dieselfde betekenis. Waar vakwetenskappe soos byvoorbeeld die Plantkunde en Volkekunde die besondere wêreld van die plant en van die volkere bestudeer, daar probeer die Wysbegeerte om die wêreld (kosmos) as ordelike geheel (totaliteit) te verstaan.

Die Wysbegeerte bied 'n algemene beroepsvoorbereiding; dit verskaf nie 'n besondere beroepsopleiding nie. 'n Kombinasie met onder andere die Staatsleer, Sielkunde, Biblioteekkunde, Sosiologie, Geskiedenis, Volkekunde, Kunstgeskiedenis, Kommunikasieleer, moderne en klassieke tale, is uiters geskik om die student voor te berei vir beroepe soos dié van onderwyser, diplomaat, regspraktisyn, predikant, bibliotekaris, sielkundige, joernalis en so meer.

FACULTIES OF COMMERCE

UNIVERSITY OF CAPE TOWN

FACULTY OF COMMERCE

Degrees

Bachelor of Commerce	: B.Com.
Bachelor of Commerce (Honours)	: B.Com. (Hons.)
Master of Commerce	: M.Com.
Bachelor of Business Science	: B.Bus.Sc.
Master of Business Science	: M.Bus.Sc.
Master of Business Administration	: M.B.A.
Doctor of Philosophy	: Ph.D.

Certificate and Diplomas

Certificate in the Theory of Accountancy	: C.T.A.
Advanced Diploma in Taxation	: Adv. Dip. Tax.
Advanced Diploma in Business Administration	: Adv. Dip. B.A.
Advanced Diploma in Management Accounting	: Adv. Dip. Mgt. A.

DEGREES

Bachelor of Commerce: B.Com.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with an aggregate of at least 50 per cent as well as a pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade.

Curriculum: Three years of full-time study. The curriculum includes all the following subjects:

Economics II, Business Science II, Economic History I or Industrial Sociology I, Commercial Law, Mathematics, Statistics, Accounting, Company Law, Communication, Costing (Management Accounting), Taxation I, Auditing I.

Bachelor of Commerce (Honours): B.Com.(Hons.)

Admission requirement: A B.Com. degree.

Curriculum: One year of full-time study or not less than two years of part-time study.

A candidate must attend and complete an Honours course in either Accounting, Taxation or Management Accounting or any other field of study approved by the Senate provided that the candidate may be required to attend and complete courses which were not included in his curriculum for the B.Com. degree.

The Honours examination consists of a formal written examination. In addition a technical report may be required. A candidate may also be required to present himself for an oral examination. Candidates who are not successful in the Honours examination will not be permitted to present themselves for a second time.

Master of Commerce: M.Com.

Admission requirements: A person who wishes to be admitted as a candidate must lodge his application in writing with the Registrar, submitting evidence of his academic and general qualifications and indicating the line of research which he wishes to prosecute.

A Bachelor of Commerce (Honours) may be admitted as a candidate.

Curriculum: A candidate must, during not less than one academic year, do advanced study and research under the guidance of a supervisor. The study and research must be in the field of study in which the candidate passed the Honours examination or its equivalent. The candidate must present a thesis and take such examination as the Senate may determine.

Bachelor of Business Science: B.Bus.Sc.

Admission requirements: As for the B.Com. degree.

Curriculum: Four years of full-time study. The curriculum consists of compulsory courses in Business Science, Economics, Industrial Sociology and Communication, together with courses in subjects comprising fields of study designed to equip students for the careers in which they have special interest. Each special field consists of a group of related subjects; generally an Honours course and appropriate ancillary courses.

Each student must choose one special field from the following:

Actuarial Science, Banking, Business Finance, Computing and Data Processing, Economics (General), Insurance, Marketing, Mathematical Economics, Personnel Management, Psychology, Public Administration, Sociology.

The structure of the degree provides for the equivalent of four full courses to be completed in each of the first and second years, with three and a half courses in the third year and three in the fourth year. Generally a student is required to complete all the courses prescribed for each year before proceeding to those for the following year.

Master of Business Science: M.Bus.Sc.

Admission requirements: The following candidates may be admitted: (i) Bachelors of Business Science; (ii) Honours graduates of other faculties; (iii) Honours graduates of other universities; (iv) other specially qualified graduates approved by the Senate.

A candidate must satisfy the Senate that the curriculum for his Bachelor's degree is an adequate preparation for the M.Bus.Sc. degree.

Curriculum: A candidate must work at an approved subject for at least one academic year under the direction of an approved supervisor. Every candidate must select a subject for intensive study and research from among the range of subjects included in the special groups of the B.Bus.Sc. degree. Every candidate must submit a thesis on the approved subject.

Master of Business Administration: M.B.A.

Admission requirements: The qualification of M.B.A. is open to approved graduates who have obtained a degree in Arts, Commerce, Engineering, Law, Science or Social Science, and to Chartered Accountants.

Curriculum: Every candidate will be required to complete a full-time MBA Programme at the University for a period of one year.

The curriculum of the MBA Programme consists of closely co-ordinated courses in the

fields of:

- Operating Management,
 - Underlying Disciplines,
 - Business Integration,
- as prescribed from time to time by the Senate.

Doctor of Philosophy: Ph.D. - See Faculty of Arts, p. 26.

CERTIFICATE AND DIPLOMAS

Certificate in the Theory of Accountancy: C.T.A.

Admission requirements: As for the B.Com. degree.

No person shall be registered as a candidate for the Certificate unless he has produced evidence that he has either served or is serving or is about to serve under articles registered with the Public Accountants' and Auditors' Board.

Curriculum: Five years of part-time study.

The Senate may exempt a candidate from such course or courses on the ground of credits obtained in equivalent courses while registered for a degree, or a diploma or a certificate.

The following subjects are included in the curriculum for the C.T.A.:

Accounting IV, Auditing III, Costing (Management Accounting) II, Taxation II, Company Law, Administration of Estates, Economics I, Statistics, Commercial Law, Mathematics, Communication.

Advanced Diploma in Taxation: Adv. Dip. Tax.

Admission requirements: Any one of the following may be admitted as a candidate for the Diploma:

- A person who has passed the Qualifying Examination of the Public Accountants' and Auditors' Board of the Republic of South Africa
- a person who has passed, or has been exempted from the attorney's entrance examination in the RSA
- a person accepted as a candidate for the Advanced Diploma in Taxation by virtue of his having passed such examinations as are equivalent to the examinations prescribed in either of the above cases.

Curriculum: Not less than two years of part-time study.

The Advanced Diploma examination comprises a formal written examination. A candidate who is not successful in the examination will not be permitted to present himself for the examination again.

Advanced Diploma in Business Administration: Adv. Dip. B.A.

Admission requirements: The Diploma is open to approved non-graduates with acceptable professional qualifications and/or several years of business experience.

Curriculum: The MBA degree and Diploma courses are identical in content and standard.

Advanced Diploma in Management Accounting: Adv. Dip. Mgt. A.

Admission requirements: Application for admission must be lodged in writing with the Registrar.

Any one of the following may be admitted:

- (i) A person who has passed the Qualifying Examination of the Public Accountants' and Auditors' Board of the Republic of South Africa; or
- (ii) a person accepted as a candidate for the Advanced Diploma in Management Accounting by virtue of his having passed such examinations as are equivalent to the examinations prescribed in the above case.

Curriculum: Not less than two years of part-time study.

The Advanced Diploma examinations comprise formal written examinations. In addition a technical report may be required. A candidate who has not been successful in the examination will not be permitted to present himself for a second time.

U N I V E R S I T Y O F N A T A L

FACULTY OF COMMERCE

Degrees

Bachelor of Commerce	:	B.Com.
Bachelor of Commerce (Honours)	:	B.Com. Hons.
Master of Commerce	:	M.Com.
Doctor of Philosophy	:	Ph.D.
Doctor of Economics	:	D.Econ.
Bachelor of Accountancy	:	B.Acc.(This degree is the equivalent of the Certificate in the Theory of Accountancy.)
Master of Accountancy	:	M.Acc.

Diploma

Diploma in Accountancy	:	Dip. Acc.
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DEGREES

Bachelor of Commerce: B.Com.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). Candidates need not have taken Bookkeeping or Accountancy.

Additional requirements: A pass at 'E' or higher in Mathematics on the Higher Grade or the equivalent in Mathematics on the Standard Grade. Subject to confirmation at a later date, in the light of experience, a pass at 'D' or higher on the Standard Grade will for the present be accepted as an appropriate equivalent.

Curriculum: Three years of full-time study or four or five years of part-time study.

A candidate has to take the following courses in his first year:

Group A

Accounting I; Economics I; Mathematics I or Mathematics C; English I or Afrikaans en

Nederlands I or Afrikaans*; Commercial Law I or Introduction to Roman Dutch Law.

In later years he must take the courses under Group B and at least four courses from Group C and D, of which at least one must be from Group G.

*This is a complete one-year qualifying course for students who wish to take only one course in Afrikaans.

Group B

Economics II; Business Administration I or Public Administration I; Business Administration II or Public Administration II; Accounting III or Economics III or Management Accounting I or Marketing or Business Finance.

Group C

Accounting II; Accounting III or Economics III or Management Accounting I or Marketing or Business Finance (if not taken under Group B); Mathematics I (if not taken in first year) or Mathematics II; Business Data Processing I; Statistics I; Economic History I; Psychology II or Industrial Psychology or Sociology II; Auditing I; Local Authority Accounting; Economics of Transport; Economics of Underdeveloped Regions; Agricultural Economics; Population and Labour; Finances of Public Authorities*; Business Policies and Agreements; International Business; Economic Framework of Business; Roman Law.

*(Not to be offered with Business Finance)

Group D

Actuarial Mathematics; Administration of Estates; Commercial Law II; Economic History II; English I or Afrikaans en Nederlands I or Afrikaans (if not taken in first year); Latin IA or IB; Comparative African Government and Administration I and II; Mathematics III; Business Data Processing II; Statistics II; Introduction to Roman Dutch Law (if not taken in first year) or Public International Law or Psychology I or Sociology I; Political Science I or Social Anthropology I or Philosophy I or Constitutional Law.

There are various regulations which must be followed with regard to certain subjects, e.g. A candidate must have completed Economics I before proceeding to Business Administration I or Public Administration I.

Bachelor of Commerce (Honours): B.Com. Hons.

Admission requirements: A candidate must hold a B.Com. or B.Econ. degree or have been admitted to the status thereof.

Curriculum: One year of full-time study or two years of part-time study.

A candidate must pursue advanced study in one of the following branches of study, provided that the courses shown in parenthesis have either been completed before admission to the Honours course, or are taken concurrently with the Honours courses:

Accountancy (Accounting III, Auditing I, Management Accounting I and Income Tax I); Business Administration; Economics (Economics III); Mathematics and Statistics (Mathematics II, Statistics II or Actuarial Mathematics). A candidate may not present himself for the final examination more than once.

Master of Commerce: M.Com.

Admission requirement: A B.Com. Hons. or B.Econ. Hons. degree or have been admitted to the status thereof.

Curriculum: A candidate must prosecute advanced study, or research, or both, under the guidance of a supervisor. A candidate may not proceed to the examination for the degree before the end of the academic year in which he enters upon the work of the degree.

The examination consists of a dissertation. Every dissertation must show acquaintance with the methods of research, make a contribution to knowledge, and be satisfactory as regards literary presentation.

Doctor of Philosophy: Ph.D.

Admission requirements: A candidate must be a Master of Commerce or a Master of Economics of at least two years' standing or a Bachelor of Commerce (Honours) or a Bachelor of Economics (Honours) of at least three years' standing who has been specially exempted from the Master's examination.

Curriculum: A candidate is required to pursue an advanced course of special study or research on some subject falling within the scope of the studies represented in the University.

A candidate for the degree must submit a thesis embodying the results of his special study or research. A thesis must make a distinct contribution to the knowledge or understanding of the subject and afford evidence of originality shown either by the discovery of new facts or by the exercise of independent critical power.

Doctor of Economics: D.Econ.

Admission requirements: A candidate must be a Bachelor of Commerce or a Bachelor of Economics of at least six years' standing. An intending candidate must submit a formal application for registration.

Curriculum: The degree is awarded only for published work in the form of articles, pamphlets or books which, being obtainable through booksellers, have been accessible to relevant experts and critics for at least one year.

A candidate may be permitted to submit, in partial fulfilment of the requirements for the degree, any thesis previously accepted for a research degree, provided that the work has been published and accessible to relevant experts and critics for at least one year.

Bachelor of Accountancy: B.Acc.

Admission requirements: As for the B.Com. degree.

Curriculum: At least six years of part-time study.

A candidate must obtain credit for eighteen courses which are distributed as follows:

First year: Accounting I; Modern English Usage or English I or Afrikaans or Afrikaans en Nederlands I; Commercial Law I

Second year: Accounting II; Economics I; Mathematics C or Mathematics I

Third year: Auditing I; Elements of Management; Commercial Law II

Fourth year: Accounting III; Management Accounting I; Business Data Processing

Fifth year: Auditing II; Administration of Estates; Income Tax

Sixth year: Accounting IV; Auditing III; Management Accounting II.

Master of Accountancy: M.Acc.

Admission requirements: A candidate holding a B.Acc. degree or a B.Com. degree and a Diploma in Accountancy or a B.Com. degree and who is a Chartered Accountant.

Curriculum: A candidate must undertake research under the guidance of a supervisor for at least one academic year.

A candidate must present a dissertation on some aspect of accountancy theory and/or

practice and he may be required to submit himself to an oral examination on the subject of his dissertation.

DIPLOMA

Diploma in Accountancy: Dip. Acc.

Admission requirements: A graduate who qualifies for credit in ten or more of the courses prescribed for the B.Acc. degree.

Curriculum: Two-year part-time course. A candidate must complete Accounting IV, Auditing III, Management Accounting II and those other courses prescribed for the B.Acc. degree in which he has not obtained credit.

UNIVERSITY OF PORT ELIZABETH

FACULTY OF ECONOMIC SCIENCES

Degrees

Baccalaureus Commercii : B.Com.
Baccalaureus Commercii (Educationis) : B.Com. (Ed.)
Baccalaureus Commercii Honores : B.Com. Hons.
Magister Commercii : M.Com.
Doctor Commercii : D.Com.

Certificate

Certificate in the Theory of Accountancy: C.T.A.

DEGREES

Baccalaureus Commercii: B.Com.

Admission requirements: Matriculation Certificate or a Std 10 Certificate (Matriculation Exemption).

Additional requirements: A candidate must have obtained a standard of at least 40 per cent in Afrikaans and English on the Higher or the Standard Grade.

For admission to the following courses a candidate must have obtained the standard indicated in each case:

- Mathematics or Mathematical Statistics: A pass of at least 40 per cent in Mathematics on the Higher or the Standard Grade.

- Mathematics for Economists: A pass in Mathematics on the Higher or the Standard Grade.

Curriculum: Three years of full-time study or at least four years of part-time study.

A full-time student selects one of the following eight curricula and completes the prescribed courses: Economics and Business Economics, Industrial Psychology, Accountancy, Pedagogy, Business Economics and Accountancy, Law, Computer Science, Mathematics and Mathematical Statistics.

A part-time student selects one of the following five curricula and completes the prescribed courses: Economics and Business Economics, Industrial Psychology, Accountancy, Pedagogy, Business Economics and Accountancy.

Baccalaureus Commercii (Educationis): B.Com. (Ed.)

Admission requirement: See B.Com.

Curriculum: The course extends over four years on a full-time basis. The course is an integrated academic and professional degree course which fulfils all the requirements for the B.Com. degree as well as the requirements for the training of teachers for secondary schools.

Baccalaureus Commercii Honores: B.Com. Hons.

Admission requirements: A B.Com. degree. A person will not be registered as a candidate except by permission of the Faculty of Economic Sciences.

Curriculum: One year of full-time study or not less than two years of part-time study.

A candidate may attend and complete an Honours course in one of the following subjects: Accountancy and related subjects, Business Economics, Economics, Mathematical Statistics, Operations Research, Industrial Psychology and other subjects which the Senate may approve. The Senate may require any candidate to attend and complete before being admitted to the Honours course, such course or courses of the curriculum for the degree of B.Com. as it may prescribe.

The examination consists of not less than four written papers and such practical or oral examinations, or both, as the Senate may prescribe.

Magister Commercii: M.Com.

Admission requirement: The degree of B.Com. Hons.

Curriculum: A candidate must prosecute an approved course of study or research, or both for a period of at least two consecutive semesters.

A Master's degree may be obtained by a dissertation and an oral examination; or a written examination; or both a dissertation and a written and oral examination.

Doctor Commercii: D.Com.

Admission requirement: Except by permission of the Senate, only the holder of a Master's degree may be accepted as a candidate for a Doctor's degree.

Curriculum: A candidate may not be admitted to a degree of Doctor before he has been a registered student of the University for at least four consecutive semesters.

A candidate must submit for the approval of the Senate a thesis on an approved subject. No thesis will be approved which does not make a contribution to the knowledge or understanding of the subject and affords evidence of originality.

CERTIFICATE

Certificate in the Theory of Accountancy: C.T.A.

Admission requirements: The degree of B.Com. (Accountancy) or any other approved Bachelor's degree provided that the Senate may in such a case prescribe a special curriculum.

Curriculum: At least one year of full-time or part-time study.

The following courses are prescribed: Accounting IV, Auditing IV, Cost and Management Accounting IV, Income Tax IV, Accounts of Executors, Liquidators and Trustees II.

R H O D E S U N I V E R S I T Y

FACULTY OF COMMERCE

Degrees

Bachelor of Commerce	: B.Com.
Bachelor of Commerce with Honours	: B.Com. (Hons.)
Master of Commerce	: M.Com.
Bachelor of Economics	: B.Econ.
Bachelor of Economics with Honours	: B.Econ. (Hons.)
Master of Economics	: M.Econ.
Doctor of Economics	: D.Econ.
Doctor of Philosophy	: Ph.D

Certificates

Certificate in the Theory of Accountancy : C.T.A.

Certificate in Secretarial Practice

DEGREES

Bachelor of Commerce: B.Com.

The degree of Bachelor of Commerce may be awarded either as an ordinary degree or as an Honours degree.

The ordinary degree

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements in respect of certain courses:

Business Mathematics, Statistics: A pass in Mathematics on the Higher or on the Standard Grade.

Curriculum: Three years of full-time study.

A candidate must obtain credit in all the courses in one of the following three curricula. Each curriculum contains fourteen courses.

Curriculum A is intended for students who wish to enter commerce or industry, or the teaching profession.

Compulsory subjects are: Accounting, Business Administration, Economics, English or Afrikaans, Business Mathematics and Statistics or Elementary Theory of Finance and Statistics or Mathematics.

Curriculum B: Students who wish to enter the legal profession or Government service, especially in the legal branch, should take this course. By doing so, they can obtain exemptions from LL.B. subjects, sufficient to enable them to complete this degree in a further period of two years, instead of the usual period of three years.

Compulsory subjects are: Accounting, Business Administration, Economics, English or Afrikaans, Latin, Legal Theory, Constitutional Law.

Students who intend to proceed to Legal Theory as a major subject are strongly advised to obtain credit in Latin I before proceeding to Legal Theory II.

Curriculum C: Students who wish to enter the profession of Accountancy should take this course which includes most of the subjects required for the Certificate in the Theory of Accountancy, which can be completed in one further year of study after completion of the degree course.

Compulsory subjects are: Accounting, Business Administration, Economics, Business Mathematics and Statistics, Auditing, Cost and Management Accounting, Mercantile Law, English or Afrikaans.

A candidate who takes the degree and the Certificate in Secretarial Practice concurrently must take the courses over at least four years.

Bachelor of Commerce with Honours: B.Com. (Hons.)

Admission requirements: The B.Com. degree, and at least a second class pass in the final year in the subject in which the candidate wishes to take Honours.

Curriculum: One year of full-time study. The degree may be taken in Accounting, Business Administration, Economics or Economic History.

A candidate may be required to satisfy the examiners that he has an adequate reading knowledge of an approved language other than the official languages.

Bachelor of Economics: B.Econ.

Admission requirement: As for the B.Com. degree.

Curriculum: Three years of full-time study. The curriculum comprises eleven courses. A candidate must obtain credit in all the courses. The courses for the third year are as follows: Economics III; Accounting III or Mathematics III or Mathematical Statistics III; Cost Accounting or Computer Science II or Industrial Relations or Mathematical Statistics III.

Bachelor of Economics with Honours: B.Econ. (Hons.)

Admission requirements: The B.Econ. degree, and at least a second class pass in the final year in the subject in which the candidate wishes to take Honours.

Curriculum: A candidate must attend the University for at least one year. The degree may be taken in either Economics or as a combined course in Economics, Mathematics and/or Mathematical Statistics.

Master of Commerce: M.Com. or

Master of Economics: M.Econ.

Admission requirement: An Honours degree.

Curriculum: A candidate must attend an approved course of study or research at the University for one year.

The examination consists of a thesis on an approved subject, and/or such written or oral examination as the Department concerned may prescribe.

Doctor of Philosophy: Ph.D.

See Faculty of Arts, p. 33.

Doctor of Economics: D.Econ.

As for D.Litt. degree. See p. 34.

CERTIFICATES

Certificate in the Theory of Accountancy: C.T.A.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics.

Curriculum: Four years of full-time study or five years of part-time study.

The curriculum consists of fifteen courses and a candidate must obtain credit in all the courses. The following courses are included in the curriculum: Accounting IV; Auditing II; Income Tax Practice; Mercantile Law II; Cost and Management Accounting; Accounts of Executors, Liquidators and Trustees; an approved course in Business Data Processing; Business Mathematics and Statistics; English or Afrikaans; an approved course in Economics.

Certificate in Secretarial Practice

Admission requirement: A Standard 10 Certificate.

Curriculum: Two years of full-time study. A candidate must obtain credit in all the courses. Subjects include, *inter alia*, English or Afrikaans, Shorthand, Typewriting, Business Methods and Commercial Practice, Business Administration.

U N I V E R S I T Y O F S O U T H A F R I C A

FACULTY OF COMMERCE AND ADMINISTRATION

Degrees

in Commerce:

Bachelor of Commerce	:	B.Com.
Honours Bachelor of Commerce	:	Hons. B.Com.
Master of Commerce	:	M.Com.
Doctor of Commerce	:	D.Com.

in Accounting Science:

Bachelor of Accounting Science	:	B.Compt.
Honours Bachelor of Accounting Science	:	Hons. B.Compt.
Master of Accounting Science	:	M.Compt.
Doctor of Accounting Science	:	D.Compt.

in Administration:

Bachelor of Administration	:	B.Admin.
Honours Bachelor of Administration	:	Hons. B.Admin.
Master of Administration	:	M.Admin.
Doctor of Administration	:	D.Admin.

in Business Leadership:

Master of Business Leadership	:	M.B.L. (General Management)
Master of Business Leadership	:	M.B.L. (Management Control Systems)
Doctor of Business Leadership	:	D.B.L.

Diploma and Certificate

Diploma in Market Research and Advertising

Certificate in the Theory of Accountancy : C.T.A.

DEGREES

Bachelor of Commerce: B.Com.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). An adequate knowledge of Standard 10 Mathematics is required for Statistics I and Computer Science I.

Curriculum: The curriculum extends over at least three years and consists of fourteen courses.

Students select one of the following fields:

(i) General

Compulsory major subjects: Economics III and Business Economics III

(ii) Administration

Compulsory major subjects: Economics III, Business Economics III, Industrial Psychology III

(iii) Accounting

Compulsory major subjects: Economics III, Business Economics III, Accounting III

(iv) Law

Compulsory major subjects: Economics III, Business Economics III, Private Law III, Roman Law I

A knowledge of Latin is essential for Roman Law.

(v) Economics

Compulsory major subjects: Economics III, Economic Analysis II.

Honours Bachelor of Commerce: Hons. B.Com.

Admission requirements: A B.Com. degree. The subject in which the candidate wishes to take the degree must be one of his major subjects for the Bachelor's degree.

Curriculum: No candidate is admitted to the examination unless he has completed an approved curriculum during at least one year.

The degree may be conferred in the following departments: Accounting, Auditing, Business Economics, Economics, Industrial Psychology, Statistics.

A student may not take the degree in Auditing unless he has completed Accounting III and Auditing II; or in Accounting unless he has completed Accounting III and Cost Accounting.

Master of Commerce: M.Com.

Admission requirement: The degree of Hons. B.Com.

Curriculum: The degree will not be awarded until at least one year has elapsed after the Honours Bachelor's degree was obtained.

The degrees may be conferred in the same departments as the respective Honours Bachelor's degrees.

The examination consists of a dissertation showing evidence of original research on the part of the candidate. Some departments also require oral and/or written examinations.

Bachelor of Accounting Science: B.Compt.

Admission requirement: As for the B.Com. degree.

Curriculum: The curriculum extends over four years and consists of 16 courses. A student does not take more than five courses in one year.

The curriculum includes, inter alia, the following courses: Accounting IV, Income Tax, Auditing II, Commercial Law III, Business Economics II or Economics II, Administration of Estates, Management Information Systems, Statistics I, Public Administration.

Statistics I and Administration of Estates are compulsory for students who wish to obtain the Certificate in the Theory of Accountancy.

Honours Bachelor of Accounting Science: Hons. B.Compt.

Admission requirements: The degree of B.Compt. or another degree with Accounting IV, Management Information Systems (or Computer Science I), Income Tax, Auditing II and Commercial Law III as subjects passed.

Curriculum: The curriculum comprises Accounting V and Auditing III.

The Certificate in the Theory of Accountancy will be issued to a student who has passed Statistics I and Administration of Estates and has completed the Honours B.Compt. degree and who is or has been registered with the Public Accountants' and Auditors' Board as an articled clerk.

Master of Accounting Science: M.Compt.

Admission requirement: The degree of Hons. B.Compt.

Curriculum: The examination consists of a dissertation on an approved topic. No dissertation may be submitted until one year has elapsed after the Honours Bachelor's degree was obtained.

Bachelor of Administration: B.Admin.

Admission requirement: As for the B.Com. degree.

Curriculum: The curriculum extends over three years and consists of 14 courses. A student may not take more than five courses in one year.

The subjects for the third year include Public Administration III and Economics III or Political Science III and two other subjects selected from, inter alia, the following: Native Administration, Industrial Psychology, Cost Accounting, Accounting III or Local Government Accounting.

Honours Bachelor of Administration: Hons. B.Admin.

Admission requirement: The B.Admin. degree.

Curriculum: A student attends an approved course for at least one year.

The degree may be conferred in the following departments: Economics, Industrial Psychology, Native Administration, Political Science, Public Administration.

Master of Administration: M.Admin.

See M.Com. degree, p. 87.

Master of Business Leadership: M.B.L. (General Management)

Admission requirements: A student must:

- (i) hold a Bachelor's degree; or
- (ii) have obtained the Certificate in the Theory of Accountancy and have qualified for or be in possession of the C.A.(S.A.); and
- (iii) have had at least three years' appropriate experience in an approved undertaking; provided that with the special permission of the Senate a shorter period may be accepted;
- (iv) join a study group. Should it be impossible to form a local group, a student must join an existing group elsewhere. A student's enrolment is accepted on these conditions.

Curriculum: The period of study extends over four years and is divided into five cycles each of which comprises a number of modules.

Master of Business Leadership: M.B.L. (Management Control Systems)

Admission requirements: A student must:

- (i) hold a Bachelor's degree with Accounting III as one of his courses; or
- (ii) have obtained the Certificate in the Theory of Accountancy and have qualified for or be in possession of the C.A.(S.A.); and
- (iii) and (iv) See M.B.L. (General Management).

Curriculum: As for M.B.L. (General Management).

Doctor of Business Leadership: D.B.L.

Admission requirement: The M.B.L. degree.

Curriculum: The examination comprises a written or oral examination and a thesis on an approved subject in Business Leadership.

Doctor of Commerce: D.Com. or

Doctor of Accounting Science: D.Compt. or

Doctor of Administration: D.Admin.

Admission requirements: A candidate must have obtained the Master's degree in the faculty in which he wishes to study and have satisfied the Senate as to his proficiency in the field of study selected.

Curriculum: The degree may not be conferred on a candidate until two years have elapsed since he obtained his Master's degree.

The examination consists of a thesis which must show proof of original work and is a positive contribution to the knowledge of, and insight into the subject.

The thesis shall deal with a subject in the field of Accounting, Auditing, Economics, Business Economics, Industrial Psychology, Native Administration, Political Science, Public Administration or Statistics.

DIPLOMA AND CERTIFICATE

Diploma in Market Research and Advertising

Admission requirement: A student must possess a degree.

Curriculum: The curriculum extends over two years and consists of eight courses. The courses are as follows: Economics I; Business Economics I and II; Consumer Behaviour; Statistics I; Market Research A and B; Advertising.

Certificate in the Theory of Accountancy: C.T.A.

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics.

A student who registers for the first time must produce evidence of registration as an articled clerk with the Public Accountants' and Auditors' Board.

A matriculated non-graduate who has no proof of such registration and who wishes to enrol for the first time must register for the B.Compt. degree. (See p. 88).

Graduates are strongly advised to qualify for admission to Honours B.Compt. studies with a view to completing the C.T.A. in such a manner. (See Hons. B.Compt. p. 88).

Curriculum: The curriculum extends over five years and consists of 17 courses.

U N I V E R S I T Y O F T H E W I T W A T E R S R A N D

FACULTY OF COMMERCE

Degrees

Bachelor of Commerce	: B.Com.
Bachelor of Commerce with Honours	: B.Com. Hons.
Master of Commerce	: M.Com.
Bachelor of Accountancy	: B.Acc.
Bachelor of Economic Science	: B.Econ.Sc.
Bachelor of Economic Science with Honours	: B.Econ.Sc. Hons.
Master of Economic Science	: M.Econ.Sc.
Doctor of Philosophy	: Ph.D.
Doctor of Commerce	: D.Com.
Doctor of Economic Science	: D.Econ.Sc.
Master of Business Administration	: M.B.A.

Diplomas

Higher Diploma in Accountancy	: H.Dip.Acc.
Diploma in Business Information Processing	: Dip. B.I.P.
Higher Diploma in Personnel Management	: H.Dip.Pers.Man.

DEGREES

Bachelor of Commerce: B.Com.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

- A pass in English on the Higher Grade or at least 40 per cent on the Standard Grade
- a pass in Mathematics on the Higher Grade or at least 60 per cent on the Standard Grade
- a pass on the Higher Grade in one of the following subjects if Mathematics is passed on the Higher Grade, or two of the following subjects if Mathematics is passed on the Standard Grade at 60 per cent:

Bantu Language*, Biology, French, Geography, German*, Hebrew, History, Latin, Physical Science

*if not presented in fulfilment of Group A (Languages) requirement of the Joint Matriculation Board.

Curriculum: Three years of full-time study or five years of part-time study.

The degree is offered in the General Group by either full-time or part-time study and in the Legal Group by full-time study.

General Group: The curriculum for the General Group consists of 14 courses. Students select courses from the following subjects:

Accounting; Afrikaans; Afrikaans en Nederlands; Applied Mathematics, Computer Science and Mathematical Statistics; Applied Mathematics and Computer Science; Bantu Languages (Southern Sotho, Zulu); Business Economics; Business Data Processing; Commercial Law; Communication Studies; Computer Science; Constitutional and Administrative Law; Cost and Management Accounting; Economic History; Economics; English; French; Geography; German; Hebrew; Industrial Psychology; Industrial Sociology; Italian; Latin; Mathematical Statistics; Mathematics; Mathematics and Statistics; Mathematics for Economists; Philosophy; Political Science; Portuguese; Psychology; Russian; Sociology.

Every curriculum must include - Accounting I and II; Business Economics I and II; Commercial Law; Communication Studies; Economics I and II; Mathematics and Statistics I or Mathematics for Economists or Mathematics I; and one of the following courses:

Accounting III, Business Data Processing II, Business Economics III, Computer Science III, Cost and Management Accounting, Economics III, Mathematics and Statistics III.

Legal Group: The curriculum consists of 16 courses and includes the following subjects: Accounting, Business Economics, Economics, Introduction to the Study of Law, Law of Contract, Public International Law, Roman Law, Mathematics and Statistics or Mathematics for Economists, Constitutional and Administrative Law, Law of Corporations and Insolvency, English or Afrikaans or Latin, and two courses selected from one of the subjects listed under the General Group.

Bachelor of Commerce with Honours: B.Com. Hons.

Admission requirements: A B.Com. degree.

A student must apply for admission as a candidate for the degree.

Curriculum: One year of full-time study or at least two years of part-time study. A candidate must attend and complete an Honours course in Accounting as an approved field of study or in another approved field of study or in two or more approved fields of study.

The Honours examination comprises the preparation of a satisfactory essay on an approved topic, a formal written examination and a written or oral test of the candidate's acquaintance with French or German or another approved foreign language.

A candidate in the field of Accounting may be exempted from the foreign language requirement.

Master of Commerce: M.Com.

Admission requirements: A B.Com. Hons. or a B.Acc. degree.

A person who wishes to be admitted as a candidate for the M.Com. degree must lodge his application in writing, submitting evidence of his academic and general qualifications and indicating the line of research which he wishes to prosecute.

Curriculum: A candidate must prosecute during at least one academic year advanced study and research in the field of study in which he passed the Honours examination, present a dissertation on a topic selected from his approved field of advanced study and research, and present himself for examination.

Bachelor of Accountancy: B.Acc.

Admission requirement: As for the B.Com. degree.

Curriculum: At least six years of part-time study.

As the requirements of the Public Accountants' and Auditors' Board have been revised, the degree of Bachelor of Accountancy has been designed to meet these requirements. Those students who wish to attend full-time are advised to take the B.Com. degree full-time followed by either the B.Acc. degree or the Higher Diploma in Accountancy (H.Dip.Acc.) part-time. The B.Com./B.Acc. combination may be taken over three years of full-time study followed by three years of part-time study, and the B.Com./H.Dip.Acc. combination by three years of full-time followed by two years of part-time study.

The curriculum consists of 18 courses and includes Accounting I, II, III and IV; Auditing I and II; Commercial Law; Business Economics; Economics; Business Data Processing; Accounts of Trustees, Liquidators and Executors; Cost and Management Accounting; Income Tax; Communication Studies; Business Finance; Mathematics and Statistics. (See p. 94 for H.Dip.Acc.).

Bachelor of Economic Science: B.Econ.Sc.

Admission requirement: As for the B.Com. degree.

Curriculum: Three years of full-time study. The curriculum consists of eleven courses selected from the following subjects: Applied Mathematics, Computer Science and Mathematical Statistics; Applied Mathematics and Computer Science; Business Data Processing; Business Economics; Computer Science; Economic History; Economic Statistics; Economics; Mathematics; Mathematics for Economists; Mathematical Statistics.

The curriculum comprises

first year - five courses
second year - four courses
third year - two courses (two major subjects).

The major subjects are the following:

Business Data Processing, Business Economics, Computer Science, Economic History, Economics, Mathematical Statistics, Mathematics.

Bachelor of Economic Science with Honours: B.Econ.Sc.Hons.

Admission requirement: A B.Com. or a B.Econ.Sc. degree.

A student must apply for admission as a candidate for the degree.

Curriculum: One year of full-time study or at least two and not more than four years of part-time study.

A candidate must **attend** and complete an Honours course in one or more of the following fields of study or such additional fields as may be approved by the Senate: Economics, Business Economics, Economic History.

The Honours examination comprises a formal written examination and the preparation of a long essay on an approved topic; the candidate may also be required to present himself for oral examination.

Master of Economic Science: M.Econ.Sc.

Admission requirement: The degree of B.Econ.Sc.Hons. or B.Com.Hons.

See M.Com. degree p. 92.

Doctor of Philosophy: Ph.D.

Admission requirements: A candidate must hold one of the following degrees: M.Com.; B.Com. Hons. (First Class); M.Econ.Sc.; M.B.A.

A person who wishes to be admitted as a candidate for the degree must lodge his application in writing, submitting evidence of his academic and general qualifications and indicating the line of research which he wishes to prosecute.

Curriculum: A candidate must prosecute full-time research for at least two academic years, and he may be required to attend advanced courses of instruction cognate to the subject of his research. He must present a thesis which must constitute a substantial contribution to the advancement of knowledge in the subject chosen.

Doctor of Commerce: D.Com.

Admission requirements: Any of the following may be admitted as a candidate:

- A person who has held the B.Com. Hons. degree for at least five years
- a Master of Commerce who has held the B.Com. Hons. degree for at least four years
- a Doctor of Philosophy of at least two years' standing.

A person who wishes to be admitted as a candidate for the degree must lodge his application in writing, submitting evidence of his academic and general qualifications and indicating the subject of the work which he proposes to present for the degree.

Curriculum: A candidate for the degree of D.Com. must present for the approval of the Senate original published work in a field approved by the Senate. Such work shall constitute a distinguished contribution to the advancement of knowledge in that field.

Doctor of Economic Science: D.Econ.Sc.

Admission requirements: Any of the following may be admitted as a candidate:

- A person who has held any of the following degrees for at least five years: B.Com.Hons., B.Econ.Sc. Hons., B.A. Hons., in an appropriate field
- a Master of Commerce who has held the B.Com. Hons. degree for at least four years
- a Master of Economic Science who has held the B.Econ.Sc. Hons. degree for at least four years
- a Master of Arts who has held the B.A. Hons. degree for at least four years, if the proposed work relates to Economics, Applied Economics, Economic History or some related subject
- a Doctor of Philosophy of at least two years' standing.

A person who wishes to be admitted as a candidate must lodge his application in writing, submitting evidence of his academic and general qualifications and indicating the subject of the work that he proposes to present for the degree.

Curriculum: A candidate for the degree of D.Econ.Sc. must present for the approval of the Senate original published work or original work accepted for publication in a field approved by the Senate. Such work must constitute a distinguished contribution to the advancement of knowledge in that field.

Master of Business Administration: M.B.A.

Admission requirements: Any of the following may be admitted as a student:

- A graduate in any faculty
- a person who, not being a graduate, holds a professional qualification
- in an exceptional case the Senate may admit a person who has satisfied the Senate that his admission as a candidate is warranted by virtue of his experience, qualifications and abilities.

Curriculum: Sixty-four weeks of full-time study divided into six academic terms.

A student may be required to undertake field projects and to participate in organized practical work during terms and vacations.

A student must submit a dissertation in the form of a report on a research project undertaken by him on an approved subject.

A student must perform the work of the class and present himself for the examinations in all the compulsory course units.

DIPLOMAS

Higher Diploma in Accountancy: H.Dip.Acc.

Admission requirement: A graduate who has been exempted from ten or more of the courses prescribed for the degree of B.Acc. (See p. 92.)

Curriculum: The student must obtain credit in the following courses: Accounting IV, Auditing II, Cost and Management Accounting, Income Tax. See also B.Acc. p. 92.

Diploma in Business Information Processing: Dip. B.I.P.

Admission requirements: The candidate must be a graduate and must have attained a standard in Mathematics and Statistics equivalent to that of Mathematics and Statistics A in the curriculum for the B.Com. degree and must have an adequate knowledge of COBOL (obtained by completing the elementary COBOL course given by the University's Computing Centre).

Curriculum: Two years of part-time study. The curriculum includes such topics as Systems Analysis and Design; Advanced COBOL; Data Management; Computer Languages and Compilers.

Higher Diploma in Personnel Management: H.Dip.Pers.Man.

Admission requirement: Any of the following may be admitted:

- A graduate in any faculty
- a person who, not being a graduate, holds a professional qualification
- in an exceptional case a person may be admitted who has satisfied the Senate that his admission as a candidate is warranted by virtue of his experience, qualifications and abilities.

Curriculum: One academic year of full-time study.

A candidate may be required to attend an introductory course in the behavioural sciences.

A student may be required to undertake field projects and to participate in organized practical work during terms and vacations, in addition to his attendance at the prescribed courses of study and his participation in the class work.

Course units include, inter alia, General Management Problems and Processes; Personnel Management Systems and Practices.

A student must present himself for the examinations in all the prescribed course units.

V O C A T I O N A L S E R V I C E

N.B. Also read the section "WHAT IS THIS BOOK ABOUT?" in Chapter 1.

The choice of a suitable field of study and occupation is based to a considerable extent on the knowledge of all the most important facets of that particular field. However, it is not the intention, and also not possible, to attempt to discuss in this section all conceivable aspects of each field. As a result of the wide subject choice, it will, however, be possible for students to prepare themselves for practically any occupation for which knowledge of the economic and related sciences is a requirement. The universities attempt to provide guidance in this respect by offering a choice of particular fields of study. The object of the curricula is generally of a twofold nature, viz a broad background study of the field of the economic sciences on the one hand, and study in a particular main field on the other. Post-graduate study for a degree or diploma provides for specialization, which lays the foundation for promotion to high-level occupations.

The economic and related fields of study are so extensive and the occupational opportunities which are offered so numerous that they can only be discussed in broad outline.

Accounting: The accountancy profession plays an indispensable rôle in all types of business concerns. In the course of time, qualified persons in this field have moved from the position of ordinary bookkeeper to that of the specialized leader and financial adviser. For persons who have not been trained professionally but who have a degree (B.Com. or B.Admin.) with Accounting as a major in combination with subjects such as Cost Accounting, Auditing, Commercial Law, Income Tax, Business Economics and Economics, there is a particularly wide variety of opportunities in the occupational field. They can become teachers in commercial subjects or enter the business world as accountants, auditors, credit managers, secretary-accountants, cost accountants, et cetera, in the employ, for example, of commercial and industrial undertakings, municipalities, financial institutions, mines, companies, banks, building societies, insurance companies and many others. They are also employed by Government Departments such as those of Finance, the Treasury, Agricultural Economics and Marketing and Labour to be trained as professional officers. Certain concerns experience a considerable demand for persons who have at least a B.Com. degree, as a result of the divergence of activities in their financial divisions.

It has, for many years now, been impossible to satisfy this demand. By displaying exceptional initiative, drive and capacity for work, persons can, in the course of time, progress to managerial posts and posts in an executive capacity. However, post-graduate study is essential for the accountant who wishes to reach the top.

More advanced study in Accounting can lead to admission to the qualifying examination of the Public Accountants' and Auditors' Board. Success in this examination, as well as the completion of a period of service as an articled clerk in the office of a public accountant and auditor, is a prerequisite for registration as a chartered accountant (C.A.). The title "C.A." is acknowledged throughout the world as a highly specialized professional qualification.

This qualification opens the door to highly paid positions. The chartered accountant can operate on his own in a private practice or in partnership with other registered accountants. For example, in the Republic all public companies, banks and building societies

must make use of the services of a public accountant and auditor. Otherwise, he can reach a position of prestige in a large company such as that of director, general manager, accountant, internal auditor, secretary or cost accountant. Those persons who also possess the other qualities for top leadership can rise to the position of managing director or chairman. More information concerning the C.A. qualification may be obtained directly from the Public Accountants' and Auditors' Board, Johannesburg, or from any firm of public accountants and auditors.

As the business world becomes more complicated and many-sided, there is a corresponding increase in the demand for trained manpower with a proper grasp of commerce and industry. There are virtually unlimited opportunities for persons with analytical ability, the capacity to think logically and sound judgement. They are also generally highly respected.

Apart from the opportunity to become a professional officer in a Government department (as mentioned above), graduates are also given preference when candidates are considered for the following posts in the Public Service:

- Auditor: The main aim of a Government auditor is to ensure that public funds are appropriated with care, accuracy and efficiency. Auditing is done by the Controller and Auditor-General, the various Provincial Auditors and their staff of auditors. The Public Service recommends that persons who are interested in this field should take the same course as suggested for an Accountant. After his appointment the newcomer is not left to himself, but is thoroughly instructed in the duties of an auditor.

With the ever increasing activities of the Public Service and the concomitant spending of public money, there are excellent promotional opportunities for an able auditor. At present the promotion cycle is the following: Assistant Auditor, Auditor, Senior Auditor, Assistant Chief Auditor, Chief Auditor.

- Departmental Accountant (Financial Administration): Although the Treasury must ensure that financial obligations are fulfilled according to regulations, each Government department also has its own financial branch which is responsible for disbursement and recoveries. The Public Service recommends that the Accountant should have a suitable degree with the following subjects: Accounting as one major and one or more of the following as the other major(s): Business Economics, Economics, Commercial Law, Industrial Psychology, Cost Accounting, Roman-Dutch Law, Public Administration, Statistics, Mathematical Statistics. (The remaining subjects can be included to advantage as subsidiary subjects.)

The uniform basis upon which government finances are administered in the Public Service makes it possible for the Accountant to compete for senior positions in other Government departments. The present avenue of promotion is as follows: Assistant Accountant, Accountant, Senior Accountant, Assistant Chief Accountant, Chief Accountant.

- Stores Administrator (Stores Administration): The duties of the Stores Administrator in the Public Service are mainly concerned with the purchase and control of and the accounting for stores and equipment. After entering the service, the new official is trained in the work which he has to perform. The following subjects may be included in the degree course: Economics, Accounting, Cost Accounting, Statistics, and so forth.

Stores sections exist in various departments, with the result that an official's opportunities are not limited to one department only. As in other sections of the Public Service, meritorious work is adequately rewarded.

B.Com. (Law): The B.Com. degree which includes law subjects does not only provide basic training in economic as well as legal subjects, but can also be rounded off with an LL.B. It is therefore a preparation for business and legal practice with prospects of appointment to various executive posts in commerce and industry as well as financial bodies such as insurance companies.

Also see Law, p. 256.

Business Administration (MBA) for senior managerial personnel: This provides an outstanding opportunity for businessmen and businesswomen who are already practising or

already have a bachelor's degree to expand and give academic substance to their knowledge, ability and background in respect of business affairs such as organization, planning, taking the lead, co-ordination and control.

The task of providing guidance and of controlling and co-ordinating the work of a large group of employees with a view to maximum economic results, demands the highest qualities of leadership. The managerial profession does not only include general managers but also specialists in the large number of managerial functions which are so characteristic of commerce and industry. In order to fulfil these functions, thorough training in modern principles and practice is absolutely essential.

The large variety of managerial fields provides persons with the opportunity of choosing a suitable field in accordance with their aptitude and personality characteristics. A few of these fields are, for example, those of the personnel manager, sales manager, executive manager, production or works manager, marketing manager, financial manager, credit manager and so forth.

However, students must not expect to walk into a senior managerial post directly after leaving the university. Attractive posts go to those who are willing and able to work for them and who obtain them on merit. The training in commerce and industry, particularly at the post-graduate level, should, however, enable them to start higher up and to make more rapid progress. All managers cannot be experts in all fields and for this reason use is being made to an increasing extent of specialists to assist them. A B.Com. degree with post-graduate specialization is consequently of great value.

Cost Accounting: The status of as well as the demand for trained cost accountants is very high in every undertaking as a result of the important work that they do. Data made available by the cost accountant constitute the barometer for the determination of the extent to which the business is a paying proposition and a basis for important decisions.

His knowledge is utilized by virtually all undertakings, large or small, in divisions such as cost accounting, budget control, labour remuneration, fixing of prices, managerial guidance and many other spheres in which the analysis of and control over expenditure are necessary. He is thus a key figure in the determination of development and efficiency, particularly when an undertaking finds itself in a highly competitive position. The advice and responsible calculations of the cost accountant are of great importance to the management of an undertaking, and this accounts for his high salary.

The expansion of industry, trade and the economy and the necessity of trying to keep costs and prices to a realistic level, render the prospects most attractive for cost accountants in the Public Service; commerce and industry; provincial administrations; municipalities; factories (particularly where mass production and competition play a rôle); Sasol; the Railways; the Defence Force; Iscor; the CSIR; mining and other companies and as consultants and lecturers at educational institutions. Further study and mature experience are imperative for advancement in this occupation.

Economics, Business Economics and Money and Banking:

Various subjects such as Business Economics and Money and Banking have developed from Economics, the mother of all economic sciences. More and more persons are tending to specialize in a particular field such as finance, transport, trade and distribution, agriculture, industry, labour, marketing or other economic activities. Opportunities for this are also created by the universities which offer different subject combinations centred around Economics and Business Economics as majors. Economics is also offered as a major or subsidiary subject for the B.A. degree at most universities. It provides a valuable background study in combination, for example, with Political Science, Sociology, Anthropology, Geography, law subjects and even Philosophy. Persons with mathematical aptitude should also bear in mind that the demand for persons who are qualified in Economics or Business Economics, in combination with subjects such as Mathematics, Statistics or Mathematical Economics is just as urgent and that they have virtually unlimited opportunities.

In the Government departments listed below, the activities of Economists vary according

to the functions of each department and the requirement for appointment as professional officers is a university degree with major and other subjects as indicated in this order:

Labour: Business Economics; at least two courses in Accounting.

Planning and the Environment: Economics/Business Economics; two courses in Statistics for some posts.

Forestry: B.Com. degree: Economics or Business Economics or Money and Banking; B.Sc. (Forestry) degree with Forestry Economics as a subject.

Finance: Economics or one of Accounting, Business Economics, Money and Banking.

Commerce: Economics or Business Economics; one course in Commercial Law or Statistics or Accounting.

Agricultural Economics and Marketing: One or more of Economics, Business Economics, Accounting, Agricultural Economics; a B.Com. degree with Accounting as a major and at least one course in Auditing and Commercial Law.

Industry: Economics/Business Economics; one or more courses in Accounting, Statistics or Commercial Law.

Other bodies employ persons who are qualified in Economics and related fields as economic advisers, financial consultants, researchers and so on to interpret general economic trends for the concern; to forecast production, markets and prices and to assist in the planning of the concern as a whole. Such employers are, inter alia, the IDC, the Bantu Investment Corporations, Iscor, Sasol, the Railways, the Federated Chamber of Industry, the Association of Chambers of Commerce, commercial banks, building societies, insurance companies, market agents and other undertakings in commerce and industry.

Since transport is essentially an integral part of the production process, Transport Economics is an important subject or specialized field of study for the B.Com. degree. The universities which offer it regard it as an opportunity to provide students with the basic background knowledge of transport within the framework of their knowledge as gleaned, in particular, in the subject fields of Economics and Business Economics. Employment opportunities in this field will be found, for example, in the Department of Transport (various branches), the Railways, the various shipping and other companies which are concerned with the delivery of goods.

No intelligent young person who is in possession of a degree with the appropriate subject combination and who tackles his task with dedication and a true sense of duty need fear that he will not make any progress. However, the labour market gives preference to post-graduate students. The demand for these persons to occupy executive posts will increase still further in future as a result of South Africa's large-scale industrial development and considerable resources. Post-graduate study is also a prerequisite for appointment as a lecturer at a university. When planning his or her course, a prospective teacher of Economics and other commercial subjects should bear in mind the requirements of the educational authority concerned.

Also see Agricultural Economics, p. 219.

Industrial and Personnel Psychology: This science is related to such subject fields as Psychology, Sociology, Economics and Business Economics. It concerns itself with the study of man in the job situation and the maximum utilization of labour as a production factor. As a result of the vital rôle of the personnel (employees) in the attainment of success, any undertaking is constantly seeking methods to motivate employees and to guide them to their optimum achievement (highest productivity). Knowledge of human conduct (behaviour) in various industrial situations has consequently become indispensable to any business administrator.

Persons with this training are employed in commerce and industry, Government departments and other large undertakings such as the Railways, Iscor, Sasol, the CSIR, the Department of Posts and Telecommunications, co-operative societies, the mines, insurance companies, building societies, municipalities and banks with a view to being trained as personnel, employment, training, personnel research, organization develop=

ment, organization and method of general personnel officers. They can advance from these posts to personnel managers, managerial advisers and even personnel directors.

Today there is increasing recognition of the value of the services of one or more personnel managers in an undertaking, particularly where optimum utilization of available labour is concerned. The duties of a personnel manager, though diverse in nature, are extremely interesting. In a large concern, however, it is possible that a person may be responsible for only one specialized section, for example training.

Appointment as a personnel manager will be the fruit of years of hard work as well as a period of intensive in-service training. A university degree such as B.A., B.Com., B.Sc., B.P.L. or B.A. (Soc. Sc.) with major subjects such as Industrial and Personnel Psychology, Psychology, Sociology, Social Work, Economics etc. would definitely be of inestimable value for accelerated promotion. It provides that extremely useful background and knowledge which are necessary when personnel managers have to deal with affairs such as the selection and placement of personnel, group relationships, motivation and morale, satisfaction derived from working conditions, planning and co-ordination, safety measures and the prevention of accidents, and so forth.

Marketing: The tempo of economic development in a country can only be properly maintained if the business world is orientated towards marketing. The rise of marketing as one of the managerial functions is also attributed to a new and more scientific approach to all aspects of selling (marketing).

The acceptance by the business world of the value of increased turnover as a result of effective marketing creates more and more opportunities for employment in various specialized fields such as those of sales, advertising, public liaison, marketing research, commercial art, price determination, distribution, promotion of sales, after-sales service, product development and efficient administration. For graduates who have gradually gained the necessary experience and who possess ambition, insight, initiative, a capacity for work and other essential characteristics, a career in this field can lead to the highest posts in management. Many business enterprises have adopted the policy of appointing their top men from the ranks of marketing officials.

Public Administration: In addition to the few diploma courses which can be taken in this field, Public Administration, as in the case of Economics, Mathematics, Psychology and many other subjects, is offered at most universities in more than one faculty, for example for the B.A. degree, where it can be combined with Political Science, Economics, languages (particularly foreign languages), Bantu Law and Administration, History, Sociology, law subjects and so on. As regards the B.Admin. degree, it can be combined effectively with subjects such as Economics, Political Science, Industrial Psychology, Accounting, et cetera.

Degrees and diplomas in this field make particular provision for the training of organizing and administrative officials who are employed by all Government departments (as senior administrative assistants); the provincial administrations; municipalities and other public bodies such as the agricultural produce and research boards, the Railways, the Postal Services, the SABC, the IDC and Iscor. It is also an extremely useful subsidiary subject for a career in journalism or law.

Post-graduate qualifications are essential to provide for the demand for professional officials such as engineers, architects, medical practitioners and others who, besides their professional work, must fulfil administrative and supervisory functions such as those of chief engineer, chief architect, hospital superintendent etc.

Also see Senior Administrative Assistant, p. 44 and p. 49.

Secretarial field: The higher ranks in the secretarial profession are mainly accessible to those persons who possess recognized professional qualifications and who have acquired membership of the secretarial organizations. Every company, for example, must appoint a secretary and this person occupies an extremely responsible position as chief administrative and executive officer. With his specialized knowledge of the Companies Act, he is an important member of the managerial team and it generally happens that he is also appointed as director.

Apart from his other duties, the secretary is an important link between the directors on the one hand, and, for example, the shareholders, office personnel, bankers, auditors and the public on the other. This function ensures that his work is interesting and pleasant. He must be able to handle important matters intelligently and responsibly. His status is high and he is adequately remunerated.

The growth of industrial organizations, the annual registration of a large number of new companies and the tendency towards the forming of groups on the part of companies result in the fact that the secretary, with his specialized training, has a dynamic function to fulfil in the business world of today.

Also consult Tertiary Training.

Statistics and Economics: These fields give the student basic training in a mathematical-statistical approach to economic problems and theories. An increasing demand for persons trained in a combination of mathematical and economic sciences is arising on a wide front in South Africa, with a view to the collection, processing and interpretation of data.

The econometrist and statistician are in demand in research institutions and industries with research laboratories such as the CSIR, HSRC, SABS, Iscor, the Chamber of Mines, Sasol, factories, etc.; transport and communication; various Government departments especially the Department of Statistics; insurance companies; some universities; computer firms and firms rendering services such as management consultation and market research.

Also see Statistics, p. 150 and Computer Science, p. 147.

Diploma courses: The attention of candidates who cannot or do not wish to take a degree course is drawn to the diploma courses which are offered at a few universities. These courses generally provide training of a specialized nature.

Information on diploma courses in commerce and administration which can be taken outside the university is supplied in the HSRC publication Tertiary training outside universities and career opportunities.

FAKULTEITE VAN HANDEL

UNIVERSITEIT VAN DIE ORANJE - VRYSTAAT

FAKULTEIT VAN EKONOMIESE EN ADMINISTRATIEWE WETENSKAPPE

Grade

Baccalaureus Administrationis	: B.Admin.
Honneurs-Baccalaureus Administrationis	: B.Admin. (Hons.)
Magister Administrationis	: M.Admin.
Doctor Administrationis	: D.Admin.
Baccalaureus Commercii	: B.Com.
Honneurs-Baccalaureus Commercii	: B.Com. (Hons.)
Magister Commercii	: M.Com.
Doctor Commercii	: D.Com.

Baccalaureus Personeelleiding	: B.P.L.
Honneurs-Baccalaureus Personeelleiding	: B.P.L. (Hons.)
Magister Personeelleiding	: M.P.L.
Doctor Personeelleiding	: D.P.L.

Diplomas

Diploma in Staats- en Munisipale Administrasie
 Gevorderde Diploma in Staats- en Munisipale Administrasie
 Sertifikaat in die Teorie van Rekeningkunde

GRADE

Baccalaureus Administrationis: B.Admin.

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasie=
 vrystelling).

Leergang: Drie jaar voltydse studie. Die leergang bevat minstens 14 kursusse. 'n
 Leergang vir die graad moet minstens twee goedgekeurde hoofvakke insluit, in elk waar=
 van die voorgeskrewe aantal kursusse voltooi moet word.

Die hoofvakke moet uit die volgende gekies word:

Staatsadministrasie en EEN van die volgende: Bedryfsekonomie, Bedryfsielkunde, Ekono=
 mie, Privaatreg, Staatsleer, Toegepaste Volkekunde.

'n Student kies sy leergang in een van die volgende rigtings:

- Algemene Rigting

Hoofvakke: Staatsadministrasie en Staatsleer

- Bantoe-administrasie

Hoofvakke: Toegepaste Volkekunde en Staatsadministrasie

- Regsrigting

Hoofvakke: Privaatreg, Staatsadministrasie en Romeinse Reg en Regsgeskiedenis

- Personeeladministrasie

Hoofvakke: Bedryfsielkunde en Staatsadministrasie.

Honneurs-Baccalaureus Administrationis: B.Admin. (Hons.)

Toelatingsvereistes: 'n Student moet voldoen aan al die vereistes van die gewone Bac=
 calaureusgraad.

'n Student kan slegs 'n vak aanbied wat hy as hoofvak vir die gewone Baccalaureusgraad
 afgelê het.

Die Senaat kan weier om 'n student toe te laat indien hy die bekwaamheid van die student
 in die betrokke vak onvoldoende ag.

Leergang: Elke kandidaat moet 'n goedgekeurde studiekursus vir minstens een jaar volg.

Die B.Admin. (Hons.)-graad kan in een van die volgende vakke toegeken word:
 Bedryfsielkunde, Ekonomie, Staatsadministrasie, Staatsleer, Toegepaste Volkekunde.

Aan die einde van die kursus moet 'n student 'n universiteitseksamen aflê en gelyktydig
 in die hele eksamen slaag. 'n Student kan hom slegs twee keer vir die finale eksamen
 aanmeld.

Magister Administrationis: M.Admin.

Toelatingsvereistes: 'n Student moet in besit wees van die B.Admin. (Hons.)-graad en hy

moet die hoof van die betrokke departement oortuig dat hy voldoende kennis van die vak besit om die werk vir die graad te verrig.

Leergang: Die Magistergraad word nie aan 'n kandidaat toegeken binne twee jaar nadat hy die B.Admin.-graad behaal het nie.

Die eksamen bestaan uit 'n skriftelike eksamen of 'n verhandeling of albei. Die verhandeling word geskryf onder leiding van die hoof van die betrokke departement. Die M.Admin.-graad word in dieselfde vakke as die B.Admin. (Hons.)-graad toegeken.

Baccalaureus Commercii: B.Com.

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op minstens die Standaardgraad.

Leergang: Drie jaar voltydse studie. Die leergang bevat minstens 14 kursusse en moet minstens twee goedgekeurde hoofvakke insluit, in elk waarvan die voorgeskrewe aantal kursusse voltooi moet word.

Die hoofvakke moet uit die volgende gekies word:

Bedryfseconomie, Bedryfsielkunde, Ekonomie, Landbou-ekonomie, Privaatreg, Rekeningkunde, Statistiek.

Hoofvakke waarin twee kwalifiserende kursusse geneem word:
Bedryfsdataverwerking, Geld- en Bankwese, Vervoereconomie.

'n Student kies sy leergang in een van die volgende rigtings:

- Algemene Rigting

Hoofvakke: Ekonomie en Bedryfseconomie

- Gewone Rekeningkundige Rigting

Hoofvakke: Rekeningkunde en Bedryfseconomie

- S.T.R. Rigting

Hoofvakke: Rekeningkunde, Handelsreg, Ouditkunde en Inkomstebelasting

- Bedryfsadministratiewe Rigting

Hoofvakke: Bedryfsielkunde en Bedryfseconomie

- Statistiese Rigting

Hoofvakke: Statistiek en EEN van die volgende:

Ekonomie, Bedryfseconomie, Rekeningkunde, Bedryfsdataverwerking

- Geld- en Bankwese-rigting

Hoofvakke: Geld- en Bankwese en Ekonomie en EEN van die volgende: Bedryfseconomie, Rekeningkunde, Statistiek

- Vervoereconomie-rigting

Hoofvakke: Vervoereconomie en TWEE van die volgende: Ekonomie, Bedryfseconomie, Statistiek

- Ekonomie: Spesialiteitsrigting

Hoofvakke: Ekonomie en kursusse uit: Geld- en Bankwese, Wiskunde, Statistiek, Bedryfseconomie, Rekeningkunde

- Landbou-ekonomie-rigting

Hoofvakke: Landbou-ekonomie en Ekonomie

- Regsrigting

Hoofvakke: Privaatreg III, Romeinse Reg en Regsgeskiedenis II en EEN van die volgende: Ekonomie, Bedryfseconomie en Rekeningkunde.

Honneurs-Baccalaureus Commercii: B.Com. (Hons.)

Toelatingsvereistes: Soos vir B.Admin. (Hons.)-graad, p. 101.

Leergang: Elke kandidaat moet 'n goedgekeurde kursus vir minstens een jaar volg. Die B.Com. (Hons.)-graad kan in een van die volgende vakke toegeken word: Bedryfseconomie,

Bedryfsielkunde, Ekonomie, Geld- en Bankwese, Landbou-ekonomie, Rekeningkunde, Statistiek, Vervoereconomie.

Aan die einde van die kursus moet 'n student 'n universiteitseksamen aflê en gelyktydig in die hele eksamen slaag. 'n Student kan hom slegs twee keer vir die finale eksamen aanmeld.

Magister Commercii: M.Com.

Toelatingsvereistes: 'n Student moet in besit wees van die B.Com. (Hons.)-graad en moet die hoof van die betrokke departement oortuig dat hy voldoende kennis van die vak besit om die werk vir die graad te verrig.

Leergang: Die Magistergraad word nie aan 'n kandidaat toegeken binne twee jaar nadat hy die B.Com.-graad behaal het nie. Die eksamen bestaan uit 'n skriftelike eksamen of 'n verhandeling of albei. Die verhandeling word geskryf onder leiding van die hoof van die betrokke departement. Die M.Com.-graad word in dieselfde vakke as die B.Com. (Hons.)-graad toegeken.

Baccalaureus Personeelleiding: B.P.L.

Toelatingsvereiste: Soos vir die B.Admin.-graad.

Leergang: Drie jaar voltydse studie. Die leergang bevat minstens 14 kursusse. 'n Leergang vir die graad moet minstens twee goedgekeurde hoofvakke insluit, in elk waarvan die voorgeskrewe aantal kursusse voltooi moet word.

Die hoofvakke moet uit die volgende gekies word: Bedryfsielkunde en een van die volgende: Bedryfsekonomie, Staatsadministrasie en Toegepaste Volkekunde.

'n Student kies sy leergang volgens een van die volgende rigtings: Bedryfsrigting, Openbare Dienste, Bantoe-Personeelrigting.

Honneurs-Baccalaureus Personeelleiding: B.P.L. (Hons.)

Toelatingsvereiste: Soos vir die B.Admin. (Hons.)-graad, p. 101.

Leergang: Elke kandidaat moet 'n goedgekeurde kursus vir minstens een jaar volg. Die B.P.L. (Hons.)-graad word in die vak Bedryfsielkunde toegeken.

Aan die einde van die kursus moet 'n student 'n universiteitseksamen aflê en gelyktydig in die hele eksamen slaag. 'n Student kan hom slegs twee keer vir die finale eksamen aanmeld.

Magister Personeelleiding: M.P.L.

Toelatingsvereistes: 'n Student moet in besit wees van die B.P.L. (Hons.)-graad en moet die hoof van die Departement van Bedryfsielkunde oortuig dat hy voldoende kennis van die vak besit om die werk vir die graad te verrig.

Leergang: Die Magistergraad word nie aan 'n student toegeken binne twee jaar nadat hy die B.P.L.-graad behaal het nie. Die eksamen bestaan uit 'n skriftelike eksamen of 'n verhandeling of albei. Die verhandeling word geskryf onder leiding van die hoof van die betrokke departement. Die M.P.L.-graad word in Bedryfsielkunde toegeken.

Doctor Administrationis: D.Admin. of

Doctor Commercii: D.Com. of

Doctor Personeelleiding: D.P.L.

Toelatingsvereiste: 'n Magistergraad.

Leergang: Die Doktorsgraad word aan geen student toegeken voordat drie jaar, of twee jaar, waarvan minstens een jaar uitsluitend aan navorsing of voltydse studie gewy word

aan die Universiteit of aan 'n ander inrigting deur die Senaat goedgekeur, na die verkryging van die Magistergraad verstryk het nie.

'n Student moet 'n proefskrif vir die Doktorsgraad indien. 'n Proefskrif moet 'n oorspronklike bydrae tot die bestaande kennis van die gekose onderwerp lewer. Elke proefskrif word onder die toesig van die promotor/hulppromotor voorberei.

DIPLOMAS EN SERTIFIKAAT

Diploma in Staats- en Munisipale Administrasie

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Die leergang vir die diplomakursus is dieselfde as dié vir die B.Admin.-graad, met die voorbehoud dat die kursusse in Munisipale Administrasie geneem moet word.

Gevorderde Diploma in Staats- en Munisipale Administrasie

Toelatingsvereiste: Diploma in Staats- en Munisipale Administrasie.

Leergang: Die leergang is dieselfde as dié vir die B.Admin. (Hons.)-graad plus 'n skripsie.

Sertifikaat in die Teorie van Rekeningkunde

Toelatingsvereiste: 'n B.Com. (Voorvereiste vir S.T.R.-rigting)-graad of die kandidaat moet voldoen het aan die vakvereistes van daardie rigting.

Leergang: Twee jaar voltydse studie.

Die volgende kursusse is voorgeskryf: Rekeningkunde IV en V, Ouditkunde IV en V, Boedeladministrasie, Finansiële van die Onderneming bestaande uit Ekonomie en Bedryfsekonomie, Inkomstebelasting.

Houers van die B.Com.-graad kan 'n B.Com. (Hons.) aan die einde van die tweede jaar verworf mits voldoen word aan die seminaarvereistes vir die B.Com. (Hons.) in Rekeningkunde.

UNIVERSITEIT VAN PORT ELIZABETH

FAKULTEIT VAN EKONOMIESE WETENSKAPPE

Grade

Baccalaureus Commercii	: B.Com.
Baccalaureus Commercii (Educationis)	: B.Com. (Ed.)
Baccalaureus Commercii Honores	: B.Com. Hons.
Magister Commercii	: M.Com.
Doctor Commercii	: D.Com.

Sertifikaat

Sertifikaat in die Teorie van Rekeningkunde: S.T.R.

GRADE

Baccalaureus Commercii: B.Com.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n St. 10-sertifikaat (Matrikulasie=vrystelling).

Addisionele vereistes: 'n Kandidaat moet 'n standaard van minstens 40 persent in

Afrikaans en Engels op die Hoër of die Standaardgraad behaal het.

Vir toelating tot die volgende kursusse moes 'n kandidaat die standaard behaal het soos in elke geval aangedui:

- Wiskunde of Wiskundige Statistiek: 'n Slaagsyfer van minstens 40 persent in Wiskunde op die Hoër of die Standaardgraad.

- Wiskunde vir Ekonomie: 'n Slaagsyfer in Wiskunde op die Hoër of die Standaardgraad.

Leergang: Drie jaar voltydse of minstens vier jaar deeltydse studie.

'n Voltydse student woon een van die volgende agt leergange by en voltooi die voorgeskrewe kursusse: Ekonomie en Bedryfsekonomie, Bedryfopsigologie, Rekeningkunde, Onderwysersopleiding, Bedryfsekonomie en Rekeningkunde, Regte, Rekenaarwetenskap, Wiskunde en Wiskundige Statistiek.

'n Deeltydse student woon een van die volgende vyf leergange by en voltooi die voorgeskrewe kursusse: Ekonomie en Bedryfsekonomie, Bedryfopsigologie, Rekeningkunde, Onderwysersopleiding, Bedryfsekonomie en Rekeningkunde.

Baccalaureus Commercii (Educationis): B.Com. (Ed.)

Toelatingsvereistes: Soos vir die B.Com.-graad.

Leergang: Die kursus duur vier jaar op 'n voltydse basis. Die leergang is 'n samegestelde akademiese en professionele graadleergang wat voldoen aan al die vereistes vir die B.Com.-graad asook aan die vereistes vir die opleiding van onderwysers vir sekondêre skole.

Baccalaureus Commercii Honores: B.Com.Hons.

Toelatingsvereistes: 'n B.Com.-graad. 'n Persoon word nie as kandidaat ingeskryf nie tensy hy toestemming verkry het van die Fakulteit van Ekonomiese Wetenskappe.

Leergang: Een jaar voltydse of minstens twee jaar deeltydse studie.

'n Kandidaat mag toegelaat word tot 'n Honneurskursus in een van die volgende vakke: Rekeningkunde en aanverwante vakke, Ekonomie, Bedryfsekonomie, Bedryfopsigologie, Ondernemingsnavorsing, Wiskundige Statistiek, asook ander vakke wat die Senaat mag goedkeur.

Die Senaat kan vereis dat 'n kandidaat, alvorens hy tot die Honneurskursus toegelaat word, sodanige kursus of kursusse van die leergang van die B.Com.-graad as wat dit mag voorskryf, moet bywoon en voltooi.

Die eksamen bestaan uit minstens vier geskrewe vraestelle asook sodanige praktiese of mondelinge eksamens of albei as wat die Senaat mag voorskryf.

Magister Commercii: M.Com.

Toelatingsvereiste: Die graad B.Com. Hons.

Leergang: 'n Kandidaat moet vir 'n tydperk van minstens twee opeenvolgende semesters 'n goedgekeurde kursus van studie of navorsing of albei volg.

'n Magistergraad kan behaal word deur middel van 'n verhandeling en 'n mondelinge eksamen; of 'n geskrewe eksamen; of sowel 'n verhandeling as 'n geskrewe of mondelinge eksamen.

Doctor Commercii: D.Com.

Toelatingsvereiste: Behalwe met die vergunning van die Senaat word slegs die houer van 'n Magistergraad as kandidaat vir 'n Doktorsgraad toegelaat.

Leergang: 'n Doktorsgraad word nie aan 'n kandidaat toegeken alvorens hy vir minstens vier opeenvolgende semesters 'n kandidaat vir sodanige graad aan die Universiteit was nie.

'n Kandidaat moet vir goedkeuring deur die Senaat 'n proefskrif oor 'n goedgekeurde onderwerp voorlê. 'n Proefskrif word nie aanvaar nie tensy dit 'n bydrae tot die kennis van en insig in die vak is en bewys van oorspronklikheid lewer.

SERTIFIKAAT

Sertifikaat in die Teorie van Rekeningkunde: S.T.R.

Toelatingsvereistes: Die graad B.Com. (Rekeningkunde) of enige ander goedgekeurde Baccalaureusgraad, met dien verstande dat die Senaat dan 'n spesiale leergang mag voorskryf.

Leergang: Minstens een jaar voltydse of deelydse studie.

Die volgende kursusse word voorgeskryf:

Rekeningkunde IV, Ouditkunde IV, Koste- en Bestuursrekeningkunde IV, Inkomstebelasting IV, Boedel- en Insolvensierekening II.

P O T C H E F S T R O O M S E U N I V E R S I T E I T V I R C H R I S T E L I K E
H O Ë R O N D E R W Y S

FAKULTEIT EKONOMIESE WETENSKAPPE

Grade

Baccalaureus Commercii	: B.Comm.
Honneurs Baccalaureus Commercii	: Honns. B.Comm.
Magister Commercii	: M.Comm.
Doctor Commercii	: D.Comm.
Baccalaureus Rationalium	: B.R.
Honneurs Bedryfsadministrasie	: H.B.A.
Magister Bedryfsadministrasie	: M.B.A.
Doctor Bedryfsadministrasie	: D.B.A.

Diplomas

Diploma in Bedryfsrekeningkunde	: D.B.R.
Laer Universiteitsdiploma in Handel	: L.U.D.H.

GRADE

Baccalaureus Commercii: B.Comm.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Voornemende B.Comm.-studente word sterk aangeraai om Wiskunde as vak vir die standaard 10-eksamen af te lê.

Vir die grade B.Comm. (Rekenmeestersopleiding) en B.Comm. (Statistiek) is 'n slaagsyfer in Wiskunde op die Hoër Graad 'n vereiste.

Leergang: Drie jaar voltydse of vier jaar na-uurse studie.

Die leergang bestaan uit ongeveer sestiens kursusse. 'n Student kies een van ses verpligte belangrikste vakke, vir elk waarvoor 'n leergang voorgeskryf is.

(i) Ekonomie en Geld- en Bankwese

Hoofvakke: Ekonomie III of Wiskundige Ekonomie III en Geld- en Bankwese II

(ii) Bedryfsekonomie

Hoofvakke: Bedryfsekonomie III en Bedryfsrekeningkunde II

(iii) Bedryfsrekeningkunde

Hoofvakke: Bedryfsrekeningkunde II en een van die volgende: Rekeningkunde III, Bedryfseconomie III, Ekonomie III

(iv) Statistiek

Hoofvakke: Wiskundige Ekonomie III, Ekonometrie, Statistiek III. (Voornemende studente in hierdie rigting moet Wiskunde vir Standaard 10 geslaag het.)

(v) Bedryf- en Personeelsielkunde

Hoofvakke: Ekonomie III of Bedryfsosiologie III, Bedryfseconomie III, Bedryf- en Personeelsielkunde III, Nywerheidsreg of Geld- en Bankwese II of Rekenaarmetodes of 'n goedgekeurde onderwerp uit die ekonomiese wetenskappe, onder andere Distribusiehandel, Versekeringswese.

(vi) Rekenmeestersopleiding

Hoofvakke: Rekeningkunde III, Bedryfsrekeningkunde II, Handelsreg II, Inkomstebelasting I, Ouditkunde II

'n Student wat voornemens is om as Openbare Rekenmeester te kwalifiseer, moet hierdie rigting volg en moet minstens 40 persent in Wiskunde (Hoër Graad) in die St. 10-eksamen (Matrikulasievystelling) behaal het.

Na-urse studente kies een van die volgende leergange: Ekonomie, Bedryfseconomie, Bedryfsrekeningkunde, Bedryf- en Personeelsielkunde, Rekenmeestersopleiding.

Alle studente moet ook in die kursus Interfakultêre Wysbegeerte slaag.

Honneurs Baccalaureus Commercii: Honns. B.Comm.

Toelatingsvereiste: 'n B.Comm.-graad.

Leergang: 'n Student moet gevorderde studie in een van die volgende vakrigtings onderneem, mits die eksamen in die vakke tussen hakies aangedui, geslaag is voor voltooiing van sodanige kursusse:

- Ekonomie/Geld- en Bankwese/Bedryfseconomie (Ekonomie III, Bedryfseconomie III en Geld- en Bankwese II);
- Rekeningkunde (Rekeningkunde III, Ouditkunde II, Bedryfsrekeningkunde II, Handelsreg II, Inkomstebelasting I)
- Bedryfsrekeningkunde (Bedryfsrekeningkunde II. Daar word aanbeveel dat studente ook Inkomstebelasting I aflê.)
- Bedryfseconomie/Bedryfsrekeningkunde (Bedryfseconomie III, Bedryfsrekeningkunde II)
- Statistiek
- Bedryf- en Personeelsielkunde
- Ekonomie, Geld- en Bankwese (Ekonomie III, Geld- en Bankwese II)
- Bedryfsosiologie

Die student moet 'n goedgekeurde kursus vir minstens een akademiese jaar bywoon en in die voorgeskrewe eksamen slaag.

Magister Commercii: M.Comm.

Toelatingsvereiste: 'n Honns. B.Comm.-graad.

Leergang: 'n Student moet 'n goedgekeurde kursus of kursusse van studie of navorsing of albei, aan die Universiteit vir minstens een akademiese jaar volg.

Die vakke vir die M.Comm.-graad is dieselfde as dié wat vir die Honns. B.Comm.-graad voorgeskryf word.

Die eksamens bestaan uit vraestelle en 'n verhandeling oor 'n gebied van die betrokke vak.

Doctor Commerci: D.Comm.

Toelatingsvereiste: 'n M.Comm.-graad.

Leergang: Die graad word slegs toegeken nadat die kandidaat 'n goedgekeurde kursus of kursusse van studie of navorsing of albei aan die Universiteit vir minstens twee akademiese jare gevolg het.

Die vakke vir die D.Comm.-graad is dieselfde as dié wat vir die Honns.B.Comm.-graad voorgeskryf word.

Die eksamen vir die graad bestaan minstens uit 'n proefskrif wat resultate van die kandidaat se studie en navorsing bevat.

'n Proefskrif word nie aanvaar as dit nie 'n besliste bydrae tot die kennis van en insig in die vak is en bewys van oorspronklikheid lewer nie, hetsy deur die vind van nuwe feite, hetsy deur die beoefening van 'n onafhanklike kritiese vermoë.

Baccalaureus Rationalium: B.R.

Toelatingsvereiste: 'n Goedgekeurde Baccalaureusgraad en die kandidaat moet in die volgende kursusse geslaag het:

Rekeningkunde III, Ouditkunde II, Handelsreg II, Bedryfsrekeningkunde II, Inkomstebelasting I.

Leergang: Die kursus duur een jaar voltyds en twee jaar deelyds.

Finansiële Rekeningkunde en Ouditkunde geld as hoofvakke.

Hierdie graad verleen toelating tot die kwalifiserende eksamen van die Openbare Rekenmeesters- en Ouditeursraad.

Honneurs-Bedryfsadministrasie: H.B.A.

Toelatingsvereiste: 'n Baccalaureusgraad.

Leergang: Twee akademiese jare. Die kursus word slegs na-uurs te Potchefstroom en Vereeniging aangebied.

Die graad sal slegs aan 'n student toegeken word wat minstens twee jaar goedgekeurde praktiese ervaring voltooi het.

Van studente wat voorheen geen kursusse in Ekonomie en Bedryfseconomie gehad het nie, sal verwag word om die kennis van hierdie kursusse aan te vul tot bevrediging van die betrokke departementshoofde.

'n Student moet aan die einde van elke studiejaar in al die voorgeskrewe kursusse slaag.

Magister Bedryfsadministrasie: M.B.A.

Toelatingsvereiste: Die H.B.A.-graad.

Leergang: 'n Student moet die volgende kursusse voltooi: Bestuurseconomie II, Analise en interpretasie van finansiële rekenings en state, Personeelbeheer en Organisasieteorie en Interpersoonlike verhoudinge II, Gevorderde Bestuursrekeningkunde en Besluitkunde, Opstel.

Die leergang strek oor minstens een akademiese jaar.

Die M.B.A.-graadkursus word na-uurs te Vanderbijlpark aangebied.

Doctor Bedryfsadministrasie: D.B.A.

Toelatingsvereiste: Die M.B.A.-graad.

Leergang: Soos vir die D.Comm.-graad.

DIPLOMAS

Diploma in Bedryfsrekeningkunde: D.B.R.

Toelatingsvereistes: 'n Student moet in besit wees van (i) die B.Comm.-graad met Rekeningkunde III, Kosteberekening II, Inkomstebelasting I; of (ii) die Nasionale Diploma vir Kosterekenmeesters (N.D.K.).

Leergang: Twee jaar.

Die Diploma sal slegs toegeken word aan kandidate wat ten minste twee jaar goedgekeurde praktiese ervaring voltooi het.

Laer Universiteitsdiploma in Handel: L.U.D.H.

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Minstens twee jaar.

Die leergang sluit in, o.a., die volgende kursusse: Bedryfseconomie II, Ekonomie II, Rekeningkunde II, Bedryf- en Personeelsielkunde (Spesiaal), Bedryfsosiologie, Tikskrif (mits nog nie voorheen 'n gelykstaande eksamen afgelê is nie), Sekretariële Praktyk, Handelsreg I.

Vanderbijlpark: Die volgende kursusse word na-uurs te Vanderbijlpark aangebied: B.Comm., Honns.-B.Comm. (Bedryfsrekeningkunde), H.B.A., M.B.A.

UNIVERSITEIT VAN PRETORIA

FAKULTEIT EKONOMIESE EN STAATSWETENSKAPPE

Grade

Handel:

Baccalaureus in Handel	: B.Com.
Baccalaureus in Handel (Educationis)	: B.Com. (Ed.)
Baccalaureus Honores in Handel	: B.Com. (Hons.)
Magister in Handel	: M.Com.
Doktor in Handel	: D.Com.

Publieke Administrasie:

Baccalaureus in Publieke Administrasie	: B.Admin.
Baccalaureus Honores in Publieke Administrasie	: B.Admin. (Hons.)
Magister in Publieke Administrasie	: M.Admin.
Magister in Staats- en Stadsadministrasie	: M.S.A.
Doktor in Publieke Administrasie	: D.Phil.

Bedryfsadministrasie:

Magister in Bedryfsadministrasie	: M.B.A.
Doktor in Bedryfsadministrasie	: D.B.A.

Diplomas en sertifikaat

Diploma in Bedryfsadministrasie	: Dip. B.A.
Diploma in Bemaking	: Dip. Bem.
Diploma in Gevorderde Publieke Administrasie	: Dip. G.P.Admin.
Sertifikaat in die Teorie van die Rekeningwetenskappe	: S.T.R.

GRADE

Baccalaureus in Handel: B.Com.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Hoër Graad of minstens 40 persent op die Standaardgraad.

Addisionele toelatingsvereistes tot kursusse:

- Statistiek I en Bemakingsnavorsing: Minstens 40 persent in Wiskunde op die Standaardgraad.

- Bedryfseconomie II, Ekonomie II en Rekeningkunde: Minstens 40 persent in Wiskunde op die Standaardgraad òf as alternatief, 'n slaagsyfer in 'n goedgekeurde kursus in Ekonometriese Metodes.

Leergang: Drie jaar voltydse of vier jaar buitemuurse studie. 'n Leergang bevat sowat 13 kursusse. 'n Student kies een van die volgende hoofrigtings:

(i) Ekonomiese Wetenskappe

Derde jaar: Ekonomie III en twee van die volgende: Bedryfseconomie III, Kosteberekening en -beheer, Nasionale Rekeningkunde en Analise, Rekeningkunde III, Statistiek III.

(ii) Bemaking

Derde jaar: Bemaking II, Bemakingsnavorsing, Reklame en skakelwerk, Produk- en prysbeleid, Distribusiebeleid en Verbruikersgedrag.

(iii) Rekeningwetenskappe

Derde jaar: Rekeningkunde III, Ouditkunde II, Kosteberekening en -beheer, Handelsreg III, Inkomstebelasting.

(iv) Ekonometrie

Derde jaar: Ekonomie III, Wiskundige Statistiek III, Nasionale Rekeningkunde en Analise.

(v) Personeelbestuur

Derde jaar: Personeelbestuur II, Bedryfseconomie III, Arbeidsreg.

Sommige kursusse word tans slegs Binnemuurs, ander slegs Buitemuurs en nog ander ook na-uurs aangebied. Alle kandidate vir die B.Com.-graad wat in hul finale studiejaar is, moet 'n oriënteringskursus in die gebruik van die rekenaar en elektroniese data-verwerking volg. Geen eksamen word afgeneem nie.

Baccalaureus in Handel (Educationis): B.Com. (Ed.)

Toelatingsvereistes: Soos vir die B.Com.-graad asook met Afrikaans en Engels as geslaagde vakke in die Matrikulasie-eksamen.

Leergang: Vier jaar voltydse studie. Die hoofvakke is Ekonomie III en een van die volgende: Bedryfseconomie III, Rekeningkunde III. In die vierde jaar neem die kandidaat onderwysvakke soos bv. Pedagogiek III, Godsdiensonderrig, Skoolorganisasie en Administrasie.

Baccalaureus Honores in Handel: B.Com. (Hons.)

Toelatingsvereiste: 'n B.Com.-graad.

Leergang: Alle kandidate moet vir minstens twee semesters as ingeskrewe studente die voorgeskrewe kursusse volg, maar deeltydse studente moet hul inskrywing en studie oor minstens drie semesters versprei.

Kandidate kies een van die volgende studierigtings: Algemeen, Bedryfseconomie, Be-marking, Ekonomie, Geld- en Bankwese, Statistiek, Ekonometrie, Personeelbestuur, Re-keningwetenskappe.

Vir die verskillende studierigtings is daar besondere bepalinge en vereistes.

Magister in Handel: M.Com.

Toelatingsvereiste: Die B.Com. (Hons.)-graad.

Leergang: 'n Student moet twee krediete behaal en 'n verhandeling indien oor 'n onder-werp uit sy studierigting vir die B.Com. (Hons.)-graad.

'n Leeskennis van Frans of Duits word vereis voordat die graad toegeken kan word.

Die minimum studietydperk is een jaar.

Baccalaureus in Publieke Administrasie: B.Admin.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikula-sievystelling). 'n Kandidaat moet ook 'n slaagsyfer in minstens twee van die volgende vakke op die Hoër Graad behaal het, naamlik: Geskiedenis, Aardrykskunde, Wiskunde, Biologie, Natuur- en Skeikunde en 'n derde taal: Met dien verstande dat waar 'n taal slegs op die Standaardgraad aangebied word, dit vir hierdie doel erken word.

Kyk ook Addisionele toelatingsvereistes tot kursusse p. 110.

Leergang: Drie jaar voltydse of vier jaar buitemuurse studie.

Die leergang bevat 12 kursusse. In die derde jaar neem studente Publieke Administra-sie III en nog twee vakke wat hulle uit die volgende moet kies: Bedryfseconomie III, Ekonomie III, Internasionale Politiek II, Nasionale Rekeningkunde en Analise, Perso-neelbestuur II, Rekeningkunde III, Staatsleer III, Statistiek III, een of twee kursusse deur die Dekaan goedgekeur.

'n Kandidaat wat Nasionale Rekeningkunde en Analise wil neem, moet ook Ekonomie III neem.

Personeelbestuur I kan geneem word slegs indien Sielkunde I geslaag is.

Baccalaureus Honores in Publieke Administrasie: B.Admin. (Hons.)

Toelatingsvereiste: 'n B.Admin.-graad.

Leergang: Alle kandidate moet vir minstens twee semesters as ingeskrewe studente die voorgeskrewe kursusse volg, maar deeltydse studente moet hul inskrywing en studie oor minstens drie semesters versprei.

Kandidate kies een van die volgende studierigtings: Ekonomie, Publieke Administrasie, Staatsleer, Internasionale Politiek.

Vir die verskillende studierigtings is daar besondere bepalinge en vereistes.

Magister in Publieke Administrasie: M.Admin.

Toelatingsvereiste: Die B.Admin. (Hons.)-graad.

Leergang: 'n Student moet twee krediete behaal en 'n verhandeling oor 'n onderwerp uit die

studierigting vir die B.Admin. (Hons.)-graad indien.

'n Leeskennis van Frans of Duits word vereis voordat die graad toegeken kan word.

Magister in Staats- en Stadsadministrasie: M.S.A.

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n Baccalaureusgraad of tot die status daarvan toegelaat wees. Hy moet ook oor praktiese ervaring van 'n voldoende gehalte beskik.

Indien die kennis van 'n kandidaat weens die rigting van vorige studie onvoldoende is ten opsigte van Staatsleer, Ekonomie en Publieke Administrasie, moet die kursusse, Staatsleer Spesiaal, Ekonomie Spesiaal en Publieke Administrasie Spesiaal onderskeidelik afgelê word. 'n Kandidaat sal eers 'n volle jaar aan die voorbereidende kursusse moet bestee.

Leergang: Minstens twee en hoogstens vier jaar.

'n Kandidaat moet 'n skripsie oor 'n goedgekeurde onderwerp uit enige van die vakke vir die graad indien.

Slegs één hereksamen in hoogstens enige twee vakke kan toegestaan word.

Magister in Bedryfsadministrasie: M.B.A.

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n Baccalaureusgraad, 'n slaagsyfer in Wiskunde op die standerd 10-peil en twee jaar praktiese ervaring.

In gevalle van kandidate wat nie voldoende praktiese ervaring het nie, kan toelating nogtans verleen word onderhewig aan die nakoming van aanvullende voorwaardes.

Kandidate wat nie oor 'n graad beskik nie kan toelating tot die diplomastudie verleen word.

Leergang: Die volle kursus, wat deelyds in die Buitemuurse Afdeling van die Universiteit aangebied word, strek oor minstens twee jaar, maar kan oor vier jaar versprei word.

Die leergang behels tien vakke en 'n skripsie. 'n Kandidaat moet 'n skripsie oor 'n goedgekeurde onderwerp uit enige van die vakke vir die graad indien.

Doktorsgraad: D.Com., D.B.A. of D.Phil.

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n Magistergraad of tot die status daarvan toegelaat wees: Met dien verstande dat toelating tot die D.B.A. graadstudie onderhewig is aan keuring ooreenkomstig maatstawwe deur die Fakulteitsraad goedgekeur.

Leergang: Elke kandidaat vir die D.Com.- of D.B.A.-graad, moet vir goedkeuring deur die Senaat 'n proefskrif voorlê wat handel oor 'n onderwerp uit die rigting waarin die B.(Hons.)-graad of die M.-graad of die M.B.A.-graad behaal is, en elke kandidaat vir die graad D.Phil. moet 'n proefskrif voorlê oor 'n onderwerp uit Ekonomie, Staatsleer, Internasionale Politiek of Publieke Administrasie.

Die eksamen gaan oor een hoofvak en twee byvakke wat uit die vakke van die Fakulteit gekies word.

'n Leeskennis van Frans of Duits is verpligtend vir alle kandidate.

'n Doktorsgraad word toegeken minstens vier jaar na voltooiing aan al die vereistes vir die Baccalaureusgraad of minstens drie jaar na voltooiing aan al die vereistes vir die Magistergraad.

DIPLOMAS EN SERTIFIKAAT

Diploma in Bedryfsadministrasie: Dip.B.A.

Toelatingsvereistes: 'n Kandidaat wat na die mening van die Fakulteitsraad in besit is van kwalifikasies en/of ondervinding wat ten minste gelyk staan aan die vereistes vir 'n Baccalaureusgraad, kan tot die Diplomakursus toegelaat word.

Die regulasies vir die M.B.A.-graad is origens mutatis mutandis op die Diploma van toepassing.

Diploma in Gevorderde Publieke Administrasie: Dip. G.P.Admin.

Toelatingsvereistes: 'n Standaard 10-sertifikaat of gelykwaardige kwalifikasie, en ervaring van voldoende gehalte.

Leergang: Minstens twee en hoogstens vier jaar, met dien verstande dat die studie vir die Diploma oor slegs een jaar kan strek waar die kandidaat van drie kursusse vir die eerste studiejaar weens suksesse in vorige eksamens vrygestel is.

Die leergang behels die volgende kursusse:

Eerste jaar: Staatsleer Spesiaal; Ekonomie Spesiaal; Publieke Administrasie Spesiaal; en EEN van die volgende: Bedryfsekonomie Spesiaal; Staats- en Administratiefreg; Uitleg van Wette of Administratiewe Tegnologie

Tweede jaar: Gevorderde Administratiewe Teorie en Praktyk; Gevorderde Personeeladministrasie (Openbare sektor); Gevorderde Finansiële Administrasie (Openbare sektor); en EEN van die volgende: Staatsbeplanning; Vergelykende Publieke Administrasie; Gevorderde Munisipale Administrasie; Internasionale Administrasie; Bedryfsielkunde of 'n keusevak van die eerste jaar.

Sertifikaat in die Teorie van die Rekeningwetenskappe: S.T.R.

Die Sertifikaat in die Teorie van die Rekeningwetenskappe word slegs uitgereik aan reeds gegraduateerde kandidate wat in die volgende kursusse geslaag het:

- Rekeningkunde I, II, III en Gevorderde Rekeningkunde
- Ouditkunde I, II en Gevorderde Ouditkunde
- Kosteberekening en -beheer en Gevorderde Bestuursrekeningkunde
- Inkomstebelasting en Gevorderde Inkomstebelasting
- Boedeladministrasie
- Handelsreg I, II en III
- Statistiek I
- Bedryfsekonomie I en II of Bedryfsekonomie Spesiaal en Ekonomie I en II of Ekonomie Spesiaal of in enige ander kursus of kursusse wat dieselfde vakgebied dek maar nie van 'n laer standaard is nie
- Gevorderde Rekenmeesterspraktyk
- Oriënteringskursus, rekenaar.

FAKULTEIT EKONOMIESE EN BESTUURSWETENSAPPE

Grade

Baccalaureus in die Ekonomiese en Bestuurswetenskappe	: B.Com.
Gekombineerde Baccalaureus in die Ekonomiese en Bestuurswetenskappe en Sertifikaat in die Teorie van Rekeningkunde	: B.Com.-S.T.R.
Baccalaureus in die Ekonomiese en Bestuurswetenskappe vir On=derwysersopleiding	: B.Com.(Opv.)
Honneurs-Baccalaureus in die Ekonomiese en Bestuurswetenskappe	: B.Com. Hons.
Magister in die Ekonomiese en Bestuurswetenskappe	: M.Com.
Doktor in die Ekonomiese en Bestuurswetenskappe	: D.Com.

Sertifikaat

Sertifikaat in die Teorie van Rekeningkunde	: S.T.R.
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GRADE

Baccalaureus in die Ekonomiese en Bestuurswetenskappe: B.Com.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer van minstens 40 persent in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad.

Addisionele toelatingsvereistes tot kursusse:

- Wiskunde: Kandidate wat Wiskunde op die Standaardgraad geslaag het, word slegs by uitsondering en nadat 'n toets gestel deur die Departement Wiskunde geslaag is, tot kursusse in Wiskunde toegelaat.

- Wiskundige Metodes: 'n Slaagsyfer (40 persent) in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad.

Leergang: Drie jaar voltydse of vier jaar deeltydse studie. 'n Leergang bevat 14 jaar=kursusse en drie hoofvakke.

Die graad word in die volgende graadrigtings aangebied:

(i) Algemeen

Verpligte vakke: Bedryfsekonomie, Ekonomie, Rekeningkunde, Komersiële Reg, Statistiese Metodes (of Statistiek I)

(ii) Bedryfsielkundig

Verpligte vakke: Bedryfsekonomie, Bedryfsielkunde, Ekonomie, Rekeningkunde, Statistiese Metodes of Statistiek I

(iii) Kommunikasie

Verpligte vakke: Bedryfsekonomie, Ekonomie, Kommunikasieleer, Bedryfsielkunde, Siel=kunde, Rekeningkunde, Sosiologie en minstens segment Groepsdinamika, Statistiese Metodes of Statistiek I

(iv) Opvoedkunde

(Kyk OPVOEDKUNDE p. 206.)

(v) Regte

Verpligte vakke: Privaatreg, Romeinse Reg, Handelsreg, Bedryfsekonomie, Ekonomie, Rekeningkunde

(vi) Rekeningkundig

Verpligte vakke: Bedryfsekonomie, Ouditkunde, Rekeningkunde, Ekonomie, Komersiële Reg, Koste- en Bestuursrekeningkunde, Statistiese Metodes of Statistiek I

(vii) Statisties

Verpligte vakke: Bedryfsekonomie, Ekonomie, Rekeningkunde, Statistiek, Kommersiële Reg, Wiskundige Metodes of Wiskunde I

(viii) Vervoer

Verpligte vakke: Vervoerekonomie, Vervoeradministrasie en -bestuur, Bedryfsekonomie, Ekonomie, Kommersiële Reg, Rekeningkunde, Statistiese Metodes of Statistiek I.

B.Com. (Rekeningkunde) - vir S.T.R.-doeleindes

Ingeskrewe Openbare Rekenmeestersklerke wat voornemens is om die Kwalifiserende Eksamen van die Openbare Rekenmeestersraad af te lê en wat dus 'n Sertifikaat in Teorie van Rekeningkunde moet verwerf as voorvereiste voordat bogenoemde eksamen afgelê kan word, moet die vasgestelde B.Com. (Rek.)-kursus voltooi.

Toelatingsvereiste: Soos vir die B.Com.-graad.

Leergang: Ses jaar deelydse studie. Die hoofvakke vir die B.Com.-graad is Rekeningkunde III, Ouditkunde II, Bedryfsekonomie III. Die vyfde jaar is gelyk aan eerste jaar B.Com. Hons. (Rekeningkunde) en behels die volgende vakke: Rekeningkunde IV, Koste- en Bestuursrekeningkunde II, Ouditkunde III, Inkomstebelasting II. In sy tweede Honneursjaar (sesde studiejaar) lê die kandidaat die oorblywende gedeelte van sy Honneursgraad af. Dit bestaan uit: Gevorderde Finansiële Bestuur, en enige ander goedgekeurde onderwerp uit die studiegebied.

B.Com. Hons.-, M.Com.- en D.Com.-graad

Kyk Fakulteit Lettere en Wysbegeerte, B.A. Hons.-, M.A.-, en Doktorsgraad, p. 60.

U N I V E R S I T E I T V A N S T E L L E N B O S C H

FAKULTEIT VAN HANDEL EN ADMINISTRASIE

Grade

Baccalaureus Commercii	: B.Comm.
B.Comm. met Regsvakke	
Honneurs-Baccalaureus Commercii	: Hons.-B.Comm.
Magister Commercii	: M.Comm.
Doctor Commercii	: D.Comm.
Baccalaureus Economiae	: B.Econ.
Honneurs-Baccalaureus Economiae	: Hons.-B.Econ.
Magister Economiae	: M.Econ.
Doctor Economiae	: D.Econ.
Baccalaureus Administrationis	: B.Admin.
Honneurs-Baccalaureus Administrationis	: Honneurs-B.Admin.
Magister Administrationis	: M.Admin.
Doctor Administrationis	: D.Admin.
Baccalaureus in Rekeningkunde	: B.Rekeningkunde
Honneurs-Baccalaureus in Rekeningkunde	: Hons.-B.Rekeningkunde
Magister in Rekeningkunde	: M.Rekeningkunde
Doktor in Rekeningkunde	: D.Rekeningkunde

Honneurs-Baccalaureus in Besigheidsbestuur en -administrasie : Hons.-B.(B. en A.)
Magister in Besigheidsbestuur en -administrasie : M.B.A.
Doktor in Besigheidsbestuur en -administrasie : D.B.A.
Magister in Publieke Administrasie : M.P.A.

Diploma

Diploma in Besigheidsbestuur en -administrasie: Dipl. (B. en A.)

GRADE

Baccalaureus Commercii: B.Comm.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Standaardgraad.

Vir kursusse waarin Wiskunde I as vak aangebied word: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 60 persent op die Standaardgraad.

Leergang: Drie jaar voltydse studie of vier jaar deeltydse studie. Die leergang omvat normaalweg dertien jaarkursusse. Die eerstejaarsvakke is soos volg: Bedryfseconomie, Ekonomie, Finansiële Rekeningkunde, Bedryfsielkunde of Rekenaarwetenskap of Sosiologie, Wiskunde of Statistiek (halwe kursus) en Wiskunde (halwe kursus) of Statistiese Metodes A en B.

In die tweede jaar kies studente òf die Gewone rigting òf die Wiskundige rigting.

- Gewone rigting:

Twee van die volgende as hoofvakke: Ekonomie; Bedryfseconomie; Finansiële Rekeningkunde; Kosteberekening, Inkomstebelasting en Maatskappijwet (mits Finansiële Rekeningkunde III gevolg word); Statistiek; Bedryfsielkunde of Sosiologie; Vervoereconomie, Handelsreg.

- Wiskundige rigting:

Twee van die volgende as hoofvakke: Wiskunde; Wiskundige Statistiek; Rekenaarwetenskap; Ekonomie; Bedryfseconomie; Finansiële Rekeningkunde; Vervoereconomie.

Om toelating tot die H.O.D.-kursus te verkry, moet minstens vyf van die jaarkursusse uit die volgende vakke gekies word, waarvan minstens een op derdejaarsbasis en minstens een op tweedejaarsbasis moet wees: Ekonomie; Bedryfseconomie; Finansiële Rekeningkunde/Rekeningkunde; Wiskunde; Snel- en Tikskrif; Handelsreg en Geografie.

Alle voltydse studente word ten sterkste aangeraai om gedurende vakansies praktiese ondervinding in sakeondernemings op te doen.

B.Comm. met Regsvakke

Toelatingsvereiste: Soos vir B.Comm., maar Wiskunde is nie 'n vereiste nie.

Leergang: Drie jaar voltydse studie.

Die kursus verleen toegang tot die tweede jaar van die LL.B.-kursus.

Eerstejaarsvakke is Privaatreg, Ekonomie, Bedryfseconomie, Finansiële Rekeningkunde, Latyn, Spesiale Engels of Engels. Eersgenoemde vier vakke word ook in die tweede jaar geneem en in die derde jaar word Privaatreg III (hoofvak), Romeinse Reg (hoofvak) en Afrikaans-Nederlands I of Afrikaans I (byvak) geneem.

Honneurs-Baccalaureus Commercii: Hons.-B.Comm.

Toelatingsvereistes: 'n B.Comm.- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Binnemuurse studente volg die voorgeskrewe kursus vir ten minste een jaar en buitemuurse studente vir ten minste twee jaar.

Die Honneursgraad word in die volgende hoofrigtings toegeken: Bedryfseconomie, Bedryfsielkunde, Ekonomie, Rekeningkunde, Vervoereconomie, Wiskundige Statistiek en Statistiek. Kursusse in die hoofrigtings Sosiologie, Rekenaarwetenskap en Wiskunde kan ook vir die Hons.-B.Comm.-graad gevolg word.

Magister Commercii: M.Comm.

Toelatingsvereistes: 'n Honneurs-B.Comm.- of 'n ander goedgekeurde Honneursgraad, of 'n B.Comm.- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Studente moet 'n goedgekeurde leergang van navorsing en/of gevorderde studie van ten minste een jaar aan die Universiteit of op 'n ander goedgekeurde plek volg.

Studente wat in besit is van 'n B.Comm.-graad, moet 'n goedgekeurde leergang van ten minste twee jaar volg, wat 'n periode van studie of navorsing van nie langer as een jaar nie op 'n ander erkende plek mag insluit.

Studente moet ook aanvullende werk of studie doen wat die betrokke dosent vereis en 'n bevredigende verhandeling inlewer, of M.Comm.-studente in Bedryfseconomie en/of Ekonomie moet bevredigende werkstukke inlewer en in die voorgeskrewe eksamen in die vereiste getal studierigtings slaag.

Baccalaureus Economiae: B.Econ.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasiestelling). In gevalle waar die vakkeuse Statistiek (halwe kursus) en Wiskunde (halwe kursus) insluit is 'n slaagsyfer in Wiskunde op die Standaardgraad 'n vereiste.

Leergang: Drie jaar binnemuurse studie of vier jaar buitemuurse studie. Die leergange omvat normaalweg elf jaarkursusse. In die derde jaar kies studente twee van die volgende: Ekonomie, Bedryfseconomie, Finansiële Rekeningkunde, Bedryfsielkunde, Sosiologie, Staatsleer of Vervoereconomie of Snel- en Tikskrif, Handelsreg of Ontwikkelingsadministrasie, Geografie, Statistiek.

Minstens vier jaarkursusse moet uit Ekonomie en Bedryfseconomie gekies word.

Om toelating tot die H.O.D.-kursus te verkry, moet minstens vyf van die jaarkursusse uit die volgende vakke gekies word, waarvan minstens een op derdejaarsbasis en minstens een op tweedejaarsbasis moet wees: Ekonomie, Bedryfseconomie, Rekeningkunde, Snel- en Tikskrif, Handelsreg en Geografie.

Honneurs-Baccalaureus Economiae: Hons.-B.Econ.

Toelatingsvereistes: 'n B.Econ.- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Studente moet die voorgeskrewe kursus vir ten minste een jaar in die geval van binnemuurse studente, of vir ten minste twee jaar in die geval van buitemuurse studente, aan die Universiteit volg en aan die einde daarvan in die eksamen slaag.

Studente kan in enige van die volgende hoofrigtings studeer mits hulle die betrokke vak op 'n driejarige basis vir die Baccalaureusgraad gevolg en geslaag het: Ekonomie, Bedryfseconomie, Vervoereconomie, Bedryfsielkunde, Staatsleer, Sosiologie, Ontwikkelingsadministrasie, Geografie, Statistiek, Rekeningkunde.

Magister Economiae: M.Econ.

Toelatingsvereistes: 'n Honneurs-B.Econ.- of 'n ander goedgekeurde Honneursgraad, of 'n B.Econ.- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Studente moet 'n goedgekeurde leergang van navorsing en/of gevorderde studie van ten minste een jaar (ná behaling van die Honneursgraad) aan die Universiteit of op 'n ander goedgekeurde plek volg; of ten minste twee jaar (ná behaling van die Baccalaureusgraad), wat 'n periode van studie of navorsing van nie langer as een jaar nie op 'n ander goedgekeurde plek mag insluit.

Studente moet ook aanvullende werk of studie doen wat die betrokke dosent mag vereis en 'n bevredigende verhandeling inlewer, of M.Econ.-studente in Ekonomie en/of Bedryfs= ekonomie moet bevredigende werkstukke inlewer en die voorgeskrewe eksamen in die vereiste getal studierigtings slaag.

Baccalaureus Administrationis: B.Admin.

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar vir binnemuurse studente en vier jaar vir buitemuurse studente. Die leergang omvat normaalweg elf jaarkursusse.

Die derdejaarsvakke is soos volg: Openbare Administrasie III en een van die volgende: Ekonomie III, Staatsleer III of Vervoerekonomie II, Bedryfsielkunde III, Ontwikkelingsadministrasie II of Handelsreg II, Sosiologie III.

Honneurs-Baccalaureus Administrationis: Honneurs-B.Admin.

Toelatingsvereiste: 'n B.Admin.- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Studente moet die voorgeskrewe kursus vir ten minste een jaar in die geval van binnemuurse studente, of vir ten minste twee jaar in die geval van buitemuurse studente, aan die Universiteit volg en aan die einde daarvan in die eksamen slaag.

Studente kan in enige van die volgende hoofrigtings studeer, mits hulle die bepaalde vak op 'n driejarige basis vir die Baccalaureusgraad gevolg en geslaag het: Staatsleer, Openbare Administrasie, Ekonomie, Ontwikkelingsadministrasie, Sosiologie, Bedryfsielkunde, Vervoerekonomie.

Magister Administrationis: M.Admin.

Toelatingsvereistes: 'n Honneurs-B.Admin.- of 'n ander goedgekeurde Honneursgraad, of 'n B.Admin.- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Soos vir die graad M.Econ. (p. 117).

Baccalaureus in Rekeningkunde: B.Rekeningkunde

Toelatingsvereistes: Soos vir B.Comm.

Leergang: Drie jaar vir binnemuurse en vier jaar vir buitemuurse studente. Die leergang omvat normaalweg dertien jaarkursusse.

Die derdejaarsvakke sluit in Rekeningkunde III, Ouditkunde I, Kosteberekening, Inkomstebelasting I, Handelsreg II en Maatskappywet I.

Honneurs-Baccalaureus in Rekeningkunde: Hons.-B.Rekeningkunde

Toelatingsvereistes: 'n B.Rekeningkunde- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Die kursusse vir die grade Hons.-B.Rekeningkunde en M.Rekeningkunde word slegs buitemuurs (te Bellville) aangebied.

Die graad Hons.-B.Rekeningkunde verleen toelating tot die kwalifiserende eksamen van die Openbare Rekenmeesters- en Ouditeursraad.

Die leergang vir die Honneursgraad duur twee jaar en behels die volgende kursusse: Rekeningkunde IV en V, Ouditkunde II en III, Bestuurskontroles en Maatskappywet II, Inkomstebelasting II.

Magister in Rekeningkunde: M.Rekeningkunde

Toelatingsvereistes: 'n Honneurs-B.Rekeningkunde- of 'n ander goedgekeurde Honneursgraad,

of 'n B.Rekeningkunde- of 'n ander goedgekeurde Baccalaureusgraad.

Leergang: Soos vir die graad M.Econ. (p. 117), maar studente in besit van 'n Baccalaureusgraad moet 'n goedgekeurde leergang van navorsing en/of gevorderde studie van minstens drie jaar (ná behaling van die B.-graad) volg.

Honneurs-Baccalaureus in Besigheidsbestuur en -administrasie: Hons.-B.(B. en A.)

Toelatingsvereistes: Studente moet in besit wees van 'n Baccalaureusgraad en moet skriftelik aansoek doen om toelating, met 'n volledige opgawe van hul kwalifikasies en ervaring.

Leergang: Minstens een jaar voltydse of twee jaar deelydse studie.

Die studierigtings word soos volg aangebied: Algemene Bestuur en Beplanning; Be-markingsbestuur; Finansiële Bestuur; Personeelbestuur en Administrasie; Menslike Verhoudinge en Organisasoriese gedrag; Produksiebestuur; Informasiebestuur en Data-verwerking; Bestuursrekeningkunde, Handels- en Maatskappyereg en Sekretariële Praktyk; Bestuursekonomie, Suid-Afrikaanse Besigheids- en Bestuurspraktyk; Kwantitatiewe Metodes; Ondersoekmetodiek en die skryf van verslae.

Magister in Besigheidsbestuur en -administrasie: M.B.A.

Toelatingsvereistes: Die graad Honneurs-Baccalaureus in Besigheidsbestuur en -administrasie of ander goedgekeurde gelykstaande kwalifikasies. Studente moet skriftelik aansoek doen om toelating tot die kursus.

Leergang: 'n Student moet 'n goedgekeurde leergang van navorsing en/of gevorderde studie van ten minste een jaar aan die Universiteit of op 'n ander goedgekeurde plek volg; en verder òf (i) in die Bestuurswetenskappe spesialiseer deur die voorgeskrewe eksamens in drie gevorderde studierigtings te slaag, 'n interdisiplinêre projek te voltooi en 'n mondelinge eksamen te slaag, òf (ii) 'n bevredigende Magister-verhandeling oor 'n goedgekeurde bestuursprojek inlewer.

Magister in Publieke Administrasie: M.P.A.

Toelatingsvereistes: 'n Student moet in besit wees van 'n Baccalaureusgraad of op 'n ander wyse 'n toereikende standaard van bekwaamheid in sy bepaalde studierigting bereik het. Hy moet ook praktiese ervaring in openbare administrasie opgedoen het wat vol-doende voorbereiding vir die Magistergraadkursus vorm.

Studente moet skriftelik aansoek doen en 'n volledige opgawe van hul kwalifikasies en ervaring verstrek.

Leergang: Studente moet 'n goedgekeurde leergang van gevorderde studie vir ten minste twee jaar volg. Die kursus word slegs by die Buitemuurse Afdeling aangebied.

Studente moet in die voorgeskrewe eksamens slaag en 'n bevredigende verhandeling inlewer.

D.Comm.-, D.Econ.-, D.Admin.-, D.Rekeningkunde- en D.B.A.-grade

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n Magistergraad of 'n toereikende standaard van bekwaamheid in sy bepaalde studierigting op 'n ander wyse bereik het.

Studente moet skriftelik aansoek doen om toelating tot die Doktorstudie. Elke aansoek word op meriete deur die Senaat oorweeg.

Leergang: 'n Kandidaat moet vir minstens twee jaar as student vir 'n Doktorsgraad aan die Universiteit ingeskryf wees.

'n Proefskrif word van elke kandidaat vereis. Die proefskrif moet oorspronklike navorsing van die kandidaat oor een of ander vraagstuk in verband met sy hoofvak behels.

'n Mondelinge eksamen word in die reël vereis, maar in spesiale gevalle kan vrystelling verleen word.

DIPLOMA

Diploma in Besigheidsbestuur en -administrasie: Dip. (B. en A.)

Toelatingsvereistes: Minstens 'n Standaard 10-sertifikaat. Studente moet 'n toereikende ontwikkelingsvlak bereik het.

Studente moet skriftelik aansoek doen en 'n volledige opgawe van hul kwalifikasies en ervaring verstrek.

Leergang: Die besonderhede in verband met die kursus is dieselfde as vir die Hons.-B. (B. en A.). Kyk p. 119.

U N I V E R S I T E I T V A N S U I D - A F R I K A

FAKULTEIT HANDEL EN ADMINISTRASIE

Grade

in Handel:

Baccalaureus Commercii	: B.Com.
Honneurs-Baccalaureus Commercii	: Hons.-B.Com.
Magister Commercii	: M.Com.
Doctor Commercii	: D.Com.

in Rekeningwetenskap:

Baccalaureus Computationis	: B.Compt.
Honneurs-Baccalaureus Computationis	: Hons.-B.Compt.
Magister Computationis	: M.Compt.
Doctor Computationis	: D.Compt.

in Administrasie:

Baccalaureus Administrationis	: B.Admin.
Honneurs-Baccalaureus Administrationis	: Hons.-B.Admin.
Magister Administrationis	: M.Admin.
Doctor Administrationis	: D.Admin.

in Bedryfsleiding:

Magister in Bedryfsleiding	: M.B.L. (Algemene Bestuur)
Magister in Bedryfsleiding	: M.B.L. (Bestuursbeheersisteme)
Doktor in Bedryfsleiding	: D.B.L.

Diploma en Sertifikaat

Diploma in Marknavorsing en Advertensiewese	
Sertifikaat in die Teorie van Rekeningkunde	: S.T.R.

GRADE

Baccalaureus Commercii: B.Com.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). 'n Toereikende kennis van standaard 10-Wiskunde word vir Statistiek I en Rekenaarwetenskap I vereis.

Leergang: Die leergang strek oor minstens drie jaar en bevat veertien kursusse.

Studente kies een van die volgende rigtings:

(i) Algemene rigting

Verpligte hoofvakke: Ekonomie III en Bedryfseconomie III

(ii) Administratiewe rigting

Verpligte hoofvakke: Ekonomie III, Bedryfseconomie III, Bedryfsielkunde III

(iii) Rekeningkundige rigting

Verpligte hoofvakke: Ekonomie III, Bedryfseconomie III, Rekeningkunde III

(iv) Regsrigting

Verpligte hoofvakke: Ekonomie III, Bedryfseconomie III, Privaatreg III, Romeinse Reg I. ('n Kennis van Latyn is noodsaaklik vir Romeinse Reg.)

(v) Ekonomiese rigting

Verpligte hoofvakke: Ekonomie III, Ekonomiese Analise II.

Honneurs-Baccalaureus Commercii: Hons.-B.Com.

Toelatingsvereistes: 'n B.Com.-graad. Die vak waarin die kandidaat verder wil studeer, moet een van sy hoofvakke vir die Baccalaureusgraad wees.

Leergang: Geen student word tot die eksamen toegelaat nie tensy hy 'n goedgekeurde leergang gedurende minstens een jaar gevolg het.

Die graad word in die volgende departemente toegeken: Bedryfseconomie, Bedryfsielkunde, Ekonomie, Ouditkunde, Rekeningkunde, Statistiek.

'n Student neem nie die graad in Ouditkunde nie, tensy hy Rekeningkunde III en Ouditkunde II voltooi het; of in die Rekeningkunde nie tensy hy Rekeningkunde III en Kosteberekening voltooi het.

Magister Commercii: M.Com.

Toelatingsvereiste: Die graad Hons.-B.Com.

Leergang: Die graad sal nie toegeken word voordat minstens een jaar verloop het sedert die kandidaat die Honneurs-Baccalaureusgraad verwerf het nie.

Die grade word in dieselfde departemente toegeken as die onderskeie Honneurs-Baccalaureusgrade.

Die eksamen bestaan uit 'n verhandeling wat bewys moet lewer van oorspronklike navorsing aan die kant van die kandidaat. Sommige departemente vereis ook skriftelike en/of mondelinge eksamens.

Baccalaureus Computationis: B.Compt.

Toelatingsvereiste: Soos vir die B.Com.-graad.

Leergang: Die leergang strek oor vier jaar en bevat 16 kursusse. 'n Student volg nie

meer as vyf kursusse per jaar nie.

Die leergang sluit onder andere die volgende kursusse in: Rekeningkunde IV, Inkomstebelasting, Ouditkunde II, Kommersiële Reg III, Bedryfseconomie II of Ekonomie II, Boedelberedding, Bestuursinligtingstelsels, Statistiek I, Publieke Administrasie.

Statistiek I en Boedelberedding is verpligtend vir studente wat die Sertifikaat in die Teorie van Rekeningkunde wil verwerf.

Honneurs-Baccalaureus Computationis: Hons.-B.Compt.

Toelatingsvereistes: Die graad B.Compt. of 'n ander graad met Rekeningkunde IV, Bestuursinligtingstelsels (of Rekenaarwetenskap I), Inkomstebelasting, Ouditkunde II en Kommersiële Reg III as geslaagde vakke.

Leergang: Die leergang behels Rekeningkunde V en Ouditkunde III.

Die Sertifikaat in die Teorie van Rekeningkunde word uitgereik aan 'n student wat in Statistiek I en Boedelberedding geslaag het en die graad Honneurs-B.Compt. voltooi het en wat as 'n ingeskrewe klerk by die Openbare Rekenmeesters- en Ouditeursraad geregistreer is/was.

Magister Computationis: M.Compt.

Toelatingsvereiste: Die graad Hons.-B.Compt.

Leergang: Die eksamen bestaan uit 'n verhandeling oor 'n goedgekeurde onderwerp. 'n Verhandeling mag nie ingedien word voordat 'n jaar verloop het sedert behaling van die Honneurs-Baccalaureusgraad nie.

Baccalaureus Administrationis: B.Admin.

Toelatingsvereiste: Soos vir die B.Com.-graad.

Leergang: Die leergang strek oor drie jaar en bevat 14 kursusse. 'n Student neem nie meer as vyf kursusse per jaar nie.

Die vakke vir die derde jaar behels Publieke Administrasie III en Ekonomie III of Staatsleer III en nog twee ander vakke gekies uit onder andere die volgende: Naturelle-administrasie, Bedryfsielkunde, Kosteberekening, Rekeningkunde III of Plaaslike Owerheidsrekeningkunde.

Honneurs-Baccalaureus Administrationis: Hons.-B.Admin.

Toelatingsvereiste: 'n B.Admin.-graad.

Leergang: 'n Student volg 'n goedgekeurde leerplan gedurende minstens een jaar.

Die graad word in die volgende departemente toegeken: Ekonomie, Bedryfsielkunde, Naturelle-administrasie, Publieke Administrasie, Staatsleer.

Magister Administrationis: M.Admin.

Kyk M.Com.-graad, p. 121.

Magister in Bedryfsleiding: M.B.L. (Algemene Bestuur)

Toelatingsvereistes: 'n Student moet:

- (i) in besit wees van 'n Baccalaureusgraad; of
- (ii) die Sertifikaat in die Teorie van Rekeningkunde behaal het en die C.A.(S.A.) besit of daarvoor kwalifiseer; en
- (iii) minstens drie jaar toepaslike praktiese ervaring in 'n goedgekeurde onderneming

gehad het; met dien verstande dat 'n korter tydperk met die spesiale toestemming van die Senaat aanvaar kan word;

(iv) by 'n studiegroep aansluit. Indien daar nie 'n plaaslike studiegroep gevorm kan word nie, moet 'n student elders by 'n bestaande groep aansluit. 'n Student se inskrywing word op hierdie voorwaardes aanvaar.

Leergang: Die studietydperk duur vier jaar en word verdeel in vyf sikkusse wat elk 'n aantal modules bevat.

Magister in Bedryfsleiding: M.B.L. (Bestuursbeheersisteme)

Toelatingsvereistes: 'n Student moet:

(i) in besit wees van 'n Baccalaureusgraad met Rekeningkunde III as een van sy kursusse; of

(ii) die Sertifikaat in die Teorie van Rekeningkunde behaal het en die C.A.(S.A.) besit of daarvoor kwalifiseer; en

(iii) en (iv) Kyk M.B.L. (Algemene Bestuur).

Leergang: Soos vir M.B.L. (Algemene Bestuur).

Doktor in Bedryfsleiding: D.B.L.

Toelatingsvereiste: Die M.B.L.-graad.

Leergang: Die eksamen bestaan uit 'n skriftelike of mondelinge eksamen en 'n proefskrif oor 'n goedgekeurde onderwerp in die Bedryfsleiding.

Doctor Commercii: D.Com. of

Doctor Computationis: D.Compt. of

Doctor Administrationis: D.Admin.

Toelatingsvereistes: 'n Kandidaat moet die Magistergraad behaal het in die fakulteit waarin hy wil studeer, en tot bevrediging van die Senaat bewys gelewer het aangaande sy bekwaamheid in die gekose rigting.

Leergang: Die graad word nie aan 'n kandidaat toegeken voordat twee jaar verloop het sedert hy die Magistergraad verwerf het nie.

Die eksamen bestaan uit 'n proefskrif wat bewys moet lewer van oorspronklike werk en 'n besliste bydrae tot die kennis van en insig in die vak moet wees. 'n Proefskrif handel oor 'n onderwerp in verband met Rekeningkunde, Ouditkunde, Ekonomie, Bedryfsekonomie, Bedryfsielkunde, Staatsleer, Publieke Administrasie, Naturelle-administrasie of Statistiek.

DIPLOMA EN SERTIFIKAAT

Diploma in Marknavorsing en Advertensiewese

Toelatingsvereiste: 'n Student moet 'n graad besit.

Leergang: Die leergang strek oor twee jaar en bevat 8 kursusse. Die kursusse is soos volg: Ekonomie I; Bedryfsekonomie I, II; Verbruikersgedrag; Statistiek I; Marknavorsing A, B; Reklamewese.

Sertifikaat in die Teorie van Rekeningkunde: S.T.R.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde.

'n Student wat vir die eerste keer inskryf, moet bewys lewer van registrasie van leerkontrak by die Openbare Rekenmeesters- en Ouditeursraad.

'n Nie-gegradueerde gematrikuleerde student wat nie bewys van leerkontrak het nie en wat vir die eerste keer wil inskryf, moet vir die B.Compt.-graad registreer. (Kyk p. 121.)

'n Gradueerde student word sterk aangeraai om te kwalifiseer vir toelating tot Hon-neurs-B.Compt.-studie met die oog daarop om die S.T.R. sodoende te voltooi. (Kyk Hons.-B.Compt. p. 122.)

Leergang: Die leergang strek oor vyf jaar en bevat 17 kursusse.

B E R O E P S D I E N S

Let wel: Lees ook in Hoofstuk 1 die gedeelte "WAAROM GAAN HIERDIE BOEK?"

Die keuse van 'n gepaste studie- en beroepsrigting is in 'n hoë mate gebaseer op die kennis van al die vernaamste fasette van daardie besondere rigting. Dit is egter nie die bedoeling en ook nie moontlik om in hierdie afdeling alle moontlike aspekte van elke bestaande rigting te probeer bespreek nie. As gevolg van die wye vakkeuse sal dit egter vir studente moontlik wees om hulle voor te berei vir feitlik enige beroep waarvoor kennis van die ekonomiese en verwante wetenskappe 'n vereiste is. Hierin probeer die universiteite dan ook leiding gee deurdat bepaalde studierigtings gekies kan word. Oor die algemeen is die oogmerke met die kurrikula tweeledig, naamlik 'n breë agtergrondstudie van die terrein van die ekonomiese wetenskappe aan die een kant en 'n studie in 'n bepaalde hoofrigting aan die ander kant. Nagraadse studie vir 'n graad of diploma maak voorsiening vir spesialisering wat die grondslag lê vir bevordering na beroepe op hoë vlak.

Die ekonomiese en verwante studierigtings is so omvangryk en die beroepsgeleenthede wat gebied word so veelvuldig dat slegs 'n breë oorsig daarvan hier moontlik is.

B.Com. (Regte): Die B.Com.-graad waarby regsvalke ingesluit is verleen nie slegs basiese opleiding in ekonomiese sowel as regsvalke nie, maar dit kan ook met LL.B. afgerond word. Dit beteken dus voorbereiding vir die sakelewe en regspraktyk met vooruitsigte op 'n aanstelling in verskillende uitvoerende betrekkinge in die handel en nywerheid, asook finansiële instellings soos die versekeringsmaatskappye. Kyk ook Regsgeleerdheid, p. 375.

Bedryf- en Personeelsielkunde: Hierdie vakwetenskap hou verband met die vakgebiede van byvoorbeeld die Psigologie, Sosiologie, Ekonomie en Bedryfseconomie. Dit hou sig besig met die studie van die mens in die werksituasie en die maksimale benutting van arbeid as produksiefaktor. As gevolg van die deurslaggewende rol van die personeel (werknemers) in die bereiking van sukses, word daar in enige onderneming voortdurend gesoek na metodes om werknemers te motiveer en te lei tot hul optimale prestasie (hoogste produktiwiteit). Kennis van menslike optrede (gedrag) in verskillende bedryfsituasies het dus vir enige sakebestuurder onontbeerlik geword.

In die handel en nywerheid, Staatsdepartemente en ander groot ondernemings soos die Spoorweë, Yskor, Sasol, die WNNR, die Poswese, Koöperatiewe Verenigings, die myne, versekeringsmaatskappye, bougenootskappe, munisipaliteite en banke, word personeel met hierdie opleiding in diens geneem om opgelei te word as personeel-, indiensnemings-, opleidings-, personeelnavorsings-, organisasieontwikkelings-, organisasie en metode- of algemene personeelbeamptes. Daarvandaan kan dan gevorder word na personeelbestuurders, bestuursraadgewers en selfs personeeldirekteure.

Die waarde van die dienste van een of meer personeelbestuurders in 'n onderneming, veral waar dit gaan om die optimale benutting van beskikbare arbeid, word vandag al hoe meer besef. Die pligte van 'n personeelbestuurder, hoewel uiteenlopend van aard, is baie interessant. In 'n groot onderneming is dit egter moontlik dat 'n persoon net vir een gespecialiseerde afdeling verantwoordelik kan wees, soos byvoorbeeld opleiding.

'n Aanstelling as personeelbestuurder sal die vrug wees op die harde werk van jare asook 'n tydperk van intensiewe indiensopleiding. 'n Universiteitsgraad soos B.A., B.Com.,

B.Sc., B.P.L. of B.A. (Sos. W.), met hoofvakke soos Bedryf- en Personeelsielkunde, Sielkunde, Sosiologie, Maatskaplike Werk, Ekonomie en so meer, sal beslis van groot waarde wees om bevordering te bespoedig. Dit verskaf daardie uiters nuttige agtergrond en kennis wat nodig is wanneer personeelbestuurders met aangeleenthede te doen kry soos die keuring en plasing van personeel, groepsverhoudinge, motivering en moraal, bevrediging uit werksomstandighede, beplanning en koördinerings, veiligheidsmaatreëls en voorkoming van ongelukke, en so meer.

Bedryfsadministrasie (M.B.A.) vir hoë bestuurspersoneel: Hier is 'n uitstekende geleentheid vir sakemanne en -vroue wat reeds in die praktyk staan of reeds oor 'n bacca-laureusgraad beskik, om hul kennis, vermoë en agtergrond oor bestuursaangeleenthede soos organisasie, beplanning, leiding, koördinerings en beheer, verder uit te brei en akademies te fundeer. Die taak om leiding te gee en om die werk van 'n groot groep werknemers te kontroleer en te koördineer met die oog op maksimale ekonomiese resultate, vereis die hoogste kwaliteite van leierskap. Die bestuursprofessie omsluit nie slegs algemene bestuurders nie, maar ook spesialiste in die groot aantal bestuursfunksies wat so kenmerkend van die handel en nywerheid is. Vir die vervulling van hierdie funksies is deeglike opleiding in moderne beginsels en praktyk absoluut noodsaaklik.

Die groot verskeidenheid van bestuursrigtings stel persone in die geleentheid om volgens hul aanleg en persoonlikheidseienskappe, 'n gepaste rigting te kies. 'n Paar van hierdie rigtings is byvoorbeeld dié van personeelbestuurder, verkoopsbestuurder, bedryfsbestuurder, produksie- of werksbestuurder, bemarkingsbestuurder, finansiële bestuurder, kredietbestuurder en so meer.

Studente moet egter nie verwag om uit die universiteit direk in 'n hoë bestuurspos in te stap nie. Goeie poste gaan na die mense wat bereid en in staat is om daarvoor te werk en dit te verdien. Die opleiding in handel en administrasie, veral op nagraadse vlak, behoort hulle egter te help om hoër te begin en vinniger te vorder. Alle bestuurders kan nie deskundiges op alle terreine wees nie en daarom word daar in 'n toenemende mate van spesialiste gebruik gemaak om hulle by te staan. 'n Gewone B.Com.-graad met nagraadse spesialisering is dus ewe-eens van groot waarde.

Bedryfsrekeningkunde (Kosteberekening): Die status van en vraag na opgeleide kosterekenmeesters is as gevolg van die belangrike werk wat gedoen word, in elke onderneming baie hoog. Gegewens deur die kosterekenmeester beskikbaar gestel, vorm die termometer vir die bepaling van die lonendheid van die bedryf en 'n basis vir belangrike beslissings. Sy kennis word deur feitlik alle ondernemings, groot of klein, benut in afdelings soos kosteberekening, begrotingskontrole, arbeidsvergoeding, prysbepaling, bestuursvoorligting en talle ander terreine waar die ontleding van en kontrole oor uitgawes nodig is. Hy is dus 'n sleutelfiguur in die bepaling van ontwikkeling en doeltreffendheid, veral wanneer die onderneming in 'n sterk mededingende posisie verkeer. Vir die bestuur van 'n onderneming is die advies en verantwoordelike berekeninge van die kosterekenmeester beslis van groot belang, en hieruit spruit ook sy hoë besoldiging.

Die uitbreiding van die nywerheid, handel en ekonomie, en die noodsaaklikheid daarvan om koste en pryse steeds op 'n realistiese vlak te probeer hou, maak vooruitsigte baie aantreklik vir kosteberekenaars in die Staatsdiens; handel en nywerheid; Provinsiale Administrasies; munisipaliteite; fabriekke (veral waar massaproduksie en kompetisie 'n rol speel); Sasol; die Spoorweë; Weermag; Yskor; WNNR; myn- en ander maatskappye en as konsultante en dosente aan opvoedkundige inrigtings. Verdere studie en rype ervaring in hierdie rigting is noodsaaklik vir bevordering.

Bemerking: Die tempo van ekonomiese ontwikkeling in 'n land kan slegs na behore gehandhaaf word indien die sakewêreld bemarkingsgeoriënteerd is. Die opkoms van bemarking as een van die bestuursfunksies, word dan ook toegeskryf aan 'n nuwe en meer wetenskaplike benadering tot alle aspekte van verkoop (bemarking).

Die aanvaarding deur die sakewêreld van die waarde van verhoogde omset as gevolg van doeltreffende bemarking, skep toenemende geleenthede vir werk in verskeie spesialiteitsrigtings soos dié van verkope, reklame, openbare skakeling, marknavorsing, handelskuns, prysbepaling, verspreiding, verkoopsbevordering, na-verkoopsdiens, produkontwikkeling en doeltreffende administrasie. Vir gegradueerdes wat gaandeweg die nodige ervaring opgedoen het en wat oor ambisie, insig, inisiatief, werkvermoë en ander noodsaaklike

eienskappe beskik, kan 'n loopbaan in hierdie rigting tot die hoogste poste in die be=stuurswese lei. Baie ondernemings het dan ook daartoe gekom om hul topleiers uit die geleedere van bemarkingsbeamptes aan te stel.

Ekonomie, Bedryfseconomie en Geld- en Bankwese: Uit Ekonomie, die moeder van alle ekonomiese wetenskappe, het verskeie ander vakke soos Bedryfseconomie en Geld- en Bankwese ontwikkel. Meer en meer persone neig dan ook tot spesialisasie in 'n besondere rigting soos finansies, vervoer, bedryf en distribusie, landbou, industrie, arbeid, be=marking of ander ekonomiese bedrywighede. Hiervoor word deur universiteite ook die ge=leentheid geskep deur die verskillende vakkombinasies wat rondom Ekonomie en Bedryfs=ekonomie as hoofvakke sentreer. Ook kan Ekonomie aan die meeste universiteite as 'n hoof- of byvak vir die B.A.-graad aangebied word, in welke geval dit 'n waardevolle agtergrondstudie verskaf in kombinasie met byvoorbeeld Staatsleer, Sosiologie, Volke=kunde, Geografie, regs vakke en selfs Wysbegeerte. Leerlinge met wiskundige aanleg kan ook in gedagte hou dat in die sakewêreld die behoefte aan persone wat oor Ekonomie of Bedryfseconomie in kombinasie met vakke soos Wiskunde, Statistiek of Wiskundige Ekono=mie beskik, net so dringend is en dat die geleenthede vir hulle feitlik onbeperk is.

In die Staatsdepartemente hieronder, wissel die werksaamhede van Ekonomie na gelang van die funksies van elke departement en is die vereistes vir aanstelling as vakkundige beamptes, 'n erkende universiteitsgraad met hoof- en ander vakke soos in dié volgorde aangedui:

Arbeid: Bedryfseconomie; ten minste twee kursusse in Rekeningkunde.

Beplanning en die Omgewing: Ekonomie/Bedryfseconomie; twee kursusse in Statistiek vir sommige poste.

Bosbou: B.Com.-graad: Ekonomie of Bedryfseconomie of Geld- en Bankwese; B.Sc.-Bosbougraad met Bosbou-ekonomie as vak.

Finansies: Ekonomie of een van die vakke Rekeningkunde, Bedryfseconomie, Geld- en Bankwese.

Handel: Ekonomie of Bedryfseconomie; een kursus in Handelsreg of Statistiek of Rekeningkunde.

Landbou-ekonomie en -bemarking: Een of meer van die vakke Ekonomie, Bedryfseconomie, Rekeningkunde, Landbou-ekonomie; 'n B.Com.-graad met Rekeningkunde as hoofvak en ten minste een kursus in Ouditkunde en Handelsreg.

Nywerheidswese: Ekonomie/Bedryfseconomie; een of meer kursusse in Rekeningkunde, Statistiek of Handelsreg.

Ander instansies neem persone wat in Ekonomie en verwante rigtings geskoold is in diens as ekonomiese adviseurs, finansiële konsultante, navorsers en so meer, om die algemene ekonomiese tendense vir die onderneming te interpreteer; om vooruitskatting van produksie, markte en pryse te doen en om behulpsaam te wees met die beplanning van die onderneming as geheel. Sulke werkgewers is onder andere die NOK, die Bantoebeleggings= korporasies, Yskor, Sasol, die Spoorweë, die Gefedereerde Kamer van Nywerhede, die Ver= eniging van Kamers van Koophandel, handelsbanke, bougenootskappe, versekeringsmaatskap= ppe, markagente en ander ondernemings in die handel en nywerheid.

Aangesien vervoer in wese 'n integrerende deel van die produksieproses uitmaak, vorm Vervoereconomie 'n belangrike vak of spesialiteitstudierigting vir B.Com. Die univer= siteite wat dit aanbied, sien dit as 'n geleentheid om aan studente die basiese agter= grondkennis van die vervoerwese oor te dra binne die kader van hul kennis soos opgedoen in veral die vakrigtings Ekonomie en Bedryfseconomie. Werksmoontlikhede in dié rigting sal byvoorbeeld wees in die Departement van Vervoer (verskillende vertakkinge), die Spoorweë, die verskillende skeeps- en ander maatskappye wat met lewering van goedere gemoeid is.

Geen intelligente jongmens wat oor 'n graad met toepaslike vakkombinasie beskik en wat sy taak met toewyding en roepingsbewustheid aanpak, hoef te vrees dat hy nie vordering sal maak nie. Die arbeidsmark verleen egter voorkeur aan nagraadse studente. Die vraag na hierdie persone om uitvoerende poste te beklee, sal as gevolg van Suid-Afrika se grootskaalse nywerheidsontwikkeling, en met sy groot hulpbronne, in die toekoms nog

groter word. Ook vir 'n aanstelling as dosent aan 'n universiteit is nagraadse studie noodsaaklik. Die aspirant-onderwyser in die ekonomie en ander handelsvakke moet in die samestelling van sy leeryang die vereistes van die betrokke onderwysowerheid in gedagte hou.
Kyk ook Landbou-ekonomie, p. 358.

Rekeningkunde: Die rekeningkundige professie speel 'n onmisbare rol in alle soorte sake-ondernemings. Met verloop van tyd het die gekwalifiseerdes in dié rigting beweeg van die posisie van gewone boekhouer af na dié van die gespesialiseerde leier en finansiële adviseur. Vir diegene wat nie professioneel opgelei is nie maar wat wel oor 'n graad (B.Com. of B.Admin.) met Rekeningkunde as hoofvak in kombinasie met vakke soos Bedryfsrekeningkunde, Ouditkunde, Handelsreg, Inkomstebelasting, Bedryfseconomie en Ekonomie beskik, is daar 'n besonder wye beroepsveld. Hulle kan onderwysers in handelsvakke word of tuitree tot die sakewêreld as rekenmeesters, ouditeurs, kredietbestuurders, sekretaris-rekenmeesters, kosterekenmeesters en so meer in diens van byvoorbeeld handels- en nywerheidsondernemings, munisipaliteite, finansiële instellings, myne, maatskappye, banke, bougenootskappe, versekeringsmaatskappye en talle ander. Hulle word ook deur Staatsdepartemente soos dié van Finansies, die Tesourie, Landbou-ekonomie en -bemarking en Arbeid in diens genseem om as vakkundige beamptes opgelei te word. Daar bestaan ook by ondernemings 'n groot vraag na persone wat minstens oor 'n B.Com.-graad beskik, as gevolg van die uiteenlopende werksaamhede in die finansiële afdelings. In hierdie vraag kon reeds vir baie jare lank nog nie voorsien word nie. Met besondere inisiatief, dryfkrag en werkvormoë kan daar mettertyd tot bestuursposte en poste in uitvoerende bediening gevorder word. Nagraadse studie is egter vir die rekeningkundige noodsaaklik om tot die hoogste spore te kan vorder.

Meer gevorderde studie in Rekeningkunde kan lei tot die toelating tot die kwalifiserende eksamen van die Openbare Rekenmeesters- en Ouditeursraad. Suksesvolle aflegging van hierdie eksamen, tesame met die voltooiing van 'n dienstermyn as ingeskrewe klerk in die kantoor van 'n openbare rekenmeester en ouditeur, is 'n voorvereiste vir registrasie as geëkspertiseerde rekenmeester ("C.A."). Die titel "C.A." word oor die wêreld heen erken as 'n besondere professionele kwalifikasie. Hierdie kwalifikasie open die weg tot hoog besoldigde betrekkinge. Die geëkspertiseerde rekenmeester kan in 'n private praktyk alleen praktiseer of in vennootskap tree met ander geregistreerde rekenmeesters. In die Republiek het byvoorbeeld alle publieke maatskappye, banke en bougenootskappe van die diens van 'n Openbare Rekenmeester en ouditeur gebruik maak. Andersins kan hy vorder tot 'n prestiegebetrekking in 'n groot maatskappy soos dié van direkteur, algemene bestuurder, rekenmeester, interne ouditeur, sekretaris of kosterekenmeester. Diegene wat ook oor die ander eienskappe vir topleiding beskik, kan uitstyg tot die posisie van besturende direkteur of voorsitter. Meer inligting oor die "C.A."-kwalifikasie kan regstreeks verkry word van die Openbare Rekenmeesters- en Ouditeursraad, Johannesburg, of van enige openbare rekenmeesters- en ouditeursfirma.

Namate die sakewêreld meer ingewikkeld en veelsydig word, groei ook die behoefte aan opgeleide mannekrag wat 'n behoorlike begrip van die bedryfslêwe het. Daar bestaan feitlik onbepaalde moontlikhede vir persone met analitiese vermoë, logiese denke en heldere oordeel. Hulle geniet ook allerweë hoë agting.

Afgesien van die geleentheid om 'n vakkundige beampte in 'n Staatsdepartement te word (soos hierbo vermeld), geniet gegraduateerdes ook voorkeur om in die Staatsdiens in aanmerking te kom vir die volgende poste:

- **Departementele Rekenmeester (Finansiële Administrasie):** Hoewel die Tesourie moet toesien dat finansiële verpligtinge volgens voorskrif nagekom word, het elke staatsdepartement egter ook sy eie finansiële afdeling wat verantwoordelik is vir uitbetalings en invorderings. Die Staatsraad beveel aan dat die Rekenmeester oor 'n toepaslike graad met die volgende vakke kan beskik: Rekeningkunde as een hoofvak en een of meer van die volgende as die ander hoofvak(ke): Bedryfseconomie, Ekonomie, Handelsreg, Industriële Sielkunde, Bedryfsrekeningkunde, Romeins-Hollandse Reg, Staatsadministrasie, Statistiek, Wiskundige Statistiek. (Die oorblywende vakke kan met vrag as byvakke ingesluit word.)

Die oervormige basis waarop staatsfinansies in die Staatsdiens geadministreer word, maak dit vir die Rekenmeester moontlik om ook mee te ding om senior betrekkinge in ander

Staatsdepartemente. Die vorderingsbaan is tans soos volg: Assistent-rekenmeester, Rekenmeester, Senior Rekenmeester, Assistent-hoofrekenmeester, Hoofrekenmeester.

- Ouditeur: Die hoofdoelstelling van 'n Staatsouditeur is om te verseker dat openbare fondse met versigtigheid, noukeurigheid en doeltreffendheid aangewend word. Ouditering word behartig deur die Kontroleur en Ouditeur-generaal, die verskillende Provinsiale Ouditeurs en hul personeel van ouditeure. Die Staatsdiens beveel aan dat persone wat in hierdie rigting belangstel, dieselfde leergang sal volg soos voorgestel vir die Rekenmeester. Ná sy aanstelling word die nuweling nie aan homself oorgelaat nie, maar word hy deeglik onderrig in die pligte van 'n ouditeur.

Met die steeds uitbreidende werksaamhede van die Staatsdiens en die daarmee gepaardgaande besteding van staatsgelde, is daar goeie vorderingsgeleenthede vir die knap ouditeur. Die vorderingsbaan is tans soos volg: Assistent-ouditeur, Ouditeur, Senior Ouditeur, Assistent-hoofouditeur, Hoofouditeur.

- Voorrade-administrateur (Voorrade-administrasie): Die pligte van die Voorrade-administrateur in die Staatsdiens spruit hoofsaaklik uit die aankoop van, beheer oor en verantwoording van voorrade en toerusting. Na diensaanvaarding word die nuwe amptenaar opgelei in die werk wat hy moet verrig. Die volgende vakke kan in die graad-leergang ingesluit word: Ekonomie, Rekeningkunde, Bedryfsrekeningkunde, Statistiek en so meer.

Voorrade-afdelings bestaan in verskeie departemente, met die gevolg dat 'n beampte se geleentheid nie slegs tot een departement beperk is nie. Soos in alle ander afdelings van die Staatsdiens word verdienstelike werk goed beloon.

Sekretariële rigting: Die hoër range van die sekretariële professie is hoofsaaklik toeganklik vir daardie persone wat oor erkende professionele kwalifikasies beskik en ook lidmaatskap van die sekretariële organisasies verwerf het. Elke maatskappy, byvoorbeeld, moet 'n sekretaris aanstel en dié beklee 'n uiters verantwoordelike posisie as hoof-administratiewe uitvoerende beampte. Met sy gespesialiseerde kennis van onder andere die Maatskappyyewet, is hy 'n belangrike lid van die bestuurspan en kom dit algemeen voor dat hy ook as 'n direkteur aangestel word.

Afgesien van sy ander pligte, vorm die sekretaris 'n belangrike skakel tussen die direkteure aan die een kant en byvoorbeeld die aandeelhouers, kantoorpersoneel, bankiers, ouditeure en die publiek aan die ander kant. Hierdie funksie maak sy werk interessant en aantreklik. Hy moet belangrike sake op intelligente en verantwoordelike wyse kan hanteer, en sy status en besoldiging is hoog.

Die groei van nywerheidsorganisasies, die jaarlikse registrasie van 'n groot aantal nuwe maatskappye en die neiging tot groeppvorming deur maatskappye bring mee dat die sekretaris met sy gespesialiseerde opleiding vandag in die sakewêreld 'n dinamiese funksie het om te vervul.

Raadpleeg ook Tersiêre Opleiding.

Staatsadministrasie/Publieke Administrasie/Openbare Administrasie: Afgesien van die enkele diplomakursusse wat in hierdie rigting gevolg kan word, word Staatsadministrasie, net soos in die geval van Ekonomie, Wiskunde, Sielkunde en talle ander vakke, aan die meeste universiteite in meer as een fakulteit aangebied, soos in die geval van die B.A.-graad waar dit in kombinasie met byvoorbeeld Staatsleer, Ekonomie, tale (veral vreemde tale), Bantoereg en -administrasie, Geskiedenis, Sosiologie, regs vakke en so meer aangebied word. Vir die B.Admin.-graad kombineer dit baie goed met vakke soos Ekonomie, Staatsleer, Bedryfsielkunde, Rekeningkunde en andere.

Grade en diplomas in hierdie rigting maak in die besonder voorsiening vir die opleiding van organiserende en administratiewe amptenare wat in diens geneem word deur byvoorbeeld alle Staatsdepartemente (as senior administratiewe assistente); die Provinsiale Administrasies; munisipaliteite en ander openbare instellings soos die landbou-, produkte- en navorsingsrade, die Spoorweë, die Poswese, die SAUK, die NOK en Yskor. Dit is ook 'n besonder nuttige aanvullende vak vir 'n loopbaan in die joernalistiek of in die regte.

Nagraadse kwalifikasies is noodsaaklik om te voorsien in die behoefte aan vakkundige amptenare soos ingenieurs, argitekte, medici en ander wat benewens vakkundige werk ook administratiewe en toesighoudende funksies moet vervul soos dié van hoofingenieur, hoofargitek, hospitaalsuperintendent en so meer.

Kyk ook Senior Administratiewe Assistent, p. 69 en p. 73.

Statistiek en Ekonomie: Hierdie rigtings gee aan die student basiese opleiding in die wiskundig-statistiese benadering tot ekonomiese probleme en teorieë. 'n Toenemende vraag na opgeleide persone met wiskundige wetenskappe in kombinasie met ekonomiese wetenskappe is besig om op 'n uitgebreide front in Suid-Afrika te ontwikkel, met die oog op versameling, verwerking en interpretasie van gegewens.

Die ekonometrikus en statistikus is in aanvraag by navorsingsinrigtings en nywerhede met navorsingslaboratoria soos die RGN, WNNR, SABS, Yskor, Kamer van Mynwese, Sasol, fabriek en so meer; vervoer- en kommunikasiewese; verskillende Staatsdepartemente, maar veral die Departement van Statistiek; sommige universiteite; rekenaarsfirmas; firmas wat dienste soos bestuurskonsultasie en marknavorsing lewer, en die versekeringswese.

Kyk ook Statistiek, p. 181 en Rekenaarwetenskap, p. 179.

Diplomakursusse: Die aandag van kandidate wat nie 'n graadkursus kan of wil volg nie, word gevestig op die diplomakursusse wat aan sommige universiteite aangebied word. Hierdie kursusse bied oor die algemeen opleiding van 'n gespesialiseerde aard aan.

Inligting oor diplomakursusse in handel en administrasie wat buite die universiteit gevolg kan word, word verstrek in die RGN-publikasie Tersiêre opleiding buite die universiteit en beroepsgeleenthede.

FACULTIES OF SCIENCE

UNIVERSITY OF CAPE TOWN

FACULTY OF SCIENCE

Degrees

Bachelor of Science	: B.Sc.
Bachelor of Science (Honours)	: B.Sc. (Hons.)
Master of Science	: M.Sc.
Doctor of Science	: D.Sc.
Doctor of Philosophy	: Ph.D.

Diploma and Certificate

Diploma in Analytical Chemistry
Certificate in Exploration Geochemistry

DEGREES

Bachelor of Science: B.Sc.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with an aggregate of at least 50 per cent.

Additional requirements:

- A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade.
- A pass in either Physical Science, Physiology or Biology on the Higher Grade or at least 50 per cent on the Standard Grade.

Curriculum: Three years of full-time study. The curriculum comprises at least eight qualifying courses including one or more major subjects. An examination is taken at the end of each course. A student may not take more than four courses in any one year.

For second and third courses in subjects, the conditions, if any, regarding auxiliaries for such courses must be satisfied.

At least six qualifying courses must be in subjects chosen from Groups I, II and III below. (Not more than two qualifying courses may be chosen from either those approved for the B.A. degree or from the subjects Accounting, Business Science I, II, offered for the degree of B.Bus.Sc.)

GROUP I: Applied Mathematics, Botany, Chemistry, Chemistry (Geochemistry Option), Geography, Geology, Mathematics, Physics, Psychology, Zoology.

GROUP II: Biochemistry, Computer Science, Mathematical Statistics, Microbiology, Physiology.

GROUP III: Astronomy, Comparative Physiology, Genetics (half course).

The major subjects must be chosen from Groups I and II and will require the completion of three qualifying courses in the case of a Group I subject and of two qualifying courses in the case of a Group II subject.

Bachelor of Science (Honours): B.Sc. (Hons.)

Admission requirements: A candidate may, with the permission of the Senate, proceed to the degree in any approved subject other than Astronomy, Geochemistry and Theoretical Physics if he holds the B.Sc. degree with the subject in which he proposes to proceed to Honours as a major subject.

A candidate who proposes to proceed to Honours in Astronomy must have completed Physics III and Applied Mathematics III; for Geochemistry he must have completed Geology III and Chemistry (Geochemistry Option) III; and for Theoretical Physics he must have completed Applied Mathematics III and Physics III.

Curriculum: One year for full-time students and not more than two years for part-time students.

The degree is conferred in any one of the following subjects: Applied Mathematics, Astronomy, Biochemistry, Botany, Chemistry, Comparative Physiology, Computer Science, Geochemistry, Geography, Geology, Immunology, Mathematics, Mathematical Statistics, Microbiology, Physics, Physiology, Psychology, Statistics, Theoretical Physics, Virology, Zoology.

The course will, in general, contain only advanced work in the selected subject, though in certain cases some part of the work may be done in a related subject.

A candidate who fails the Honours examination will not be allowed to rewrite the examinations.

Master of Science: M.Sc.

Admission requirements: A candidate must either hold the B.Sc. (Hons.) degree; or be a graduate in (i) Engineering who has completed the Electrical Engineering B course and passed the Physics final course; or (ii) Chemical Engineering (B course only).

Curriculum: The degree is conferred in any one of the following subjects: Applied Mathematics, Astronomy, Biochemistry, Botany, Chemistry, Clinical Psychology, Comparative Physiology, Computer Science, Geochemistry, Geography, Geology, Immunology, Mathematics, Mathematical Statistics, Microbiology, Oceanography, Operations Research, Photogeology, Physics, Physiology, Psychology, Theoretical Physics, Virology, Zoology.

A candidate must attend the University for at least one academic year. The degree in Theoretical Physics normally requires two years, and that in Physics one and a half years of attendance. Candidates in the field of Clinical Psychology are required to register for a minimum of two years.

The degree may be conferred after the satisfactory completion of a written examination, or after the acceptance of a thesis, or by both procedures; and in all cases an oral examination may be required.

Doctor of Science: D.Sc.

Admission requirements: A candidate must be a Bachelor in one of the Faculties of Arts, Science, Medicine and Engineering of not less than five years' standing.

Curriculum: Graduates from any other university must pursue an approved course of work under the supervision of the University for a period of not less than two years.

Every candidate for the degree must submit published work, which constitutes an original and important contribution to learning.

Candidates may be required to present themselves for examination, conducted orally or otherwise, on the subject of the work presented.

Doctor of Philosophy: Ph.D. - See Faculty of Arts, p.26.

School of Environmental Studies: The M.Sc. degree may be taken through this School. See Faculty of Arts, p.26.

DIPLOMA AND CERTIFICATE

Diploma in Analytical Chemistry

Admission requirements: A candidate must have completed the first and second qualifying courses in Chemistry, together with the specified auxiliaries. He must further complete, either before or concurrently with his work for the Diploma, the third qualifying course in Chemistry. A candidate will not be granted the Diploma until he has obtained the degree of Bachelor of Science, and except with the special permission of the Senate, a candidate will not be admitted to the course of study for the Diploma if he has completed fewer than seven qualifying courses for the degree.

Curriculum: A minimum period of two university terms. Candidates must be registered for the Diploma for at least one academic year, and must complete to the satisfaction of the Head of the Department of Chemistry the schedule of work prescribed for the Diploma.

Certificate in Exploration Geochemistry

Admission requirements: A candidate may be admitted to the course if he is a graduate in Science, and if he has satisfied the Head of the Department of Geochemistry that his qualifications in both Geology and Chemistry are of a sufficiently high standard.

Curriculum: The curriculum extends over the second university term and candidates must complete to the satisfaction of the Head of the Department of Geochemistry the schedule of work prescribed for the Certificate.

This course is designed to provide a thorough training in the basic theoretical principles and both the laboratory and field techniques used in modern exploration geochemistry.

UNIVERSITY OF NATAL

FACULTY OF SCIENCE

Degrees

Bachelor of Science	: B.Sc.
Bachelor of Science (Honours)	: B.Sc.Hons.
Master of Science	: M.Sc.
Bachelor of Science in Chemical Technology	: B.Sc. Chem. Tech.
Master of Science in Chemical Technology	: M.Sc. Chem. Tech.
Doctor of Philosophy	: Ph.D.
Doctor of Science	: D.Sc.

DEGREES

Bachelor of Science: B.Sc.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

- A pass at 'E' or higher in Mathematics on the Higher Grade or the equivalent on the Standard Grade.

- A pass at 'E' or higher in a natural science on the Higher Grade or the equivalent on the Standard Grade.

Subject to confirmation at a later date, in the light of experience, a pass at 'D' or higher on the Standard Grade will, for the present, be accepted as an appropriate equivalent.

Curriculum: Not less than three years of full-time study and not less than four years of part-time study.

Credits are obtained by passing the examinations associated with a course. Courses designated as I or II are based on a maximum of 12 credits. Courses designated as III are based on a maximum of 16 credits.

A candidate must obtain at least 110 credits of which at least 98 must be in courses in subjects chosen from the list below; provided that at least 32 of these credits must be derived from courses designated as III.

These must be completed simultaneously and at least 16 of these credits must be obtained in one subject from the list below:

Applied Chemistry (III); Applied Mathematics (I, II, III); Biochemistry (II, III); Biological Science A (II, III); Biological Science B (II, III); Biometry (I); Botany (I, II, III); Chemistry (I, II, III); Computer Science (I, II, III); Economics (I, II, III); Entomology (II, III); Genetics (Sc.) (II); Geography (I, II, III); Geology (I, II, III); Introduction to Computer Science (I) ($\frac{1}{2}$ course); Mathematics (I, II, III); Mathematical Statistics (II, III); Microbiology - Plant Pathology (II, III); Physics (I, II, III); Physics (I) (Terminal); Psychology (I, II, III); Service Electronics (II) ($\frac{1}{4}$ course); Soil Science (II); Statistics (I); Theoretical Chemistry (III); Zoology (I, II, III).

The Roman numerals in brackets indicate the level at which courses are available.

12 credits towards the minimum of 110 may be obtained in one of the following courses, all of which are first courses (I):

Afrikaans, Afrikaans en Nederlands, Economic History, English, French or Introductory French, German or Introductory German, Greek, Hebrew or Introductory Hebrew, History, History of Fine Art, Jewish Studies, Philosophy, Latin, Social Anthropology, Sociology, Survey, Theology, Zulu.

Bachelor of Science (Honours): B.Sc. Hons.

Admission requirement: The B.Sc. degree.

The Senate may refuse to admit a student to an Honours course in any subject if the standard of proficiency which he has previously attained in that subject is not sufficiently high.

Curriculum: A candidate must attend the University for at least one academic year, and must pursue a course of advanced study in the subject in which he has completed, during the B.Sc. curriculum, all prerequisite courses for entry to the Honours degree.

A candidate may be required to complete a course in any prescribed subject as ancillary to the subject which he offers for the degree and to pass a test in a foreign language. He must present himself for all parts of the final examination at one and the same time. No candidate may present himself for the final examination more than once.

Master of Science: M.Sc.

Admission requirement: The B.Sc.Hons. degree.

Curriculum: A candidate for the degree must prosecute advanced study, or research, or both, under the guidance of a supervisor for at least one year.

The examination consists of two or more written papers, or of a dissertation showing acquaintance with the methods of research, or of such a dissertation together with one or more written papers.

Bachelor of Science in Chemical Technology: B.Sc. Chem. Tech.

Admission requirements: The B.Sc. degree with 40 credits in Chemistry, 24 credits in Physics and 24 credits in Mathematics; or the degree of B.Sc. in Engineering with 40 approved credits in Chemistry, 24 approved credits in Physics and 24 approved credits in Mathematics. The 24 credits in Physics may be waived in the case of a candidate with appropriate experience.

Curriculum: One academic year for a candidate who holds a B.Sc. degree and two academic years for a candidate with a B.Sc.Eng. degree.

A candidate must pursue a course of advanced study approved by the Senate, and he may be required to pass a test in a foreign language. He must present himself for all parts of the final examination at one and the same time and may not present himself for the final examination more than once.

Master of Science in Chemical Technology: M.Sc. Chem. Tech.

Admission requirement: The B.Sc. degree in Chemical Technology.

Curriculum: A candidate must attend the University for not less than one academic year and must pursue a course of advanced study in Chemical Technology. He may be required to take a course in any prescribed subject as ancillary to the course of study for the degree and may have to pass a test in a foreign language. He must present himself for all parts of the examination at one and the same time and may not present himself for the final examination more than once.

Doctor of Philosophy: Ph.D.

Admission requirements: A candidate must be (i) either a Master of Science or Master of Science in Chemical Technology of not less than two years' standing; or (ii) a Bachelor of Science (Honours) or Bachelor of Science in Chemical Technology of not less than three years' standing.

Curriculum: A candidate is required to pursue an approved course of special study or research on some subject connected with the mathematical, physical, natural or applied sciences, and to submit a thesis embodying the results of his special study or research. This thesis must make a distinct contribution to the knowledge or understanding of the subject and afford evidence of originality shown either by the discovery of new facts or by the exercise of independent critical power.

Doctor of Science: D.Sc.

Admission requirements: A candidate must be a Bachelor of Science (Honours) of not less than five years' standing.

Curriculum: A candidate must submit a thesis or published work which must be a record of original and independent research carried out by the candidate on some subject connected with the mathematical, physical, natural or applied sciences, and falling within the scope of the studies represented at the University. At least part of the work of the thesis must already have been published.

A thesis must be a work of distinction in its field and a substantial contribution to the advancement of learning.

A candidate may be required to present himself for examination on the subject of his thesis and on the whole field of study in which it falls.

UNIVERSITY OF PORT ELIZABETH

FACULTY OF SCIENCE

Degrees

Baccalaureus Scientiae: B.Sc.

Baccalaureus Scientiae (Educationis): B.Sc. (Ed.)

Baccalaureus Scientiae in Materials Science

Baccalaureus Scientiae Honores: B.Sc.Hons.

Magister Scientiae: M.Sc.

Magister Scientiae in Textile Science

V.Sc. in Metallurgy and M.Sc. in Polymer Science

Philosophiae Doctor in Textile Science: Ph.D. in Textile Science

Doctor Scientiae: D.Sc.

DEGREES

Baccalaureus Scientiae: B.Sc.

Admission requirements: Matriculation Certificate or a Std 10 Certificate (Matriculation Exemption) with a pass of at least 40 per cent in Mathematics on the Higher or the Standard Grade.

Curriculum: Three years of full-time study. An approved curriculum consists of not less than nine courses (at least ten courses in the case of Biological Sciences) of which not less than two must be major subjects on third year level, selected from the following: Applied Mathematics, Biochemistry, Electronic Data Processing, Fundamental Biology, Botany, Business Economics, Chemistry, Economics, Geology, Mathematical Statistics, Mathematics, Operations Research, Statistical Methods, Physics, Zoology, Computer Science.

Baccalaureus Scientiae (Educationis): B.Sc. (Ed.)

Admission requirement: As for the B.Sc. degree.

Curriculum: Four academic years. The course is an integrated academic and professional degree course which fulfils all the requirements for the B.Sc. degree as well as the requirements for the training of teachers for secondary schools.

Baccalaureus Scientiae in Materials Science

Admission requirement: As for the B.Sc. degree.

Curriculum: Four years of full-time study. The curriculum comprises, inter alia, the following courses: Ceramics, Metal Science and Technology, Polymer Science and Technology, Extraction Metallurgy, Biometry, Physics, Chemistry, Mathematics.

Baccalaureus Scientiae Honores: B.Sc.Hons.

Admission requirements: A B.Sc. degree.

A candidate may only be admitted to the Honours course in a subject which was a major subject for his Bachelor's degree.

Curriculum: A candidate may be admitted to an Honours course in any of the following subjects, and he may be required to complete as additional work a course or courses in any other prescribed subject: Applied Mathematics, Biochemistry, Botany, Chemistry, Computer Science, Geology, Mathematics, Mathematical Statistics, Materials Science, Operations Research, Physics, Zoology.

The curriculum for an Honours degree extends over at least two consecutive semesters and the examination consists of not less than four papers, oral and/or written.

Magister Scientiae: M.Sc.

Admission requirement: A B.Sc. Hons. degree.

Curriculum: A candidate must prosecute an approved course of study or research, or both, for a period of at least two consecutive semesters at the University. The degree may be obtained by a dissertation and an oral examination; or a written examination; or both a dissertation and a written or oral examination.

Magister Scientiae in Textile Science

Admission requirements: A candidate must hold one of the following minimum qualifications:

- B.Sc. (Textiles) degree
- Diploma in Textile Engineering
- B.Sc. (Hons.) degree in Chemistry, Physics, Mathematics or Mathematical Statistics.

Curriculum: One of the following fields may be selected for research: Textile Chemistry, Textile Physics, Mechanical Processing, Textile Engineering.

All candidates should be employed by a well established textile laboratory having the necessary research facilities.

See also the Curriculum for the M.Sc. degree above.

M.Sc. in Metallurgy and M.Sc. in Polymer Science

Admission requirements: A candidate must hold one of the following degrees: B.Sc., B.Sc. (Ind. Chem.) or B.Sc. (Eng.) which must include at least Mathematics I, Chemistry II and Physics II.

Curriculum: Two academic years. Written examinations must be passed and a dissertation must be submitted on completion of the research project at the end of the second year of study.

Philosophiae Doctor in Textile Science: Ph.D. in Textile Science

Admission requirements: A candidate must hold one of the following minimum qualifications:

- M.Sc. degree in Chemistry, Physics or Textile Engineering with at least two years experience in the textile research field
- M.Sc.(Textiles) degree.

Curriculum: See D.Sc. degree below.

Doctor Scientiae: D.Sc.

Admission requirement: Except by permission of the Senate, only the holder of a Master's degree may be accepted as a candidate for a Doctor's degree.

Curriculum: A candidate may not be admitted to the degree of Doctor before he has been a registered student of the University for at least four consecutive semesters.

The candidate must submit reprints of his papers, bound in the form of a thesis to prove that he is an authority in his field.

R H O D E S U N I V E R S I T Y

FACULTY OF SCIENCE

Degrees

Bachelor of Science	:	B.Sc.
Bachelor of Science with Honours:		B.Sc.(Hons.)
Master of Science	:	M.Sc.
Doctor of Philosophy	:	Ph.D.
Doctor of Science	:	D.Sc.

Diploma

Diploma in Leather Science (Post-graduate): Dip. Leather Sc.

DEGREES

Bachelor of Science: B.Sc.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics on the Standard Grade.

Additional requirements in respect of certain courses:

- Mathematics, Computing and Applied Mathematics, Physics or Statistics: A candidate must have obtained a pass in Mathematics on the Higher or on the Standard Grade.
- Mathematics, Computer Science, Applied Mathematics or Mathematical Statistics: A candidate intending to major in one of these subjects must have obtained a pass in Mathematics on the Higher Grade or a pass deemed to be equivalent thereto on the Standard Grade.
- Chemistry IA (the major course): A pass in either Chemistry or Physics or Physical Science on the Higher Grade or a pass deemed to be equivalent thereto on the Standard Grade.
- Physics IA (the major course): A pass in either Physics or Physical Science on the Higher Grade or a pass deemed to be equivalent thereto on the Standard Grade.

Curriculum: Three years of full-time study. A candidate must obtain credit in not less than nine courses.

A candidate must obtain credit in all the required courses in at least two subjects, to be known as major subjects, which must be selected from the following:

Applied Mathematics, Botany, Chemistry, Computer Science, Entomology, Geography, Geology, Mathematical Statistics, Mathematics, Microbiology, Physics, Psychology, Zoology.

A curriculum may contain courses in any of the above-mentioned subjects which have not already been chosen as major subjects; and any of the following courses: Biological Science I, Biological Science II, Statistics, Computing and Applied Mathematics.

The ninth course may be chosen from the following subjects: Afrikaans, English, French, German, Logic, Philosophy.

Bachelor of Science with Honours: B.Sc.(Hons.)

Admission requirements: The B.Sc. degree with at least a second class pass in the final year in the subject in which the candidate wishes to take Honours.

Curriculum: A candidate must attend the University for not less than one academic year and pursue a course of advanced study in one of the following subjects: Applied Mathematics, Botany, Chemistry, Computer Science, Entomology, Geography, Geology, Mathematical Statistics, Mathematics, Microbiology, Pharmacy, Physics, Psychology, Zoology.

The subject for the Honours course must be one which the candidate has completed as a major subject for the B.Sc. degree.

A candidate must write all parts of the examination at one time and will not be permitted to present himself for the Honours examination more than once in the same subject.

Master of Science: M.Sc.

Admission requirement: The B.Sc.(Hons.) degree.

Curriculum: A candidate must attend an approved course of study or research at the University for one year.

The examination for the degree consists of a thesis on an approved subject, and/or such written or oral examination as may be prescribed.

Doctor of Philosophy: Ph.D.

See Chapter 2 Faculty of Arts, p.33.

Doctor of Science: D.Sc.

Admission requirement: The M.Sc. degree.

Curriculum: A candidate shall not be admitted to the degree until at least five years after admission to the B.Sc.(Hons.) degree or until at least four years after admission to the M.Sc. degree.

A candidate must submit, for the approval of the Senate, six copies of published work dealing with some subject falling within the scope of the studies represented in the University.

DIPLOMA

Diploma in Leather Science (Post-graduate)

Admission requirements: The B.Sc. degree with Chemistry as a major subject. A candidate must obtain the permission of the Board of the Faculty, on the recommendation of the Director of the Leather Industries Research Institute.

Curriculum: One year of full-time study. A candidate for the Diploma must obtain credit in all the courses set out in the following curriculum: Principles of Leather Manufacture, Methods of Leather Manufacture, Analytical Chemistry (Leather), Physical Chemistry (Leather), Practical Chemistry (Leather).

A candidate must take examinations in each of the prescribed courses and prepare an original thesis.

UNIVERSITY OF SOUTH AFRICA

FACULTY OF SCIENCE

Degrees

Bachelor of Science : B.Sc.

Honours Bachelor of Science: Hons.B.Sc.

Master of Science : M.Sc.

Doctor of Philosophy : Ph.D.

Honours Bachelor of Science (Operations Research): Hons.B.Sc.(Operations Research)

Master of Science (Operations Research): M.Sc.(Operations Research)

DEGREES

Bachelor of Science: B.Sc.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

- A pass in Mathematics on the Higher Grade or at least 60 per cent on the Standard Grade.

-- A pass in Physical Science on at least the Standard Grade for candidates who wish to enrol for the following subjects: Chemistry, Physics, Botany, Zoology, Geology, Astronomy, Microbiology.

Each year in which he wishes to enrol for the purpose of taking an examination in a subject in which practical work is required, a student should apply for admission on the prescribed form, naming his supervisor and the laboratory in which he proposes to work.

Curriculum: The curriculum extends over a minimum of three years and is composed of at least nine qualifying courses in the following subjects:

GROUP I

Applied Mathematics, Astronomy, Biology, Botany, Chemistry, Computer Science, Geography, Geology, Mathematics, Mathematical Statistics, Microbiology, Physics, Physiology, Physiological Chemistry, Psychology, Zoology.

GROUP II

Afrikaans en Nederlands, English, French, French(Special Course), German, German (Special Course), Greek or Hellenistic Greek, Latin, Practical Afrikaans, Practical English, Russian, Russian (Special Course).

Each curriculum must contain at least two major subjects.

The major subjects are selected from the following:

- (a) Major subjects with three courses: Applied Mathematics, Astronomy, Botany, Chemistry, Computer Science, Geography, Geology, Mathematical Statistics, Mathematics, Physics, Psychology, Zoology.
- (b) Major subjects with two courses: Physiology, Microbiology.

There are compulsory ancillary subjects which must be taken together with the major subjects e.g. (i) A student who takes Chemistry as a major subject, must take at least Physics I and Mathematics I.

(ii) A student who takes Astronomy as a major subject, must take at least two courses in Mathematics and one in Applied Mathematics.

Honours Bachelor of Science: Hons. B.Sc.

Admission requirements: A B.Sc. degree. The requirements with regard to practical work also apply here, (see Admission requirements for the B.Sc. degree).

Curriculum: A student in Botany, Geology, Experimental Physics, Physiology and Zoology must submit at the practical examination a notebook containing a record of the practical work done.

A student of Chemistry will be admitted to the February examinations only if by the end of the preceding October he has handed in a notebook containing satisfactorily completed practical work.

The degree may be conferred in the following departments: Applied Mathematics, Astronomy, Botany, Chemistry, Computer Science, Geography, Geology, Mathematical Statistics, Mathematics, Physics, Physiology, Psychology, Zoology.

Master of Science: M.Sc.

Admission requirement: The degree of Hons. B.Sc.

Curriculum: The degree may be conferred in the same departments as the Honours Bachelor's degree.

The examination consists of oral or written papers and/or a dissertation.

No dissertation may be submitted unless two years have elapsed since completion of the Bachelor's degree.

Honours Bachelor of Science in Operations Research: Hons.B.Sc.(Operations Research)

Admission requirements: A Bachelor's degree and must have adequate knowledge of Mathematics.

Curriculum: Two years. The courses are as follows:

First year

Capita Selecta from Mathematical Statistics, Numerical Analysis I, Operations Analysis, Economics for Operations Research (Half-course).

Second year

Four papers on topics selected in consultation with the Head of the Department.

Master of Science in Operations Research

Admission requirement: An Honours B.Sc. degree in Operations Research or an equivalent qualification.

Curriculum: The curriculum comprises two sections, viz:

Section A: Two papers on topics selected in consultation with the Head of the Department.

Section B: A dissertation on an appropriate subject.

Doctor of Philosophy: Ph.D.

Admission requirement: A Master's degree.

Curriculum: The degree will not be awarded until two years have elapsed after the completion of the Master's degree. The thesis must deal with a subject in Mathematics, Natural Science or the Applied Sciences. In Chemistry the examination comprises a written and an oral examination and a thesis.

UNIVERSITY OF THE WITWATERSRAND

FACULTY OF SCIENCE

Degrees

Bachelor of Science	: B.Sc.
Bachelor of Science and Arts	: B.Sc. & A.
Bachelor of Science with Honours	: B.Sc.Hons.
Bachelor of Science in Industrial Chemistry	: B.Sc.(Ind.Chem.)
Bachelor of Philosophy in Environmental Science	: B.Phil.
Master of Science	: M.Sc.
Doctor of Philosophy	: Ph.D.
Doctor of Science	: D.Sc.

Diploma

Diploma in Computer Science

DEGREES

Bachelor of Science: B.Sc.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

- A pass in Mathematics on the Higher Grade or at least 60 per cent on the Standard Grade.

- A pass on the Higher Grade in one of the following subjects if Mathematics is passed on the Higher Grade, or in two of the following subjects if Mathematics is offered on the Standard Grade:

Biology, French, Geography, German, Hebrew, History, Latin, Physical Science, Physiology.

- A pass on the Higher or on the Standard Grade in one of the following subjects: Biology, Physical Science, Physiology.

Curriculum: Not less than three years of full-time study.

A student must include in his curriculum either all the courses offered in two major subjects, in which event his curriculum need comprise no more than nine courses; or all the courses offered in only one major subject, in which event his curriculum must comprise not fewer than ten courses of which at least four are at second or third-year level.

The major subjects in which three courses are offered are the following:

Applied Mathematics, Botany, Chemistry, Computer Science, Geography, Geology, Mathematical Statistics, Mathematics, Physics, Psychology, Zoology.

The major subjects in which two courses are offered are the following:

Anatomy, Archaeology, Biochemistry, General Anatomy, Genetics, Histology, Micro-Anatomy, Microbiology, Physiological Chemistry, Physiology.

A student must include in his curriculum such courses ancillary to his major subjects as are determined by the Senate.

A student must include in his curriculum at least one course in one of the following subjects: Anatomy (including Micro-Anatomy) I, Biochemistry, Botany, Chemistry, General Anatomy (including Histology), Genetics, Geography, Geology, Microbiology, Physics, Physiological Chemistry, Physiology, Psychology, Zoology.

An approved curriculum must include one of the courses listed in (a); provided that, by permission of the Senate, one of the courses listed in (b) may be substituted.

- (a) English I, Political Ideas and Institutions, Philosophy of Science, Afrikaans I.
- (b) African Government I, Afrikaans en Nederlands, A Bantu Language, Biblical Studies I, Classical Life and Thought I, Economic History I, Economics I, Fine Art I, French I, German I, Greek I, Hebrew I, History I, History and Appreciation of Music, History of Art I, History of Education, History of Music I, Italian I, Latin I, Legal Theory & Institutions I, Philosophy I, Phonetics and Linguistics I, Political Science I, Portuguese I, Russian I, Social Anthropology I, Sociology I.

A student who selects Archaeology as a major subject must spend ten days on field work outside Johannesburg as part of the requirements for each of the first and second qualifying courses.

A student who selects Geology as a major subject must spend a minimum of two months in practical work of a geological nature approved by the Senate, normally during December and January at the end of the second year of study.

Bachelor of Science and Arts: B.Sc. & A.

Admission requirements: A candidate must satisfy the admission requirements of both the Faculty of Arts (p. 37) and the Faculty of Science (p.141).

Curriculum: This is a single degree taken over a minimum of four years, but is regarded as being equivalent to two degrees. Its purpose is to make it possible for students to major in combinations of subjects not normally possible in either the B.A. or B.Sc. degree.

A student will have to obtain credit in a minimum of 13 courses. He will be required to major in three subjects, at least one of which must be selected from the major subjects offered for the degree of B.A. and at least one from the major subjects offered for the degree of B.Sc. However, a student whose three major subjects could be taken entirely in one Faculty may be required to select the remaining courses of his curriculum from courses offered only in the other Faculty.

Students are formally registered in the Faculty of Science.

Bachelor of Science with Honours: B.Sc.Hons.

Admission requirements: A candidate must have obtained credit in all the qualifying courses for the B.Sc. degree.

A person who has completed all the requirements for the degree of B.D.S. or M.B., B.Ch. may be admitted as a candidate for the Honours course in Pharmacology.

Except in the case of Palaeontology, Geophysics or Pharmacology, the Honours course selected must be in a major subject completed by the candidate for the B.Sc. degree.

Candidates who select either Geology, Chemistry, Biophysical Chemistry, Biochemistry, Biological Chemistry or Mathematical Statistics will have to complete certain prescribed courses prior to their admission to the Honours course.

Curriculum: One year.

The degree may be awarded in a course selected from one of the following subjects: Anatomy, Applied Mathematics, Archaeology, Biochemistry, Biological Chemistry, Biophysical Chemistry, Botany, Chemistry, Computer Science, Experimental and Theoretical

Physics, Experimental Physiology, Genetics, Geography, Geology, Geophysics, Histology, Mathematical Statistics, Mathematics, Micro-Anatomy, Microbiology, Palaeontology, Pharmacology, Physiological Chemistry, Psychology, Zoology.

A candidate may be required to satisfy the Senate that he has sufficient knowledge of an approved foreign language to read the scientific publications in his subject in that language.

A candidate who fails an Honours examination may be permitted to re-present himself for the Honours examination not earlier than one year after the examination he failed and be required to re-attend the course or parts of the course prior to such re-examination.

A candidate must perform the prescribed vacation practical work and participate in approved visits and tours.

Bachelor of Science in Industrial Chemistry: B.Sc.(Ind.Chem.)

Admission requirement: As for the B.Sc. degree.

Curriculum: Four years of full-time study. The degree consists of 14 courses. The prescribed qualifying courses are, inter alia, Chemistry III; Applied Chemistry; Electrical Engineering; Statistics for Engineers and Industrial Chemists; Descriptive Geometry and Mechanical Engineering Design; Introduction to Chemical Engineering; Physics I; Mathematics II.

A student must spend at least six weeks in either the second or the third year of study, during the vacation, doing practical work in approved industrial chemical laboratories.

Bachelor of Philosophy in Environmental Science: B.Phil.

Admission requirement: A first degree. A candidate must lodge his application in writing with the Registrar, submitting evidence of his academic and general qualifications and indicating the particular field in which he proposes to pursue the research project required.

Curriculum: At least two academic years of full-time study. One year after a four-year degree or an Honours degree.

An approved curriculum comprises courses in, inter alia, Ecology (including Human Ecology), Applied Meteorology, Introduction to Computer Science, Pollution Law and Environmental Economics.

A student must undertake a research project on an approved topic on which he must present a report.

See also B.Phil. under Faculty of Arts of this University, p.39

Master of Science: M.Sc.

Admission requirements: A B.Sc.Hons. or a B.Sc.(Ind.Chem.) or a B.Phil. in Environmental Science.

A person who wishes to be admitted as a candidate for the degree must lodge his application in writing with the Registrar, submitting evidence of his academic and general qualifications and indicating the line of research which he wishes to prosecute.

Curriculum: A candidate for the degree must prosecute during not less than one academic year advanced study or research or both, under the guidance of a supervisor appointed by the Senate. He must present a dissertation relating to the subject selected for his Honours course, and he may be required to present himself for an examination or test in regard to the subject of his dissertation.

Doctor of Philosophy: Ph.D.

Admission requirements: An M.Sc. degree or by permission of the Senate a B.Sc.Hons. or a B.Phil. in Environmental Science.

A person who wishes to be admitted as a candidate must lodge his application in writing with the Registrar, submitting evidence of his academic and general qualifications and indicating the line of research which he wishes to prosecute.

Curriculum: A candidate must prosecute full-time research under the guidance of a supervisor either in the University or in an institution deemed to be part of the University for this purpose, for at least two academic years. He may be required to attend advanced courses of instruction.

Every candidate must present for the approval of the Senate a thesis which must constitute a definite contribution to the advancement of knowledge in the subject chosen, and he may be required to present himself for an examination or test, oral or written.

Doctor of Science: D.Sc.

Admission requirements: A person who wishes to be admitted as a candidate must lodge his application in writing with the Registrar submitting evidence of his academic and general qualifications and indicating the subject of the work which he proposes to present for the degree.

Any one of the following may be admitted as a candidate:

- A person who has held any of the following degrees for at least five years:
 - . Bachelor of Science with Honours
 - . Bachelor of Science in Soil Conservation (if he has passed an examination of Honours standard)
 - . Bachelor of Arts with Honours, provided the proposed work relates to Geography, Mathematical Statistics, Mathematics or Psychology
- a Master of Science who has held the degree of Bachelor of Science with Honours for at least four years
- a Master of Arts who has held the degree of Bachelor of Arts with Honours for at least four years, provided the proposed work relates to Geography, Mathematical Statistics, Mathematics or Psychology
- a Doctor of Philosophy of at least two years' standing.

Curriculum: A candidate must present for the approval of the Senate original work in a field approved by the Senate. The work, which must have been published, must constitute a distinguished contribution to the advancement of knowledge in that field.

DIPLOMA

Diploma in Computer Science

Admission requirements: A candidate must hold the degree of Bachelor in any faculty and must satisfy the Senate that he has attained a standard in Mathematics equivalent to that of the second year level for a degree.

A candidate must have had some experience on a computer and possess a knowledge of the FORTRAN language.

Curriculum: Two years of part-time study. The curriculum comprises an integrated selection of topics such as Third Qualifying Course in Computer Science, Honours Course in Computer Science, Third Qualifying Course in Applied Mathematics, and so forth.

VOCATIONAL SERVICE

N.B. Also read the section "WHAT IS THIS BOOK ABOUT?" in Chapter 1.

It should be emphasized that students should be very selective as regards their choice of subject combination in their field of interest, particularly as far as major subjects are concerned. With a view to career possibilities, they should also make use of the guidance services of the school and university, since many occupational fields also demand intimate knowledge of certain other subjects.

The following are some of the career possibilities which arise from the most important major subjects:

Archaeology: See p.47.

Astronomy: Although interest in astronomy has greatly increased in recent times owing to the exploration of space, prospective students are nevertheless advised to include in their courses as many of the subjects such as Mathematics, Applied Mathematics, Physics and Statistics as possible, with a view to a possible change of career. However, prospects for the Astronomer have improved considerably over the past few years and there is a great demand for technical scientific personnel. New developments may also cause a considerable rise in the demand for astronomers of high standing.

There are opportunities for employment as research or technical officers at the South African Astronomical Observatory, Cape Town (previously known as the Republic Observatory, Johannesburg, and the Royal Observatory, Cape Town), which is administered by the CSIR as a national research institute, as well as at the Boyden Observatory in Bloemfontein and the Leiden Observatory Southern Station at Hartbeespoort.

A Bachelor's degree is a requirement for research work but it is hardly sufficient and interested persons should in advance consider post-graduate study in Astronomy.

Biochemistry: Since Biochemistry forms a link between the physical sciences such as Chemistry, Physics, etc., and the biological sciences such as Botany, Zoology, Physiology and Microbiology, training with Biochemistry as one of the majors offers the particular opportunity of making a choice between careers existing in any of these fields.

Because Biochemistry is still a new science in South Africa, career prospects are excellent. At present there is a dire need for highly trained Biochemists, and the number of institutions employing graduates for research in the fields of, for example, nutrition and diseases of people and animals, agriculture, water purification and industry in general is increasing rapidly. Some of the bodies employing biochemists are the following: the Chemical Research Laboratories, Water and Nutrition Research Institutes of the CSIR; the SABS; AEB; the Institute for Medical Research, municipal health sections; large hospitals (chemical pathology section); universities (Faculties of Agriculture, Medicine and Science); industries responsible for the production of food, beer, wines, pharmaceutical products, fertilizers, insecticides and weed-killers, cattle remedies and cattle-feed, vitamin concentrates, canned foods, and so forth.

Biochemists are also employed by the Government Departments of Agricultural Technical Services, Health, Agricultural Economics and Marketing, Bantu Administration and Development and the Transvaal Provincial Administration. These departments offer particular opportunities for research into inter alia, game, fish, birds, fruit and food technology, wine and wine-making, citrus and subtropical fruits, tobacco, veterinary science, plant protection and horticulture.

Biology: The Biologist studies and does research into the origin, derivation, development, anatomy, distribution and other basic principles of flora and fauna and the relation between plant and animal life. Biologists usually specialize in one or another section.

Biologists normally find interesting job opportunities in the service of the National Parks Board, Onderstepoort, fishery divisions, national museums, medical research laboratories, mines, the CSIR, the various research institutes and as lecturers at universities, agricultural colleges or as teachers at secondary schools.

Also see Botany below and Zoology p.156.

Botany: The science of living creatures (organisms) is known as Biology. The two main branches of this science are Zoology and Botany. The latter is the science which has the living plant as subject-matter and when regarded from a scientific, practical and utilitarian point of view, it is a comprehensive, vital and interesting field of study for men as well as women.

With a suitable second major or subsidiaries from, for example, Zoology, Chemistry, Biochemistry, Microbiology, Geography, Geology, Physiology, Physics and Mathematics and eventual specialization, the trained Botanist should be able to find a remunerative occupation in one or more of the following lines: Plant morphology (form and structure of plants); plant taxonomy (classification of plants); plant physiology (life processes and activities of plants); plant genetics (heredity in plants); plant ecology (relationship between plants and their environment); plant pathology (plant diseases and the combating thereof); economic botany (use and economic importance of plants), and so forth. The Department of Agricultural Technical Services supplies various services which contribute to the conservation and functional utilization of the country's flora. Thus the Botanical Research Institute employs botanists (professionals) for the activities of the Botanical Survey divisions (Durban, Stellenbosch, Middelburg (C.P.) and Pretoria); Herbarium Services (National Herbarium, Pretoria and Regional Herbaria at Durban, Grahamstown, Stellenbosch and Kimberley); Flora Research; Economic Botany and Botanical Gardens, and the Administrative Division. In addition to the work of this Institute, a considerable amount of botanical research is done also by other institutes and regional organizations, particularly in connection with pasture, agronomy, horticulture and plant physiology.

Other Government Departments which employ botanists are those of Water Affairs, Mines, Bantu Administration and Development, Industries and the Provincial Administration of the Transvaal.

There are also employment prospects for teachers of Biology and Botany at secondary schools and, with advanced study, for lecturers at universities; for professional officers at the agricultural experimental stations; for researchers at the SABS, the CSIR and the oceanographic research institutes; for officers in the service of the National Parks Board, the Nature Conservation Divisions of the different provinces, private concerns such as fertilizer companies, manufacturers of phytopathological preventatives and nurseries. There are fairly numerous posts available to persons in possession of a B.Sc. degree, but candidates with post-graduate training are given preference.

Also see Agronomy, Plant Pathology and other related fields under Agriculture, p.219.

Chemistry: On commencing his studies it is certainly not always possible or desirable that a student should immediately choose a particular branch of chemistry for a life-long study. There are far too many interesting fields within the major branches and innumerable new developments in industry which must first be investigated or discovered. (For example, there are more than 175 known kinds of chemists.) Although the branches cannot be delineated with absolute accuracy one can, for example, distinguish between Physical, Organic, Inorganic and Analytical Chemistry, each with its own purport and career possibilities.

As a major, Chemistry can be combined with, for example, Mathematics, Biochemistry, Physics, Botany, Zoology, Physiology, Industrial Chemistry, Microbiology and Geology, depending on the objectives to be realised.

- Research: Research projects are normally centralized as far as is possible and the following bodies, which take the lead in this, also offer numerous job opportunities:

- .The CSIR in the field of utilization of natural resources, the building trade, water utilization, nutrition, etc. Different research units of the CSIR also serve certain industries, for example the timber, ceramics, sugar, leather, paint, fishing, wool and other industries.
- .The Atomic Energy Board at Pelindaba, which undertakes research in connection with atomic energy.
- .The Fuel Research Institute for the study of the properties of coal, of prospecting for oil and of the inflammable properties of automobile fuels.
- .The National Institute for Metallurgy for the recovery of metals which are difficult to come by, such as berillium, niobium and tantalum for use in rockets and jet engines.
- .The Government Agricultural Research Institutes for the study of water and soil chemistry, fertilizers, industrial products, pest control, cattle-feed, phytochemistry, and so forth.
- .The Medical Research Council (MRC).
- .Research institutions attached to universities.

- Chemists who have the correct subject combination are employed as professional officers by various Government departments and their activities vary from one department to the other, such as, for example, that of Water Affairs (hydrologists); Commerce (inspectors of explosives); Industry (various fields); Health (analytical chemists: medicine and food analysis, forensic chemistry and bacteriology and pathology); Agricultural Technical Services (posts attached to various Research Institutes); Agricultural Economics and Marketing (animal husbandry/dairy technology); Bantu Administration and Development (animal husbandry/ dairy technology); the Treasury (South African Mint), and the Government Printer. The four Provincial Administrations also employ chemists.

- The Consulting Chemist and Chemist in Testing Services who undertake testing and research for other producers who do not have chemists in their employ, for example the South African Bureau of Standards (SABS).

- There are excellent opportunities for chemists, production leaders and research or development officers in industry and bodies such as Iscor, Sasol, Phoscor, CSIR, SABS, oil refineries, explosives and chemical industries, Sappi and other paper-mills, synthetic rubber producers, sugar-mills, coal washing plants and refining installations, power stations, National Chemical Products, mining companies, municipalities and the Railways.

- Training of chemists is of increasing importance in order to provide for the growing demand and thus vacancies still arise for teachers in secondary schools and for lecturers at universities and colleges for advanced technical education.

Also see Chemical Engineering, p.241.

Computer Science: As in every technologically advanced country, the computer industry in the RSA has been growing very rapidly during the past fifteen years. The most important manufacturers of computers are all represented in the Republic and at least one thousand computers are already being used by, for example, universities, the public sector, scientific research bodies and commerce and industry. There is already a great shortage of qualified personnel and the demand is increasing in relation to the development of this industry.

Employers who offer careers in electronic data processing in South Africa can be divided into the following four main groups:

- Companies which manufacture computers;
- concerns in commerce and industry which use computers;
- the public sector which is already making extensive use of computers (quite a number of Government departments, the provincial administrations, the SA Railways, the CSIR, the HSRC, and so forth);
- undertakings, known as service bureaux, which provide computer services and times to concerns which cannot justify their own computer.

Each of these groups offers careers in electronic data processing in a number of possible fields such as those of operators, programmers, systems analysts, technicians, data processing managers and marketing representatives. There is thus opportunity for students in commerce, the mathematically inclined, those with a natural science background and persons with a primary interest in the computer itself. The choice of a particular field will be largely determined by the candidate's qualification, interest and aptitude. Completing one or more aptitude tests is a prerequisite.

A specialized knowledge of the activities of computers can be gained in practice or by means of intensive instruction courses from supply companies or other bodies. However, the computer scientist is one who is pre-eminently suited to evaluate the wider implications of automation and who is able to utilize the computer's potential to the utmost. University training equips students with the necessary background knowledge in a very wide field and the course consequently includes much more than mere programming.

Graduates who have a degree with Computer Science as a subject are subjected to aptitude tests in the Public Service and subsequently appointed as programmers. The existing promotion cycle in a programming section is: Assistant Programmer, Programmer, Senior and then Chief Programmer.

Entomology (the study of insects): Whereas Entomology used to be a subsection of Zoology, it has developed today into a specialized science with several subdivisions. Thus it offers opportunities for specialization in fields such as the identification and classification of insects or a study of the anatomy, physiology or behaviour of insects. The specialized knowledge of the Entomologist is invaluable in many fields, but particularly in the field of agriculture.

Entomologists normally work as researchers in, for example, museums, the Government Departments of Health and Agricultural Technical Services (various research institutes and regional organizations), the SABS, the CSIR (several research institutes), the Medical Research Institute and the private sector, as technical advisers to spray firms, co-operatives, various large producers of fruit, sugar, timber etc.; as marketing representatives in firms which manufacture and distribute insecticides and spraying equipment. There are also posts as lecturers at universities or colleges and as teachers of agriculture and biology. There is also the possibility of acting as a consulting entomologist in private practice.

Genetics (Theory of heredity): Of all the biological sciences, Genetics is perhaps the most penetrating. In this subject a study is made of the underlying causes of the hereditary similarities and differences in biological aspects between organisms related by descent. Genetics is therefore concerned with the way in which living organisms reproduce their own kind.

Research posts for Geneticists in plant culture (for the improvement of various cereals, fruit, vegetables, flowers, sugar-cane, tobacco, silvicultural crops, etc.) and in animal husbandry (for the improvement of large and small stock, poultry, fur-bearing animals, etc.), exist at the various research institutes and experimental farms throughout the country under the control of the Department of Agricultural Technical Services or the Department of Forestry, as well as with large semi-private and private organizations. Geneticists are also employed by the Departments of Agricultural Economics and Marketing and Bantu Administration and Development, the National Parks Board, agricultural colleges and universities. There is an increasing demand for geneticists in medical schools and large hospitals, to undertake research in, for example, cytogenetics and biochemical genetics, and to qualify themselves as human geneticists for genetic guidance and consultation.

Geography: A careful choice of major and subsidiary subjects together with Geography will contribute towards the possibility of successfully practising an occupation in this field. In addition, students will have to be prepared to undertake advanced and specialized study in order to be considered for a remunerative career.

Although some secondary schools do not offer Geography up to Std 10 level, a career in the teaching profession remains an important possibility. Other bodies usually employ persons if their knowledge of Geography can be directly applied in conjunction with a suitable second major subject, for example, Government Departments such as those

of Planning and the Environment, Bantu Administration and Development, Water Affairs, Agricultural Economics and Marketing, Agricultural Technical Services, Transport, Community Development, Tourism, Defence, as well as some of the provincial administrations, large municipalities and concerns in the private sector. Moreover, posts are available as, for example, geographers or cartographers, town and regional planners, market researchers and sales consultants attached to the executive departments of large concerns, and lecturers at universities.

Geology (including Palaeontology): A person with a degree in Geology is still not a geologist or palaeontologist in the ordinary sense of the word. Post-graduate training, which is also required by the important employers, is imperative.

Whereas the Geologist was previously seen as someone concerned with the discovery and exploitation of useful metals and minerals such as diamonds, gold, copper, asbestos, coal etc., it is important to know that they are being employed on an increasing scale with a view to the production of material on which today's civilization is based. Examples of these functions, which also indicate occupational trends, are the following: Investigation of rock composition for building construction and roads, of limestone for cement, of building sand, of clay for bricks and tiles, and so forth. They work in close co-operation with civil engineers in respect of foundations and concrete constructions, excavation and moving of soil, the combating of soil erosion, etc.

In a country such as South Africa where the economy is largely dependent on mineral production, it is obvious that a subject such as Geology plays an important part in combination with subjects such as Chemistry, Physics, Mathematics, Mathematical Statistics and Geography. It offers an opportunity for study and work in the open to persons who are fond of life in the fresh air. However, it also offers sufficient opportunity for research in a laboratory with apparatus such as the optic microscope, the electronic microscope, the X-ray diffractometer, the mass spectrograph and other modern equipment.

The Department of Mines employs graduates who have already reached an Honours level, for appointment as geologists, palaeontologists or geophysicists in one of the departments of the Geological Survey Branch. Other Government Departments which employ graduates are those of Water Affairs, Agricultural Technical Services, Planning and the Environment and the Provincial Administrations.

Most geologists, however, are employed by mining groups as field explorers or mine geologists. The remainder are attached to universities as lecturers, to scientific bodies or institutes such as the CSIR, museums and the Bernard Price Institute for Geophysical Research at the University of the Witwatersrand. Some are employed to do geological work for concerns such as Sasol, Iscor, SOECOR, other large industries and civil engineering firms. Others act as private consultants.

Also see Geophysics, p. 154.

Hydrology: Hydrology is the science which deals with the waters of the earth and their distribution in the atmosphere, over the surface and in soil and rock strata; their laws and phenomena as well as the influence of these phenomena on man and his activities.

Hydrology is not a major for a degree and students contemplating this as an occupation must choose from the following as majors for a B.Sc. degree (preferably a four-year degree): Geography, Physics, Geophysics, Botany, Chemistry, Applied Mathematics, Mathematics, Mathematical Statistics, Computer Science and Operational Research.

The most important employer is the Division of Hydrological Research of the Department of Water Affairs, with job opportunities in the Sections Operations, Analysis, Basic Research (surface water and sub-surface water) and Liaison. The requirement for appointment is a B.Sc.(Hons.) degree or a four-year degree with one of the subjects mentioned above as a major. A degree in Agriculture, Forestry or Civil Engineering is also appropriate.

The value of water is fully realized today and in South Africa in particular Hydrologists play an important part in the utilization and conservation of the country's water supplies. Women interested in this field are also considered for posts, mainly in the sections

to which very little or no field-work is attached.

Mathematical Sciences: The mathematical sciences (here one thinks particularly of Mathematics, Applied Mathematics and Statistics) play an important part as an auxiliary science for the natural, engineering, agricultural, commercial and medical sciences, as well as for other human sciences and other disciplines. Hence the time is long past when a candidate with mathematical qualifications (particularly in Pure Mathematics) was dependent on teaching only. Owing to the expanding labour field, the shortage of mathematicians and statisticians is increasing steadily.

- Statistics: On the one hand Statistics depends very largely on Mathematics and Probabilism; on the other hand there are various sciences which depend on Statistics, such as actuarial science (insurance etc.) and operational analysis (the aim of which is to bring about efficiency in industrial processes and commercial concerns). Many sciences also use statistical methods as an essential aid, for instance the biological sciences (biometrics), psychological and sociological sciences (psychometrics and sociometrics), economic sciences (econometrics), etc. Computer Science also is closely related to Statistics.

With a view to career possibilities, the broad scope of the fields in which Statistics can be applied (Statistics, Mathematical Statistics, and so forth) can briefly be indicated by a few examples:

- In the field of agriculture, the Statistician has the task of interpreting data which arise out of experiments with matters such as the influence of fertilizers, soil conservation methods, soil fertility, types of seed etc. on the yield; the effect of nutrients, feed mixtures, inherited traits etc. on the production of beef breeds.
- The handling of statistical problems in the sphere of other biological sciences such as zoology and botany, medicine and dietetics, physiology, etc.
- The contribution of statistical methods, for example in respect of the measurement of intelligence, behaviour, compilation of scales etc., to the human sciences such as psychology, education and sociology.
- The use of statistical methods has also become indispensable in the extensive field of the economic sciences, industrial concerns, engineering problems, mining, finance and so on.
- Statisticians also occupy themselves with the study and improvement of methods to find better mathematical descriptions for the phenomena which appear in their fields of application.

The task and career which include, for example, scientific planning of experimental surveys, the analysis of data, the drawing of conclusions and the possible making of decisions, is therefore interesting and stimulating to the statistician.

Statisticians are also employed as research officers or routine workers, for example to do statistical work, operational analysis or computer work for a large variety of bodies such as insurance and investment corporations; industries such as Iscor, Sasol and others with research laboratories; mining, transport and communication, Government departments (see Mathematics); the CSIR, the HSRC and other semi-government institutions; the MRC, NJPR (CSIR), universities and wherever numerical data must be processed and interpreted.

- Mathematics and Applied Mathematics: Apart from the demand for Mathematicians with Pure or Applied Mathematics as major subjects, one of these two subjects is a prerequisite for specialization in, for example, physics, chemistry, engineering, astronomy, economics and even biology, psychology and many others. In the choice of an occupational field, the student should also bear in mind the fact that the subjects Mathematics, Applied Mathematics and Physics are closely bound up with each other as regards field of study and methods. In many cases knowledge of Statistics is a requirement or at least a recommendation.

Mathematicians are employed as researchers or routine workers by, for example, the following: The CSIR, the HSRC, the Atomic Energy Board, the various research institutes

to which very little or no field-work is attached.

Mathematical Sciences: The mathematical sciences (here one thinks particularly of Mathematics, Applied Mathematics and Statistics) play an important part as an auxiliary science for the natural, engineering, agricultural, commercial and medical sciences, as well as for other human sciences and other disciplines. Hence the time is long past when a candidate with mathematical qualifications (particularly in Pure Mathematics) was dependent on teaching only. Owing to the expanding labour field, the shortage of mathematicians and statisticians is increasing steadily.

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- The use of statistical methods has also become indispensable in the extensive field of the economic sciences, industrial concerns, engineering problems, mining, finance and so on.
- Statisticians also occupy themselves with the study and improvement of methods to find better mathematical descriptions for the phenomena which appear in their fields of application.

The task and career which include, for example, scientific planning of experimental surveys, the analysis of data, the drawing of conclusions and the possible making of decisions, is therefore interesting and stimulating to the statistician.

Statisticians are also employed as research officers or routine workers, for example to do statistical work, operational analysis or computer work for a large variety of bodies such as insurance and investment corporations; industries such as Iscor, Sasol and others with research laboratories; mining, transport and communication, Government departments (see Mathematics); the CSIR, the HSRC and other semi-government institutions; the MARC, NJPR (CSIR), universities and wherever numerical data must be processed and interpreted.

- Mathematics and Applied Mathematics: Apart from the demand for Mathematicians with Pure or Applied Mathematics as major subjects, one of these two subjects is a prerequisite for specialization in, for example, physics, chemistry, engineering, astronomy, economics and even biology, psychology and many others. In the choice of an occupational field, the student should also bear in mind the fact that the subjects Mathematics, Applied Mathematics and Physics are closely bound up with each other as regards field of study and methods. In many cases knowledge of Statistics is a requirement or at least a recommendation.

Mathematicians are employed as researchers or routine workers by, for example, the following: The CSIR, the HSRC, the Atomic Energy Board, the various research institutes

in the country, industries such as Iscor, Sasol, the Railways, the Weather Bureau, large co-operatives and insurance companies. Various concerns employ mathematicians to be trained as actuaries.

It is known that there is a great shortage of mathematics teachers in the provincial high schools. Moreover, there is a great demand for lecturers with post-graduate training at the colleges for advanced technical education, technical colleges and universities.

The following Government Departments, which also offer good prospects of promotion, employ persons as professional officers if they have combinations of the mathematical sciences and other subjects:

Labour (Statistics as a major subject, or with Mathematics and Statistics as subjects).

Planning and the Environment (Statistics as a major).

Bantu Administration and Development (Statistics as a major subject, or with Mathematics and Statistics as subjects).

Bantu Education (Statistics as a major subject, or with Mathematics and Statistics as subjects).

Statistics (One or more of the following as majors: Economics, Business Economics, Accounting, Statistics, Mathematics, Mathematical Statistics).

Industries: ((i) A course in one of the following: Mathematics, Statistical Methods and Statistics, Economics or Accounting; (ii) B.Sc. degree with Mathematics or Mathematical Statistics as a major).

Agricultural Economics and Marketing (One or more of the following major subjects: Economics, Business Economics, Agricultural Economics and Accounting. Mathematics and Statistics are a strong recommendation).

Agricultural Technical Services (Major subject from among Statistics, Biometry, Mathematics, Mathematical Statistics).

Transport (One of the following as a major: Mathematics, Applied Mathematics, Mathematical Statistics, Physics).

Also see Computer Science, p. 147.

- **Actuary:** In order to qualify as an Actuary, a series of examinations must be passed. Tuition takes place by means of correspondence courses. There are two professional bodies which set actuarial examinations, viz the Institute of Actuaries with its headquarters in London, and The Faculty of Actuaries with headquarters in Edinburgh. These two bodies jointly control The Actuarial Tuition Service in London, which deals with all tuition matters. There is a local centre of this tuition service in Johannesburg and another in Cape Town.

Prospective actuaries can first complete a B.Com., B.Sc. or even a B.A. degree and then continue with studies in order to become actuaries. However, the most important requirement is that their university course should include at least two years of Pure Mathematics, and if possible, also an introduction to Statistics, Accounting and Economics. Although university study is of much help in passing the actuarial examinations, it is nevertheless not a requirement. After leaving school, a candidate may enter the service of an insurance company or a firm of consulting actuaries and immediately commence with his actuarial studies.

The University of Cape Town offers an actuarial field of study for the B. Business Science degree, which provides partial exemption from the actuarial examinations.

The particular training an actuary receives definitely opens the door to a wide variety of other fields. Actuaries are few and far between and chief managerial posts are within their grasp, even while they are still studying.

Most actuaries are employed by Life Assurance Companies which also offer extremely

favourable prospects of promotion. Others act as consultants in the service of, for example, building societies and other financial institutions; trading companies, industries, mines, the Department of Statistics, the Railways, municipalities and so forth. The expansion of commerce and industry means that more and more actuaries are being appointed in the private sector. Some Government Departments appoint actuaries in a full-time or in a consulting capacity.

More information may be obtained from the Honorary Secretary, The Actuarial Association of South Africa, P.O. Box 4464, Cape Town, 8000.

Metallurgy: Metallurgists, whose field is the science and technology of metals, can be divided into three broad groups, viz extractive metallurgists, who process ore and extract the metal from it, manufacturing metallurgists, who process metal into alloys in various useful forms, and the physical metallurgists, who chiefly study the physical behaviour of processed metals and alloys when they are being used. For research work which has to be undertaken, particularly in extractive metallurgy, the National Institute for Metallurgy, Johannesburg, serves as a research centre for practically the whole of the South African mineral industry. The work of this Institute is managed by various sections. Some mining companies undertake research work in their own laboratories, while the Chamber of Mines has a large research organization in Johannesburg.

For more information in connection with employment, training and so forth, intending students in this field are referred to the following bodies, which also represent the most important employers: The Chamber of Mines, the individual mining groups, Iscor, the National Institute for Metallurgy, the Atomic Energy Board and the Universities of Pretoria and the Witwatersrand.

Also see Metallurgical Engineering, p. 242.

Meteorology: Candidates who wish to make a success of this career should be interested in the weather and atmospheric phenomena and the causal relationship between large-scale natural phenomena. They are employed by the Department of Transport for service in the Weather Bureau. Here the Meteorologist (man or woman) carries out his tasks in well equipped offices. A limited amount of research is also undertaken in laboratories.

A B.Sc. degree with one of the following majors is required for appointment as Assistant Meteorologist: Physics, Applied Mathematics, Mathematics or Mathematical Statistics. To be appointed as Meteorologist, a B.Sc.(Hons.) degree in Meteorology or a four-year B.Sc. degree in Meteorology is required. Senior officers in the Weather Bureau organize in-service training in weather observation, the handling of meteorological instruments and weather forecasting.

Meteorologists may volunteer for service for a year or longer on Marion or Gough Island and in Antarctica. Meritorious work is always suitably rewarded and Meteorologists can be promoted to Senior and Chief Meteorologists. Also see Agricultural Meteorology, p.220.

Microbiology: This subject field makes a particular contribution to the knowledge of diseases in humans, animals and plants. Useful micro-organisms are today being harnessed to the advantage of man to such an extent that even man's way of life is influenced by them. Microbes are used, for instance, in the preparation of various beverages and foods, in manufacturing antibiotics, to evaluate the efficacy of disinfectants and canning processes and even for the purification and re-use of water. The large number of bacteria, fungi and other micro-organisms which are present in the soil, are of great importance for agriculture.

There are various lines of specialization in Microbiology and sometimes the names of these originate from the type of organism that is being studied. Thus virology has to do with viruses, bacteriology with bacteria, etc. The lines of specialization also serve as a key to a possible occupational field, for example, general microbiology, agricultural microbiology, industrial microbiology, medical and veterinary microbiology, marine microbiology and geobiology. Graduates in this field mainly qualify for work as researchers in industries, municipalities and research institutions such as the CSIR, SABS and the Medical Research Council, of which various research units and institutes are established in different parts of the country.

Microbiological research is also undertaken by the Department of Agricultural Technical Services, the research institutes for Plant Protection, Fruit and Food Technology, Citrus and Subtropical Fruit, Horticulture, Tobacco, Viticulture and Oenology, Veterinary Science, Cattle-breeding and Dairy products, Soil and other research institutes. Other Government Departments which provide work in this field are those of Industries, Agricultural Economics and Marketing, Bantu Administration and Development, Health and Water Affairs. Persons qualified in this field can also obtain employment as laboratory technicians in medical schools and hospitals, and with appropriate subject combinations they can also choose teaching as a profession.

However, post-graduate training is necessary for appointment to a lecturing post at a university. Moreover, research constitutes the backbone of the study of Microbiology and the Microbiologist must remain a student if he wishes to be successful in his career.

Nature Conservation: Organized institutions in the RSA employ qualified persons to render professional services in connection with the conservation of the country's fauna and flora. Some of these organizations concentrate on protection and research in respect of fauna, others more exclusively as regards flora. Graduates are employed as professional officers. They must be in possession of a B.Sc. degree and must be prepared to continue with appropriate post-graduate studies and research.

These bodies are the Government Departments of Water Affairs (Division of Water Research), Industries (Division Sea Fisheries), Agricultural Technical Services (Division Soil Protection/National Herbarium) and Forestry; the departments of Nature Conservation of the Provincial Administrations and South-West Africa; the National Parks Board; the Oceanographic Research Institute, Durban; the CSIR; the Natal Herbarium, Durban; the Moss Herbarium, University of the Witwatersrand; the Compton Herbarium, Newlands, Cape; the Bolus Herbarium, University of Cape Town and a number of museums scattered throughout the country.

Oceanography: Oceanography is the study of the sea - including life in it, the ocean floor and the air above the ocean. It is a compound of various subject fields which require the co-ordinated services of divergent kinds of scientists who, as a result of their particular interest in the sea and its environs, are closely associated with each other. Here one thinks, for example, of marine geologists, chemists, physicists, biologists and meteorologists who, in turn, are dependent on mathematicians, engineers, technologists and technicians to assist in various fields in compiling and processing data.

Because of this wide range of subject fields involved, the specialized training of an Oceanographer actually starts only when he has obtained a B.Sc. degree, or preferably, a B.Sc.(Hons.) degree in ordinary science subjects. Apart from Botany, Zoology, Chemistry, Geology, Physics or Microbiology as one of the majors, these subjects should also include Mathematics and, in addition, a carefully chosen combination of subsidiaries. A degree in engineering offers an excellent basis for specialization in certain aspects of physical oceanography. (The University of Cape Town is at present the only South African university which offers a degree specifically in Oceanography). Oceanographic work, however, is not restricted to persons with a degree specifically in Oceanography. Generally oceanographic knowledge is acquired in practice.

Oceanographers are employed by the Division Sea Fisheries of the Department of Industries. There are opportunities for specialization in fields such as chemical and physical oceanography, plankton research, fish research, biological oceanography, statistics, pilchard research, fish life history research, and bird and seal research. Other institutions and firms which employ oceanographers and marine experts are the following: Institute of Oceanography, University of Cape Town; Oceanographic Research Institute, University of Natal, Durban; Oceanography Division, CSIR, Natal; Natal Regional Laboratory; National Institute for Water Research, CSIR, Natal; Department of Ichthyology, Rhodes University; Department of Zoology, University of the Witwatersrand; Bernard Price Institute for Geophysical Research, University of the Witwatersrand; the South African Museum, Cape Town; South African Naval Hydrographic Office, Simonstown; Naval Oceanographic Research Unit, Youngsfield; Roberts Construction (Land and Marine), Cape Town; The South-West Africa Fisheries Office, Walvis Bay; Fisheries Development Corporation, Cape Town; Collins Submarine Pipelines, Africa (Pty) Ltd,

Cape Town; Oceanographic Research Unit, Anglo American Corporation, Johannesburg; Marine Diamond Corporation Ltd (SWA), Cape Town.

Some of the most promising marine biologists in the country are women, and there is no reason why they should not enter the field of physical oceanography.

Ornithology: At present no specific training for the study of birds is offered in South Africa. Ornithologists are therefore appointed from among the members of qualified zoologists. The requirement for appointment is normally a B.Sc. degree with Zoology as a major in combination with subjects such as Botany, Entomology, Geography, Geology, etc. However, an Honours or Master's degree will be a strong recommendation.

Job opportunities for Ornithologists are extremely limited and only really dedicated persons with particular talent and interest in this field may hope to obtain a position and achieve success in such a career. They are employed, for example, by the National Parks Board, the Provincial Administrations, the Department of Agricultural Technical Services and some museums.

Physics: Man has the urge to rule over nature, and to do this, he must know nature. Therefore Physics comprises the study of inanimate nature and all phenomena in this connection in order to get to know the fundamental principles thereof. It extends from phenomena of astronomical dimensions, such as in space, to others which are inconceivably minute and which, for example, may be observed in the nuclei of atoms. As an auxiliary to Physics, Mathematics is indispensable. Mathematics provides an exact rounding off to the physical investigation. Simultaneously, Mathematics obtains additional significance since it is applied to real things. Physics also combines well with subjects such as Chemistry, Geology, Geography, Zoology and Botany.

The particularly wide field covered by Physics, together with a judicious combination of major and subsidiary subjects will not only lay the foundation for the choice of an interesting career, but will also serve as an incentive for post-graduate study and research which are both absolutely imperative in this science.

There is a great demand for physics teachers in all the Education Departments; for atomic and nuclear physicists or other research officers in the service of the CSIR, the Atomic Energy Board, the Universities of Pretoria, the Witwatersrand and Potchefstroom, as well as the Nuclear Institute of the Southern Universities and the Universities of Stellenbosch, Cape Town etc.; for researchers employed by, for example, Iscor, Sasol, African Explosives and Chemical Industries (A.E and C.I.), the mines and other industries such as textile and wool processing, oil companies, oceanographic institutes and companies which sell scientific instruments. The developing electronic industry creates particular opportunities for research, development and production in, for example, television, radar, automation, as well as the design and operation of high-speed computers. There is also an increasing demand for physicists and biophysicists in hospitals and related institutions.

In the Public Service graduates are employed as professional officers by Departments such as those of Water Affairs (hydrologists, see p.149); Industry (physical oceanographers and so forth); Agricultural Technical Services (agricultural meteorologists, etc.); Transport (meteorologists), and the Provincial Administrations.

Geophysics is a branch of Physics which treats the whole earth, including its hydrosphere and atmosphere. It embraces disciplines such as seismology, geomagnetism, gravitation, meteorology, etc. Geophysical methods are applied in the search for and the identification of structures in the earth which are important in finding mineral deposits, oil and subsurface water and in the field of civil engineering. For this purpose Geophysicists are chiefly employed by the Geological Survey Division of the Department of Mines. However, the minimum qualification required for appointment is a B.Sc.(Hons.) or an equivalent four-year degree in Geophysics or Physics.

For the top students and for those who have completed advanced studies in Physics and Geophysics, there are possibilities as lecturers at universities or as researchers employed by the CSIR or, for example, the Bernard Price Institute for Geophysical Research at the University of the Witwatersrand. Also see Geology p.149.

Physiology: Physiology is a biological science which embraces a study of the normal functions of living creatures, particularly of man. It contributes particularly to a knowledge of the normal functions of the human body and consequently also indirectly to deviations and diseases of humans. In actual fact it is an applied science of life which forms the basis for further training in medicine, veterinary science, pharmacology, pharmacy and other specialized fields in medicine and paramedical services such as physiotherapy, occupational therapy, nursing and hospital dietetics. In the context of the natural sciences Physiology is important for training in dietetics, home economics and physical education and it also serves as a preparatory course for advanced research in many applied fields.

A career with this biological science as a major, in combination with subjects such as Chemistry, Physics, Mathematics, Zoology, Microbiology, Psychology, Biochemistry, Botany, Physical Education and Dietetics, can be found mainly in two directions, viz teaching and research. Physiology is of great value in the teaching of Biology and some secondary schools offer it as a separate subject. At higher educational institutions and technical colleges there is a demand for lecturers with advanced training in Physiology. Various laboratories which undertake biological research employ Physiologists, for instance the Chamber of Mines' Human Sciences Laboratory, the Central Medical Laboratory of the Defence Force at Voortrekkerhoogte, the Medical Research Council and the CSIR's laboratories for human nutrition research and physiological chemistry etc., the Atomic Energy Board's section for Human Sciences for research in connection with radiation, Iscor's laboratory for Industrial Hygiene, etc. For example the NIPR of the CSIR has a Physiological Psychological programme, in which persons who have Physiology and Psychology as subjects can do valuable work in connection with neuro-physiology and sensory-motor studies. Physiologists also work as laboratory technicians in medical schools, hospitals, universities and pathology laboratories.

There are also good occupational prospects for Physiologists in Government Departments such as those of Agricultural Technical Services, especially for veterinary research at Onderstepoort and other agricultural research institutes in connection with animal nutrition, meat and wool production, plant poisoning problems and the physiology of insects; Agricultural Economics and Marketing; Bantu Administration and Development; Health, and the Administrations of South-West Africa and the Transvaal. Various industries such as the pharmaceutical, tobacco and fishing industries employ physiologists, mainly with a view to research.

Also see Animal Physiology under Agriculture, p.220.

Soil Science/Pedology: See Agronomy, p.220 and Soil Science, p.222.

Textile Science: The Textile industry in South Africa is an important source of future growth and job opportunities. Owing to its phenomenal expansion, this powerful industry offers wonderful opportunities for men and women trained as textile technologists.

The prospects are self-apparent. Textile Scientists are received with open arms, particularly by textile manufacturers in the following sections, for example: scouring, carbonising, carding and combing, drawing and spinning, knitting, weaving, dyeing and finishing, and quality control. Graduates are also employed by, for example, the Wool and Textile Research Institute of the CSIR and the test laboratories of the SABS.

Water Purification and Recovery: One of the methods of combating a possible shortage of water in South Africa is by purifying it for re-use. However, purification processes require highly specialized knowledge and the application of advanced techniques. Consequently there is a demand for persons with, inter alia, appropriate university qualifications which can be utilized in the field of water purification and recovery. For example, the National Institute for Water Research (CSIR) appoints persons with B.Sc. degrees in subjects such as Chemistry, Botany and Zoology as technical officers. In order to be able to work at a research level, one must have a four-year degree, such as an honours, engineering or agricultural degree, etc. There is therefore ample scope

for biologists, botanists, zoologists, chemists, chemical and civil engineers, biochemists and microbiologists.

Zoology: Zoology in itself embraces such a wide field of study that, for the sake of convenience, it is divided into a number of basic subsections such as Morphology, Anatomy, Histology, Physiology, Taxonomy, Embryology, Palaeontology, Zoography, Ecology and others. Other specialized fields of study such as, for example, Entomology and Genetics have developed into completely separate subjects. Because of the varied fields of study in Zoology, students with this subject as a major can consequently enter particularly interesting fields. For many of the fields of employment and particularly for research posts, the subject which is taken with Zoology as a major is an important factor and, together with some subsidiaries, it should be carefully considered. Botany, Chemistry, Physiology, Geology, Biochemistry and Microbiology are some of the subjects which combine very effectively with Zoology.

Zoologists generally have the opportunity of choosing from a variety of occupational fields. Some of these are primarily concerned with laboratory work, while others require work in the open air. Examples of some of the employers are the following: All the Education Departments; medical research institutes; the CSIR; the SABS; Onderstepoort; museums, divisions for nature conservation, game reserves, zoos and fisheries; oceanographic institutes; industries such as the manufacturers of fertilizers, insecticides and cattle remedies; the National Parks Board, and numerous larger and smaller private firms with interests in zoological products. In the Public Service graduates also have an opportunity of choosing from among various professional fields in the Departments of Water Affairs, Mines, Industries, Agricultural Technical Services, Agricultural Economics and Marketing, Bantu Administration and Development, Health and the Provincial Administrations of Natal and the Transvaal.

Lately employers have been giving increasing preference to candidates with post-graduate training - the higher the qualification, the better the prospects of an appointment and promotion to higher posts. Usually there is such a dire need of highly trained zoologists that a large number of students who have completed an honours degree, are appointed to positions even before they have rounded off their training.

Also see the related sections under Agriculture, p. 219.

FAKULTEITE VAN NATUURWETENSKAPPE

UNIVERSITEIT VAN DIE ORANJE - VRYSTAAT

FAKULTEIT VAN NATUURWETENSKAPPE

Grade

Baccalaureus Scientiae	: B.Sc.
Honneurs-Baccalaureus Scientiae	: B.Sc.(Hons.)
Magister Scientiae	: M.Sc.
Doctor Scientiae	: D.Sc.

GRADE

Baccalaureus Scientiae: B.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde en Skeikunde en Natuurkunde.

Addisionele vereistes: Van Januarie 1977 af word 'n student slegs toegelaat indien hy in Wiskunde en Natuur- en Skeikunde minstens op die Standaardgraad geslaag het, behalwe in die geval waar hy vir Wiskunde I inskryf. In laasgenoemde geval moet hy in Wiskunde op die Hoër Graad geslaag het. Die Universiteit sal dit verwelkom as studente wat vir die B.Sc.-graad inskryf beide Wiskunde en Natuur- en Skeikunde op die Hoër Graad geslaag het.

Leergang: Drie jaar voltydse studie. Die leergang moet minstens nege kursusse bevat wat soos volg oor die studiejare verdeel word: Eerste jaar - vier; tweede jaar - drie; derde jaar - twee.

Behalwe in buitengewone gevalle moet minstens vyf van die nege kursusse nie-aanvangskursusse wees, met dien verstande dat Biochemie II, Geochemie II, Geohidrologie III, Entomologie II, Genetika II en Fisiologie I as nie-aanvangskursusse gereken word.

'n Leergang vir die graad moet minstens twee goedgekeurde hoofvakke insluit, in elkeen waarvan die voorgeskrewe aantal kursusse voltooi moet word.

Hoofvakke waarin drie kwalifiserende kursusse gevolg word: Aardrykskunde, Chemie, Dierkunde, Fisika, Geologie, Plantkunde, Sielkunde, Statistiek, Toegepaste Wiskunde, Wiskunde.

Hoofvakke waarin twee kwalifiserende kursusse gevolg word: Biochemie, Entomologie, Fisiologie, Genetika, Geochemie, Mikrobiologie, Wiskundige Statistiek.

'n Student moet saam met sy hoofvakke die byvakke in 'n leergang insluit en voltooi wat die Universiteit voorskryf.

'n Leergang moet saamgestel word in ooreenstemming met die bepalings in verband met die groepering van vakke en die vereistes van die besondere studierigting.

'n Student wat na voltooiing van sy B.Sc.-graad as onderwyser in 'n hoërskool wil kwalifiseer, moet skoolvakke en kursusse in sy graadleergang insluit soos deur die regulasies vir die Universiteitsonderwysdiploma bepaal.

Honneurs-Baccalaureus Scientiae: B.Sc.(Hons.)

Toelatingsvereistes: 'n Student moet voldoen aan al die vereistes van die gewone Baccalaureusgraad of tot die status daarvan toegelaat wees en kan slegs 'n vak vir die Honneurs-Baccalaureusgraad aanbied wat hy as hoofvak vir die gewone Baccalaureusgraad afgelê het. Die Senaat kan weier om 'n student tot die kursus toe te laat indien hy die bekwaamheid van die student in die betrokke vak onvoldoende ag.

Leergang: Elke kandidaat moet 'n goedgekeurde studiekursus as 'n ingeskrewe student aan die universiteit vir minstens een jaar volg.

Die volgende is die vakke waarin die graad toegeken kan word:

Aardrykskunde, Biochemie (Chemie III is 'n voorvereiste vir die Honneurskursus), Chemie, Dierkunde, Entomologie, Fisika, Fisiologie, Genetika, Geologie, Mikrobiologie, Plantkunde, Sielkunde, Sterrekunde, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek.

'n Student moet aan die einde van die kursus 'n universiteitseksamen aflê en gelyktydig in die hele eksamen slaag. 'n Student kan hom slegs twee keer vir die finale eksamen aanmeld.

Magister Scientiae: M.Sc.

Toelatingsvereistes: 'n B.Sc.(Hons.)-graad.

'n Student moet die hoof van die betrokke departement oortuig dat hy voldoende kennis van die vak besit om die werk vir die graad te verrig.

Leergang: 'n Student word nie tot die Magistergraad toegelaat nie voor minstens twee jaar nadat hy tot die gewone Baccalaureusgraad toegelaat is.

Die M.Sc.-graad word verleen in dieselfde vakke as dié vir die B.Sc.(Hons.)-graad, asook in Kliniese Sielkunde.

'n Eksamen bestaan uit 'n skriftelike eksamen of 'n verhandeling of albei. Waar die departement dit nodig ag, word 'n addisionele mondelinge eksamen afgeneem.

Doctor Scientiae: D.Sc.

Toelatingsvereiste: Die M.Sc.-graad.

Leergang: Geen student word tot die Doktorsgraad toegelaat nie voordat twee jaar wat uitsluitlik gewy word aan navorsingswerk aan die Universiteit of aan 'n ander goedgekeurde inrigting, verstryk het.

Die student moet 'n proefskrif indien wat 'n oorspronklike bydrae tot die bestaande kennis van die gekose onderwerp moet lewer. Elke proefskrif word onder die toesig van die promotor/hulppromotor voorberei.

UNIVERSITEIT VAN PORT ELIZABETH

FAKULTEIT VAN DIE NATUURWETENSAPPE

Grade

Baccalaureus Scientiae	: B.Sc.
Baccalaureus Scientiae (Educationis)	: B.Sc.(Ed.)
Baccalaureus Scientiae in Materiaalwetenskap	:
Baccalaureus Scientiae Honores	: B.Sc.Hons.
Magister Scientiae	: M.Sc.
Magister Scientiae in Tekstielwetenskap	
M.Sc. in Metallurgie en M.Sc. in Polimeerkunde	
Philosophiae Doctor in Tekstielwetenskap	: Ph.D. in Tekstielwetenskap
Doctor Scientiae	: D.Sc.

GRADE

Baccalaureus Scientiae: B.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer van minstens 40 persent in Wiskunde op die Hoër of die Standaardgraad.

Leergang: Drie jaar voltydse studie.

'n Goedgekeurde leergang bestaan uit minstens nege kursusse (minstens tien kursusse in die geval van Biologiese wetenskappe) insluitende minstens twee hoofvakke op derdejaarsvlak uit die volgende gekies: Biochemie, Elektroniese Dataverwerking, Fundamentele Biologie, Botanie, Bedryfseconomie, Chemie, Ekonomie, Fisika, Geologie, Ondernemingsnavorsing, Soölogie, Statistiese Metodes, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek, Rekenaarwetenskap.

Baccalaureus Scientiae (Educationis): B.Sc.(Ed.)

Toelatingsvereiste: Soos vir die B.Sc.-graad.

Leergang: Vier akademiese jare.

Die leergang is 'n samegestelde akademiese en professionele graadleergang wat voldoen aan al die vereistes vir die B.Sc.-graad asook aan die vereistes vir die opleiding van onderwysers vir sekondêre skole.

Baccalaureus Scientiae in Materiaalwetenskap

Toelatingsvereiste: Soos vir die B.Sc.-graad.

Leergang: Vier jaar voltydse studie.

Die leergang behels onder andere die volgende kursusse: Keramika, Metaalwetenskap en -tegnologie, Polimeerwetenskap en -tegnologie, Ekstraktiewe Metallurgie, Biometrie, Fisika, Chemie, Wiskunde.

Baccalaureus Scientiae Honores: B.Sc.Hons.

Toelatingsvereistes: 'n B.Sc.-graad. 'n Kandidaat word slegs toegelaat tot Honneurs=studie in 'n vak wat hy op derdejaarsvlak geslaag het.

Leergang: 'n Kandidaat kan toegelaat word tot 'n Honneurskursus in een van die volgende vakke en daar kan van 'n kandidaat vereis word dat hy 'n kursus of kursusse in enige ander voorgeskrewe vak as newevereiste moet voltooi:

Biochemie, Botanie, Chemie, Fisika, Geologie, Materiaalwetenskap, Ondernemingsnavorsing, Rekenaarwetenskap, Soölogie, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek.

Die leergang vir 'n Honneursgraad strek oor minstens twee opeenvolgende semesters en die eksamen bestaan uit minstens vier vraestelle, mondeling en/of geskrewe.

Magister Scientiae: M.Sc.

Toelatingsvereiste: 'n B.Sc.Hons.-graad.

Leergang: 'n Kandidaat moet vir 'n tydperk van minstens twee opeenvolgende semesters 'n goedgekeurde kursus van studie of navorsing of albei aan die Universiteit volg. Die graad kan behaal word deur middel van 'n verhandeling en 'n mondelinge eksamen; of 'n geskrewe eksamen; of sowel 'n verhandeling as 'n geskrewe of mondelinge eksamen.

Magister Scientiae in Tekstielwetenskap

Toelatingsvereistes: 'n Kandidaat moet oor een van die volgende minimum kwalifikasies beskik:

- 'n B.Sc.(Tekstiel)-graad
- 'n Diploma in Tekstielsingeniërsweese
- 'n B.Sc.Hons.-graad in Chemie, Fisika, Wiskunde of Wiskundige Statistiek.

Leergang: Een van die volgende studieveldde mag vir navorsing gekies word:

Tekstielchemie, Tekstielfisika, Meganiese prosessering, Tekstielsingeniërsweese.

Alle kandidate moet by 'n gevestigde tekstiellaboratorium wat oor die nodige navorsings=fasiliteite beskik, in diens wees.

Kyk ook Leergang vir die M.Sc.-graad hierbo.

M.Sc. in Metallurgie en M.Sc. in Polimeerkunde

Toelatingsvereistes: 'n Kandidaat moet in besit wees van een van die volgende grade: B.Sc., B.Sc.(Ind. Chem.) of B.Sc.(Ing.) wat minstens Wiskunde I, Chemie II en Fisika II moet insluit.

Leergang: Twee akademiese jare. Skriftelike eksamens moet afgelê word en 'n verhandeling moet aan die einde van die tweede studiejaar ingedien word, ná voltooiing van die navorsingsprojek.

Philosophiae Doctor in Tekstielwetenskap: Ph.D. in Tekstielwetenskap

Toelatingsvereistes: 'n Kandidaat moet oor een van die volgende minimum kwalifikasies beskik:

- 'n M.Sc.-graad in Chemie, Fisika of Tekstielsingeniërsweese en ten minste twee jaar ondervinding op die gebied van tekstielnavorsing
- 'n M.Sc.(Tekstiel)-graad

Leergang: Kyk D.Sc. hieronder.

Doctor Scientiae: D.Sc.

Toelatingsvereiste: Behalwe met vergunning van die Senaat kan slegs die houer van 'n Magistergraad as kandidaat vir 'n Doktorsgraad toegelaat word.

Leergang: 'n Doktorsgraad word nie aan 'n kandidaat toegeken alvorens hy vir minstens vier opeenvolgende semesters 'n kandidaat vir sodanige graad aan die Universiteit was nie.

Die kandidaat moet herdrukke van sy navorsingspublikasies in die vorm van 'n proefskrif voorlê om te bewys dat hy 'n gesaghebbende op sy terrein is.

P O T C H E F S T R O O M S E U N I V E R S I T E I T V I R C H R I S T E L I K E
H O Ë R O N D E R W Y S

FAKULTEIT NATUURWETENSKAPPE

Grade

Natuurwetenskappe

Baccalaureus Scientiae	: B.Sc.
Honneurs Baccalaureus Scientiae	: Honns.B.Sc.
Magister Scientiae	: M.Sc.
Doctor Scientiae	: D.Sc.

Industriële Chemie

Baccalaureus Scientiae (Industriële Chemie)	: B.Sc.(Ind. Chem.)
Baccalaureus Scientiae (Industriële Chemie - Bedryf)	: B.Sc.(Ind. Chem. Bedryf)

Bodemkunde

Baccalaureus Scientiae (Bodemkunde)	: B.Sc.(Bodemkunde)
Honneurs Baccalaureus Scientiae (Bodemkunde)	: Honns.B.Sc.(Bodemkunde)

Diploma

Diploma in Bodemkunde

Sertifikaat

Sertifikaat in Bodemkunde

GRADE

Baccalaureus Scientiae: B.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Hoër Graad, ðf in 'n Natuurwetenskaplike vak, verkieslik Natuur- en Skeikunde, 'n slaagsyfer op die Hoër Graad en in Wiskunde 'n slaagsyfer op die Standaardgraad.

Addisionele toelatingsvereistes tot kursusse:

- Wiskunde: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 'n B-simbool op die Standaardgraad.
- Chemie I of Fisika I: 'n Slaagsyfer in Natuur- en Skeikunde op die Standaard- of Hoër Graad.
- Fisiologie as hoofvak: 'n Slaagsyfer in Natuur- en Skeikunde of Natuurkunde op minstens die Standaardgraad.
- Dieetkunde: 'n Slaagsyfer in Natuur- en Skeikunde op minstens die Standaardgraad.
- Industriële Chemie: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 'n B-simbool op die Standaardgraad en 'n slaagsyfer in Chemie of Natuur- en Skeikunde op die Standaardgraad.
- Liggaamlike Opvoedkunde: 'n Student moet vooraf sy mediese geskiktheid vir die kursus laat vasstel.
- Bodemkunde as hoofvak: 'n Slaagsyfer in Natuur- en Skeikunde of Chemie en Fisika op minstens die Standaardgraad.

Leergang: Drie jaar voltydse studie. Die leergang behels minstens nege kursusse.

Vir graaddoeleindes ontvang 'n student erkenning vir hoogstens drie kursusse in die jaar waarin hy vir die finale eksamen in sy hoofvakke inskryf, en vir hoogstens vier kursusse in enige ander jaar.

'n Leergang sluit minstens twee hoofvakke in, in elk waarvan twee of drie kursusse gevolg moet word:

Hoofvakke met drie kursusse:

Bedryf- en Personeelsielkunde, Bodemkunde, Chemie, Dieetkunde, Dierkunde, Fisiese Geografie, Fisika, Fisiologie, Geologie, Liggaamlike Opvoedkunde, Plantkunde, Psigologie, Toegepaste Wiskunde, Wiskunde.

Hoofvakke met twee kursusse:

Biochemie, Industriële Chemie, Mikrobiologie, Teorie van Statistiek, Rekenaarwetenskap.

Vir elke hoofvak is daar kursusse in byvakke wat deur die student gevolg moet word, bv. indien die student Chemie as 'n hoofvak neem, moet hy minstens een kursus in Fisika en Wiskunde volg.

Baccalaureus Scientiae met Ekonomiese vakke: B.Sc.

Toelatingsvereistes: Soos vir die gewone B.Sc.-graad.

Leergang: Drie jaar voltydse studie. In die derde jaar moet 'n student in een van die volgende vakkombinasies slaag:

- Wiskunde III, Teorie van Statistiek II
- Wiskunde III, Rekenaarwetenskap II
- Wiskunde III, Bedryfseconomie III, Wiskundige Ekonomie III, Ekonometrie
- Teorie van Statistiek II, Bedryfseconomie III, Wiskundige Ekonomie III, Ekonometrie
- Teorie van Statistiek II, Rekenaarwetenskap I, Rekeningkunde III, Bedryfsrekeningkunde II
- Rekenaarwetenskap II, Teorie van Statistiek I, Rekeningkunde III, Bedryfsrekeningkunde II.

Die graad gee toelating tot Honns.B.Sc., M.Sc. en D.Sc.-graadstudie in die B.Sc.-vakke wat tot op derdejaarsvlak geneem is.

Honours Baccalaureus Scientiae: Honns.B.Sc.

Toelatingsvereiste: 'n B.Sc.-graad.

Leergang: 'n Student moet 'n goedgekeurde kursus vir minstens een akademiese jaar aan die Universiteit bywoon.

Die graad kan in een van die volgende vakke voltooi word: Bedryfsosiologie, Bedryf- en Personeelsielkunde, Biochemie, Bodemkunde, Chemie, Dieetkunde, Dierkunde, Entomologie, Farmakologie, Fisiese Geografie, Fisika, Fisiologie, Fisiologiese Chemie, Geologie, Higiëne, Industriële Farmasie, Kookkuns, Liggaamlike Opvoedkunde, Mikrobiologie, Plantbiochemie, Plantkunde, Psigologie, Rekenaarwetenskap, Statistiek, Toegepaste Wiskunde, Wiskunde.

Daar is sekere voorvereistes wat nagekom moet word, bv. Plantbiochemie kan alleen geneem word deur studente wat Plantkunde en Chemie as hoofvakke vir die B.Sc.-graad afgelê het.

'n Student moet aan die einde van die kursus 'n universiteitseksamen aflê, waar hy dan in al die dele van die kursus gelyktydig moet slaag en hy kan hom slegs een keer vir die finale eksamen aanmeld.

Magister Scientiae: M.Sc.

Toelatingsvereiste: Die Honns.B.Sc.-graad. 'n M.Sc.-graad in Plantbiochemie kan regstreeks na die B.Sc.-graad geneem word, mits Chemie III en Plantkunde I afgelê is.

Leergang: 'n Student moet 'n goedgekeurde kursus of kursusse van studie of navorsing of albei aan die Universiteit bywoon vir minstens een akademiese jaar na behaling van die Honns.B.Sc.-graad of twee jaar na 'n B.Sc.-graad. Die vakke waarin die graad geneem kan word, is dieselfde as dié vir die Honns.B.Sc.-graad. Die eksamen bestaan uit vraestelle of uit een of meer vraestelle en 'n verhandeling of skripsie op die gebied van die betrokke vak. 'n Verhandeling moet bewys lewer dat die kandidaat met die metode van navorsing vertrou is.

Doctor Scientiae: D.Sc.

Toelatingsvereiste: 'n M.Sc.-graad.

Leergang: Die graad word slegs toegeken nadat die kandidaat 'n goedgekeurde kursus of kursusse van studie of navorsing of albei vir minstens twee akademiese jare aan die Universiteit bygewoon het.

Die graad kan in dieselfde vakke geneem word as dié wat vir die Honns.B.Sc.-graad voorgeskryf is. Die graad kan ook in die Industriële Chemie-vakke geneem word.

Die eksamen bestaan minstens uit 'n proefskrif wat resultate van die kandidaat se studie en navorsing bevat.

'n Proefskrif word nie aangeneem as dit nie 'n besliste bydrae tot die kennis van en insig in die vak is en bewys van oorspronklikheid lewer nie, hetsy deur die vind van nuwe feite, hetsy deur die beoefening van 'n onafhanklike kritiese vermoë.

Baccalaureus Scientiae (Industriële Chemie): B.Sc. (Ind. Chem.) en

Baccalaureus Scientiae (Industriële Chemie - Bedryf): B.Sc. (Ind. Chem. Bedryf)

Toelatingsvereiste: Die B.Sc.-graad met Chemie en Industriële Chemie as hoofvakke.

Leergang: 'n Kandidaat moet die Universiteit vir minstens een jaar bywoon. Die grade het dieselfde status as 'n Honns.B.Sc.-graad.

Om die graad B.Sc. (Industriële Chemie) te behaal, moet 'n student in die volgende vakke slaag: Gevorderde Fisiese Chemie, Gevorderde Industriële Chemie, Industriële Ekonomie en Bedryfsadministrasie, Wiskunde III A, Fisika II A; met dien verstande dat laasgenoemde as twee byvakke geld.

Om die graad B.Sc.(Industriële Chemie - Bedryf) te behaal, moet 'n student in die volgende vakke slaag: Gevorderde Fisiese Chemie, Gevorderde Industriële Chemie, Spesiale Bedryfsielkunde, Bestuurstegete, Bedryfsreg, Wiskunde III A, Fisika II A; met dien verstande dat laasgenoemde twee as byvakke geld.

Voor toekenning van die grade plaasvind, moet 'n sertifikaat in Noodhulp ingelewer word.

Baccalaureus Scientiae (Bodemkunde): B.Sc. (Bodemkunde)

Toelatingsvereiste: Die B.Sc.-graad met Bodemkunde as een hoofvak.

Leergang: Die leergang strek oor een jaar en behels 'n studie van Gevorderde Bodemkunde.

Honneurs Baccalaureus Scientiae (Bodemkunde): Honns.B.Sc.(Bodemkunde)

Toelatingsvereiste: Die B.Sc.(Bodemkunde)-graad.

Leergang: Een jaar. Die graad kan in twee rigtings gevolg word:

- Regionaal-bodemkundige rigting
- Bodemchemiese rigting

(Kyk ook Honns.B.Sc., p. 162.)

DIPLOMA

Diploma in Bodemkunde

Toelatingsvereistes: 'n Standaard 10-sertifikaat met Wiskunde en Skeikunde/Natuurkunde, laasgenoemde minstens op St. 8-peil

of

'n Standaard 10-sertifikaat (Matrikulasievystelling) met Wiskunde en Skeikunde/Natuurkunde, laasgenoemde minstens op St. 8-peil.

Leergang: Drie jaar. Die vakke behels onder andere Plantkunde, Chemie, Fisika, Bodemkunde, Geologie.

SERTIFIKAAT

Sertifikaat in Bodemkunde

Toelatingsvereiste: Die Nasionale Diploma vir Landboutegnici of enige ander gelykwaardige kwalifikasie.

Leergang: Die opleiding strek oor een jaar waarvan die eerste helfte aan teoretiese en die tweede helfte aan praktiese werk gewy sal word.

U N I V E R S I T E I T V A N P R E T O R I A

FAKULTEIT WIS- EN NATUURKUNDE

Grade

Baccalaureus in Wis- en Natuurkunde	: B.Sc.
Baccalaureus in Wis- en Natuurkunde in Mynbou-Geologie	: B.Sc.(Mynbou-Geologie)
Baccalaureus in Wis- en Natuurkunde in Weerkunde	: B.Sc.(Weerkunde)
Baccalaureus Honores in Wis- en Natuurkunde	: B.Sc.(Hons.)
Baccalaureus Honores in Wis- en Natuurkunde in Natuurbeheer	: B.Sc.(Natuurbeheer) (Hons.)

Magister in Wis- en Natuurkunde : M.Sc.
Magister in Wis- en Natuurkunde in Natuurbeheer : M.Sc.(Natuurbeheer)
Doktor in Wis- en Natuurkunde : D.Sc.
Doktor in Wis- en Natuurkunde in Natuurbeheer : D.Sc.(Natuurbeheer)

GRADE

Baccalaureus in Wis- en Natuurkunde: B.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasie=vrystelling) met slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Hoër Graad òf minstens 50 persent op die Standaardgraad òf minstens 40 persent volgens die ou leerplan.

Addisionele toelatingsvereistes tot kursusse:

- 'n Kandidaat sal nie toegelaat word om vir die volgende kursusse in te skryf nie (vir watter graad ook al) tensy hy voldoen aan die vereistes soos hierbo uiteengesit:

Chemie, Fisika, Fisiologiese Chemie, Dierkunde, Entomologie, Genetika, Geologie, Fisiologie, Metallurgie, Mikrobiologie, Plantkunde.

- Wiskunde, Wiskundige Statistiek, Toegepaste Wiskunde: 'n Kandidaat sal nie tot hierdie kursusse toegelaat word nie (vir watter graad ook al) tensy hy Wiskunde op die Hoër Graad geslaag het òf minstens 50 persent op die Standaardgraad òf minstens 40 persent op die ou leerplan behaal het.

- Vir Biologiese studierigtings word Biologie as matrikulasievak aanbeveel.

Leergang: Drie jaar voltydse studie. Elke leergang moet minstens nege kwalifiserende kursusse omvat. Geen kandidaat word toegelaat om 'n groter aantal kursusse as vier in die eerste, vier in die tweede en drie in die derde studiejaar te kies nie.

'n Kandidaat moet sy leergang uit die volgende vakke saamstel: Aardrykskunde, Anatomie en Histologie, Biochemie, Biologie, Biologiese Wetenskap, Chemie, Dierkunde, Entomologie, Fisika, Fisiologie, Fisiologiese Chemie, Genetika, Geologie, Metallurgie, Mikrobiologie, Plantkunde, Rekenaarwetenskap, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek.

Elke leergang moet minstens twee hoofvakke insluit.

Daar is sekere bepalings in verband met die hoofvakke waaraan voldoen moet word, bv. (i) Fisiologie as hoofvak mag slegs saam met Chemie of Dierkunde of Fisika of Genetika as tweede hoofvak geneem word. (ii) Metallurgie as hoofvak mag slegs saam met Chemie of Fisika as tweede hoofvak geneem word.

Alle studente in Geologie en Plantkunde moet deelneem aan die verskillende kleinere ekskursies wat gedurende die jaar gereël word.

Baccalaureus in Wis- en Natuurkunde in Mynbou-Geologie: B.Sc. (Mynbou-Geologie)

Toelatingsvereiste: Soos vir die B.Sc.-graad.

Leergang: Vier jaar voltydse studie. Die leergang behels onder andere die volgende vakke: Geologie, Mynopmeting, Mynbou-ekonomie, Metaalkunde, Mynbou, Opmeetkunde, Ertsbereiding, Chemie, Fisika, Toegepaste Geofisika, Toegepaste Wiskunde.

Minstens 20 weke vakansiewerk gedurende die studietydperk is verpligtend, waarvan 10 weke aan Toegepaste Geofisika gewy, en minstens 5 weke in 'n myn deurgebring moet word.

Baccalaureus in Wis- en Natuurkunde in Weerkunde: B.Sc.(Weerkunde)

Toelatingsvereiste: Soos vir die B.Sc.-graad.

Leergang: Vier jaar voltydse studie. Die leergang behels die volgende vakke: Weerkunde, Toegepaste Wiskunde, Wiskunde, Fisika, Wiskundige Statistiek, Aardrykskunde of Chemie, en Programmering (Bywoningskursus).

Baccalaureus Honores in Wis- en Natuurkunde: B.Sc.(Hons.)

Toelatingsvereistes: Die B.Sc.-graad. 'n Kandidaat moet voldoen aan die bepalinge wat by die leerplanne vir die betrokke vakke uiteengesit is.

Leergang: Minstens een jaar voltydse studie. Die graad word in die volgende vakke toegeken: Aardrykskunde, Anatomie en Histologie, Chemie, Dierkunde, Entomologie, Fisika, Genetika, Geologie, Metallurgie, Mikrobiologie, Plantbiochemie, Plantfisiologie, Plantkunde, Rekenaarwetenskap, Toegepaste Wiskunde, Waterbenuttingsleer, Weerkunde, Wiskunde, Wiskundige Statistiek, en die B.Sc.(Natuurbeheer) (Hons.) in Natuurbeheer.

Magister in Wis- en Natuurkunde: M.Sc.

Toelatingsvereiste: 'n B.Sc.(Hons.)-graad.

Leergang: Die minimum studietydperk is een jaar. Waar toelating tot die studie nie volg op 'n B.Sc.(Hons.)-graad nie, is die minimum studietydperk twee jaar.

Die M.Sc.-graad word in die volgende vakke toegeken: Aardrykskunde, Analitiese Chemie, Anatomie, Anorganiese Chemie, Biochemie, Dierkunde, Entomologie, Fisiese Chemie, Fisika, Fisiologie, Genetika, Geologie, Metallurgie, Mikrobiologie, Organiese Chemie, Plantkunde, Plantbiochemie, Plantfisiologie, Rekenaarwetenskap, Teoretiese Chemie, Toegepaste Wiskunde, Waterbenuttingsleer, Weerkunde, Wiskunde en Wiskundige Statistiek en die M.Sc.(Natuurbeheer) in Natuurbeheer.

Die graad word toegeken op grond van 'n verhandeling en 'n eksamen of op grond van slegs 'n eksamen.

Voordat 'n kandidaat vir die Magistereksamen mag inskryf, moet hy oor 'n lees kennis van Duits of Frans of 'n ander vreemde moderne taal beskik.

Doktor in Wis- en Natuurkunde: D.Sc.

Toelatingsvereiste: 'n Student moet in besit wees van 'n Magistergraad of tot die status daarvan toegelaat wees.

Leergang: 'n Kandidaat vir die graad moet 'n proefskrif voorlê wat handel oor 'n onderwerp uit die vakke wat vir die M.Sc.-graad voorgeskryf is, met uitsondering van Weerkunde. Die doktorsale eksamen word mondelings en/of skriftelike afgeneem en gaan oor die inhoud van die proefskrif sowel as daardie onderdele van die vakgebied waarop die proefskrif gebaseer is.

'n Doktorsgraad word toegeken minstens vier jaar na voltooiing aan al die vereistes vir die Baccalaureusgraad of minstens twee jaar na voltooiing aan al die vereistes vir die Magistergraad.

R A N D S E A F R I K A A N S E U N I V E R S I T E I T

FAKULTEIT NATUURWETENSAPPE

Grade

Baccalaureus in die Natuurwetenskappe in elk van die volgende leergangsgroepe:

Aardwetenskappe : B.Sc.
Biologiese Wetenskappe : B.Sc.
Fisiese Wetenskappe : B.Sc.
Onderwysersopleiding : B.Sc.(Opv.)
Wiskundige Wetenskappe : B.Sc.

Honneurs Baccalaureus in die Natuurwetenskappe : B.Sc.Hons.

Magister in die Natuurwetenskappe : M.Sc.

Doktor in die Natuurwetenskappe : Ph.D.

Die tweejarige leergange as gedeeltelike vervulling van die vereistes vir die verwering van 'n vierjarige B.Sc.-graad in:

- Meganiese Ingenieurswese
- Siviele Ingenieurswese
- Chemiese Ingenieurswese

GRADE

Baccalaureus in die Natuurwetenskappe: B.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasiëvrystelling) met minstens 40 persent in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad.

Addisionele toelatingsvereistes tot kursusse:

- Wiskunde, Wiskundige Statistiek: Kandidate wat Wiskunde op die Standaardgraad geslaag het, word slegs by uitsondering en nadat 'n toets gestel deur die Departement Wiskunde geslaag is, tot kursusse in Wiskunde en Wiskundige Statistiek toegelaat.
- Wiskundige Metodes: 'n Slaagsyfer (40 persent op die Hoër Graad of minstens 50 persent op die Standaardgraad).

Leergang: Drie jaar voltydse studie of vier jaar deelydse studie.

Elke leergang moet saamgestel wees uit minstens 18 semesterkursusse (9 jaarkursusse). 'n Leergang sluit in òf twee primêre hoofvakke òf een primêre plus twee sekondêre hoofvakke. Een versterkte hoofvak mag in plaas van 'n primêre hoofvak geneem word. (Kyk Fakulteit Lettere en Wysbegeerte p.60)

'n Student registreer vir 'n Baccalaureusgraad onder 'n bepaalde leergangsgroep. Kursusse in vakke van 'n ander fakulteit as dié van Natuurwetenskappe met uitsondering van die kursus in Bedryfseconomie IB Bedryfsreg en Ekonomiese Beginsels, word nie vir graad-doeleindes erken nie.

Die leergang word uit kursusse in die volgende vakke saamgestel: Biochemie, Biologie, Chemie, Dierkunde, Fisika, Geografie, Geologie, Logika, Opvoedkunde, Plantkunde, Rekenaarwetenskap, Sielkunde, Statistiese Metodes, Teoretiese Fisika, Wiskunde, Wiskundige Metodes, Wiskundige Statistiek.

B.Sc.Hons.-, M.Sc.- en Doktorsgraad

Kyk Fakulteit Lettere en Wysbegeerte, B.A.Hons.-, M.A.- en Doktorsgraad, p.60.

UNIVERSITEIT VAN STELLENBOSCH

FAKULTEIT VAN NATUURWETENSKAPPE

Grade

Baccalaureus in die Natuurwetenskappe	: B.Sc.
Honneurs-Baccalaureus in die Natuurwetenskappe	: Hons.-B.Sc.
Hons.-B.Sc. met Farmakologiese Chemie as hoofstudierigting	
Hons.-B.Sc. met Operasionele Analise as hoofstudierigting	
Hons.-B.Sc. met Biofisika as hoofstudierigting	
Magister in die Natuurwetenskappe	: M.Sc.
M.Sc.(Voorligtingsielkunde)	
M.Sc.(Kliniese Sielkunde)	
Doktor in die Natuurwetenskappe	: D.Sc.
Doktor in die Wysbegeerte	: Ph.D.

GRADE

Baccalaureus in die Natuurwetenskappe: B.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Vir alle kursusse waarin Wiskunde I as vak aangebied word: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 60 persent op die Standaardgraad.

Voornemende studente wat 'n kursus wil volg in Chemie en/of Fisika word sterk aangeraai om Skei- en Natuurkunde vir die st. 10-eksamen te neem. Indien 'n student Botanie en/of Soölogie (Dierkunde) wil volg, word hy sterk aangeraai om benewens Skei- en Natuurkunde, ook Biologie vir die st. 10-eksamen te neem.

Leergang: Drie jaar voltydse studie. Die leergang behels normaalweg nege jaar-kursusse. Die vakke wat net in die eerste en/of tweede jare gevolg word, geld as byvakke en die twee vakke wat in die derde jaar geneem word, geld as hoofvakke.

Vir die studie van sekere vakke is daar ander vakke wat as vereiste en/of voorvereiste vakke gekies moet word.

Vereiste vakke is vakke waarin eksamen gedurende enige jaar van die kursus afgelê kan word. Voorvereiste vakke is vakke waarin 'n bevredigende standaard behaal moet word alvorens die studie van die ander betrokke vak voortgesit kan word. Die eksamen kan egter gedurende enige jaar van die kursus afgelê word. Vir Botanie II is Chemie I byvoorbeeld 'n vereiste vak. Vir Botanie IIIA is Chemie I 'n voorvereiste vak.

Die volgende vakke is hoofvakke wat ook tot nagraadse studie kan lei, mits voldoen word aan die vereistes:

Biochemie, Botanie, Chemie, Fisika, Fisiologie, Genetika, Geochemie, Geografie, Geologie, Insektekunde, Mikrobiologie, Rekenaarwetenskap, Sielkunde, Soölogie, Statistiek, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek.

Honneurs-Baccalaureus in die Natuurwetenskappe: Hons.-B.Sc.

Toelatingsvereistes: Die B.Sc.-graad en 'n skriftelike aansoek om tot die betrokke kursus toegelaat te word.

Leergang: Studente moet die voorgeskrewe kursus vir ten minste een jaar aan die Universiteit volg en in die vereiste eksamen slaag.

Hons.-B.Sc. met Farmakologiese Chemie as hoofstudierigting

Toelatingsvereistes: 'n Baccalaureusgraad met Biochemie II en verkieslik Fisiologie II as hoofvakke.

Leergang: Die leergang omvat die volgende: Organiese Chemie IV, Fisiese Chemie IV, Farmakologiese Chemie.

'n Student moet die kursus vir ten minste een jaar volg en in die vereiste eksamen slaag.

Hons.-B.Sc. met Operasionele Analise as hoofstudierigting

Toelatingsvereistes: 'n Baccalaureusgraad met minstens een van die volgende vakke as hoofvak: Wiskunde III, Rekenaarwetenskap III, Toegepaste Wiskunde III, Wiskundige Statistiek II, Statistiek III

OF

'n Baccalaureusgraad in die Ingenieurswese.

Leergang: Die leergang omvat die volgende: Waarskynlikheidsleer en Stogastiese Prosesse, Voorraad- en Produksiebeheer, Lineêre en Nie-lineêre Programmering, Oorsig van Operasionele Analise, Rekenaarstelsels, Numerieke Metodes of Toegepaste Numerieke Metodes of Seminare oor Operasionele Analise, Heuristiese metodes.

Studente moet die kursus vir ten minste een jaar volg en in die vereiste eksamen slaag.

Hons.-B.Sc. met Biofisika as hoofstudierigting

Toelatingsvereistes: Vir toelating tot die fisies georiënteerde kursus word 'n B.Sc.-graad met Fisika III en Chemie II vereis. Studente moet minstens Fisiologie I (of 'n ander goedgekeurde biologiese vak) aanbied.

Vir toelating tot die biologies georiënteerde kursus word 'n B.Sc.-graad met minstens een biologiese hoofvak, asook Fisika I, Wiskunde I en òf Biochemie I òf 'n M.B., Ch.B.-graad, vereis. Studente moet minstens Fisika II aanbied.

Leergang: 18 maande. Die leergang bestaan uit 8 onderafdelings waarvan elke student 6 onderafdelings moet volg. Die kursus word verder gedifferensieer in twee hoofrigtings, naamlik (i) vir meer fisies georiënteerde studente en (ii) vir meer biologies georiënteerde studente.

Onderafdelings behels onder andere Molekulêre Biologie, Fotochemie en Fotobiologie, Radiochemie en Stralingsbiologie, Radiologiese Fisika.

Magister in die Natuurwetenskappe: M.Sc.

Toelatingsvereistes: Die Honneursgraad of die Baccalaureusgraad en 'n skriftelike aansoek om tot die betrokke kursus toegelaat te word.

Leergang: 'n Student moet 'n goedgekeurde leergang van navorsing en/of gevorderde studie van ten minste een jaar (ná behaling van die Honneursgraad) aan die Universiteit of op 'n ander goedgekeurde plek volg en 'n bevredigende verhandeling inlewer.

OF

'n Student moet 'n goedgekeurde leergang van navorsing en/of gevorderde studie van ten minste twee jaar (ná behaling van die Baccalaureusgraad) wat 'n periode van studie of navorsing van nie langer as een jaar nie op 'n ander erkende plek mag insluit. Verder moet hy in die voorgeskrewe eksamen slaag en 'n bevredigende verhandeling inlewer.

M.Sc. (Voorligtingsielkunde)

Toelatingsvereistes: 'n Honneurs-B.Sc.-graad met Voorligtingsielkunde. Kandidate moet reeds in 'n betrekking staan waar hulle sielkundige voorligtingswerk verrig.

Leergang: Soos vir die Diplomakursus in Voorligtingsielkunde, maar op 'n meer gevorderde vlak. (Kyk Fakulteit Lettere en Wysbegeerte, p.63). 'n Verhandeling moet ingedien word.

M.Sc. (Kliniese Sielkunde)

Toelatingsvereistes: 'n Honneurs-B.Sc.-graad en skriftelike aansoek om toelating tot die kursus.

Leergang: Kyk M.A.(Kliniese Sielkunde) p.62.

Doktor in die Natuurwetenskappe: D.Sc.

Toelatingsvereiste: Die M.Sc.-graad of 'n ander graad of kwalifikasie wat van 'n toereikende standaard is.

Leergang: 'n Kandidaat moet minstens drie jaar lank as student vir 'n Doktorsgraad aan die Universiteit ingeskryf wees en daar moet minstens sewe jaar verloop nadat hy die Magistergraad verwerf het voordat hy tot die Doktorsgraad toegelaat word. Hy moet gevorderde oorspronklike navorsing en/of skeppende werk op die gebied van die Natuurwetenskappe verrig en moet oorspronklike werk(e) - reeds gepubliseer - van 'n hoë standaard inlewer, wat oor 'n sentrale tema handel en wat toon dat hy 'n wesenlike en besondere bydrae tot die verryking van die kennis aangaande die Natuurwetenskap gemaak het. Indien dit vereis word, moet hy 'n mondelinge eksamen aflê.

Indien die kandidaat reeds in besit is van 'n Doktorsgraad in die Wysbegeerte (Ph.D.) moet hy vir ten minste een akademiese jaar aan die Universiteit ingeskryf wees, en daar moet minstens vyf jaar verloop voordat hy tot die D.Sc.-graad toegelaat word.

Doktor in die Wysbegeerte: Ph.D.

Toelatingsvereiste: 'n M.Sc.-graad of 'n ander bewys van toereikende bekwaamheid in die bepaalde studierigting.

Leergang: 'n Kandidaat moet minstens twee jaar lank as student vir die graad ingeskryf wees. 'n Proefskrif word vereis wat oorspronklike navorsing van die kandidaat oor een of ander vraagstuk in verband met sy hoofvak behels.

U N I V E R S I T E I T V A N S U I D - A F R I K A

FAKULTEIT NATUURWETENSKAPPE

Grade

Baccalaureus Scientiae : B.Sc.

Honneurs-Baccalaureus Scientiae : Hons.-B.Sc.

Magister Scientiae : M.Sc.

Doctor Philosophiae : Ph.D.

Honneurs-Baccalaureus Scientiae (Operasionele Navorsing): Hons.-B.Sc.(Operasionele Navorsing)

Magister Scientiae (Operasionele Navorsing): M.Sc. (Operasionele Navorsing)

GRADE

Baccalaureus Scientiae: B.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

- 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 60 persent op die Standaardgraad.

- 'n Slaagsyfer in Natuur- en Skeikunde op minstens die Standaardgraad vir kandidate wat vir die volgende vakke wil inskryf: Chemie, Fisika, Plantkunde, Dierkunde, Geologie, Sterrekunde, Mikrobiologie.

'n Student moet elke jaar waarin hy hom wil laat inskryf met die doel om eksamen af te lê in 'n kursus waarin praktiese werk vereis word, op die voorgeskrewe vorm aansoek doen om toelating. Op die vorm moet hy aandui in watter laboratorium hy gaan werk en wie sy toesighouer sal wees.

Leergang: Die leergang duur minstens drie jaar, bestaan uit minstens nege graadskursusse en word uit die volgende vakke saamgestel:

GROEP I

Aardrykskunde, Biologie, Chemie, Dierkunde, Fisika, Fisiologie, Fisiologiese Chemie, Geologie, Mikrobiologie, Plantkunde, Rekenaarwetenskap, Sielkunde, Sterrekunde, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek.

GROEP II

Afrikaans en Nederlands, Duits, Duits (Spesiale Kursus), Engels, Frans, Frans (Spesiale Kursus), Grieks of Hellenistiese Grieks, Latyn, Praktiese Afrikaans, Praktiese Engels, Russies, Russies (Spesiale Kursus).

Elke leergang moet minstens twee hoofvakke bevat.

Die hoofvakke word uit die volgende gekies:

- (a) Hoofvakke met drie kursusse: Aardrykskunde, Chemie, Dierkunde, Fisika, Geologie, Plantkunde, Rekenaarwetenskap, Sielkunde, Sterrekunde, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek.
- (b) Hoofvakke met twee kursusse: Fisiologie, Mikrobiologie.

Daar is verpligte byvakke wat saam met die hoofvakke geneem moet word. Byvoorbeeld

- (i) 'n Student wat Chemie as 'n hoofvak neem, moet minstens Fisika I en Wiskunde I neem.
- (ii) 'n Student wat Sterrekunde as 'n hoofvak neem, moet minstens twee kursusse in Wiskunde en een in Toegepaste Wiskunde neem.

Honneurs-Baccalaureus Scientiae: Hons.-B.Sc.

Toelatingsvereistes: 'n B.Sc.-graad. Die vereistes in verband met praktiese werk geld ook hier, (kyk Toelatingsvereistes vir die B.Sc.-graad).

Leergang: 'n Student in Dierkunde, Eksperimentele Fisika, Fisiologie, Geologie en Plantkunde moet by die praktiese eksamen 'n aantekeningboek inlewer wat 'n rekord van die uitgevoerde praktiese werk bevat.

'n Student in Chemie word tot die eksamens in Februarie toegelaat slegs indien hy teen die einde van die voorafgaande Oktober 'n aantekeningboek ingelewer het wat bevredigende voltooide praktiese werk bevat.

Die graad word in die volgende departemente toegeken: Aardrykskunde, Chemie, Dierkunde, Fisika, Fisiologie, Geologie, Plantkunde, Rekenaarwetenskap, Sielkunde, Sterrekunde, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek.

Magister Scientiae: M.Sc.

Toelatingsvereiste: Die Hons.-B.Sc.-graad.

Leergang: Die graad word in dieselfde departemente toegeken as die graad Honneurs-Baccalaureus.

Die eksamen bestaan uit mondelinge of skriftelike vraestelle en/of 'n verhandeling. 'n Verhandeling mag nie ingedien word voordat twee jaar verloop het sedert behaling van die Baccalaureusgraad nie.

Honneurs-Baccalaureus Scientiae in Operasionele Navorsing

Toelatingsvereistes: 'n Baccalaureusgraad en voldoende wiskundige kennis.

Leergang: Die leergang duur twee jaar. Die kursusse is soos volg:

Eerste jaar

Capita Selecta van Wiskundige Statistiek, Numeriese Analise I, Operasionele Analise, Ekonomie vir Operasionele Navorsing (halwe kursus).

Tweede jaar

Vier vraestelle oor onderwerpe wat in oorleg met die Hoof van die Departement gekies word.

Magister Scientiae in Operasionele Navorsing

Toelatingsvereiste: 'n Hons.-B.Sc.-graad in Operasionele Navorsing of 'n gelykwaardige kwalifikasie.

Leergang: Die leergang behels twee afdelings, naamlik:

Afdeling A: Twee vraestelle oor onderwerpe wat in oorleg met die Hoof van die Departement gekies word.

Afdeling B: 'n Verhandeling oor 'n toepaslike onderwerp.

Doctor Philosophiae: Ph.D.

Toelatingsvereiste: 'n Magistergraad.

Leergang: Die graad word nie toegeken voordat twee jaar verloop het sedert die Magistergraad verwerf is nie. 'n Proefskrif wat handel oor 'n onderwerp uit die Wiskunde, die Natuurwetenskap of die Toegepaste Natuurwetenskap moet ingelewer word. In Chemie bestaan die eksamen uit 'n skriftelike en 'n mondelinge eksamen en 'n proefskrif.

B E R O E P S D I E N S

Let wel: Lees ook in Hoofstuk 1 die gedeelte "WAAROM GAAN HIERDIE BOEK?"

Daar word beklemtoon dat studente uiters selektief te werk moet gaan ten opsigte van hul vakkombinasie, veral wat hoofvakke betref, vir die rigting waarin hulle belangstel. Verder moet hulle, met die oog op beroepsmoontlikhede, gebruik maak van die voorligtingsdiens van die skool en die universiteit, aangesien etlike beroepsrigtings ook besondere kennis van sekere ander vakke vereis.

Die beroepsmoontlikhede wat uit die vernaamste hoofvakrigtings spruit, is onder meer die volgende:

Argeologie: Kyk p.72.

Biochemie: Aangesien Biochemie 'n skakelvak tussen die fisiese wetenskappe soos Chemie, Fisika, ens., en die biologiese wetenskappe soos Plantkunde, Dierkunde, Fisiologie en Mikrobiologie vorm, bied opleiding met Biochemie as een van die hoofvakke die besondere geleentheid om uit loopbane wat in enige van hierdie rigtings bestaan, 'n keuse te doen.

Biochemie is in Suid-Afrika nog 'n jong wetenskap en daarom is loopbaanvooruitsigte baie goed. Daar heers tans 'n nypende tekort aan goed opgeleide Biochemici, terwyl die aantal instansies wat gegradueerdes in diens neem, vinnig toeneem vir navorsing op die gebiede van byvoorbeeld voeding en siekte van mense en diere, die landbou, watersuiwering en die nywerheid oor die algemeen. Van die instansies wat Biochemici in diens neem, is onder andere die Chemiese Navorsingslaboratoria, Water- en Voedingsnavorsingsinstitute van die WNNR; die SABS; die RAK; die Instituut vir Mediese Navorsing; munisipale gesondheidsafdelings; groot hospitale (afdeling chemiese patologie); universiteite (Fakulteite Landbou, Geneeskunde en Natuurwetenskappe); nywerhede verantwoordelik vir produksie van voedsel, bier, wynsoorte, farmaseutiese middels, bemestingstowwe, insekte- en onkruidodders, veemiddels en -voer, vitamïne-konstate, voedsel in blikkies en so meer.

Biochemici word ook deur die Staatsdepartemente van Landbou-egniese Dienste, Gesondheid, Landbou-ekonomie en -bemarking, Bantoe-administrasie en -ontwikkeling en die Provinsiale Administrasie van Transvaal in diens geneem met besondere geleentheid vir navorsing oor onder andere wild, vis, voëls, vrugte en voedseltegnologie, wyn en wynbereiding, sitrus en subtropiese vrugte, tabak, veeartsenykunde, plantbeskerming en tuinbou.

Biologie: Die Bioloog bestudeer en doen navorsing na die oorsprong, herkoms, ontwikkeling, anatomie, verspreiding en ander basiese beginsels van plante en diere en die verband tussen plante- en dierelewe. Gewoonlik word daar in die een of ander afdeling gespesialiseer.

Bioloë vind gewoonlik interessante werkgeleentheid in diens van die Nasionale Parke-raad, Onderstepoort, vissery-afdelings, nasionale museums, mediese navorsingslaboratoria, myne, die WNNR, die verskillende navorsingsinstitute en as dosente aan universiteite, landboukolleges of as onderwysers aan sekondêre skole.

Kyk ook Dierkunde, p.173 en Plantkunde, p.179.

Chemie: Dit is seker nie altyd moontlik en wenslik dat die student heel aan die begin van sy studiejare een besondere vertakking in chemie sal uitsoek vir 'n lewenslange studie nie. Hiervoor is daar te veel interessante velde binne die vernaamste vertakkinge en die talryke nuwe ontwikkelings op industriële gebied wat eers ondersoek of ontdek moet word. (Daar is byvoorbeeld al meer as 175 soorte chemici bekend.) Hoewel die vertakkinge nie waterdig afgebaken kan word nie, word daar byvoorbeeld onderskei tussen Fisiese, Organiese, Anorganiese en Analitiese Chemie, elk met sy eie strekking en beroepsmoontlikhede. Chemie kan as hoofvak gekombineer word met byvoorbeeld Wiskunde, Biochemie, Fisika, Plantkunde, Dierkunde, Fisiologie, Industriële Chemie, Mikrobiologie en Geologie, na gelang van die oogmerke wat met Chemie nagestreef word.

- Navorsing: Navorsingsprojekte word gewoonlik sover moontlik gesentraliseer en die volgende instansies, wat hierin leiding neem, bied ook ruim werkgeleentheid:
 - . Die WNNR op die gebied van benutting van natuurlike hulpbronne, die boubedryf, waterbenutting, voeding en so meer. Verskeie navorsingseenhede van die WNNR dien ook bepaalde industrieë, byvoorbeeld die hout-, keramiek-, suiker-, leer-, verf-, vis-, wol- en ander nywerhede.
 - . Die RAK by Pelindaba wat navorsing met betrekking tot atoomenergie onderneem.
 - . Die Brandstofnavorsingsinstituut vir die bestudering van die eienskappe van steenkool, olieprospektering en die verbrandingseienskappe van motorbrandstowwe.
 - . Die Nasionale Instituut vir Metallurgie vir die herwinning van moeilik bekombare metale soos berillium, niobium en tantaal vir gebruik in vuurpyle en straal-motore.
 - . Die Staat se Landbounavorsingsinstitute vir die bestudering van water- en grondchemie, bemestingstowwe, nywerheidsprodukte, plaagbestryding, veevoeding, plantchemie en so meer.
 - . Die Mediese Navorsingsraad (MNR).
 - . Navorsingsinrigtings verbonde aan universiteite.

- Chemici wat oor die regte vakkombinasie beskik, word as vakkundige beamptes deur verskeie Staatsdepartemente in diens geneem en hul werksaamhede verskil van departement tot departement, soos byvoorbeeld dié van Waterwese (hidroloë); Handel (inspekteurs van ontplofbare stowwe); Nywerheidswese (verskeie rigtings); Gesondheid (analitiese skeikundiges: medisyne- en voedselontleding, geregtelike skeikunde en bakteriologie en patologie); Landbou-tegniese Dienste (poste verbonde aan verskeie Navorsingsinstitute); Landbou-ekonomie en -bemarking (veeteelt/suiweltegnologie); Bantoe-administrasie en -ontwikkeling (veeteelt/suiweltegnologie); die Tesourie (Suid-Afrikaanse Munt), en die Staatsdrukker. Die vier Provinsiale Administrasies neem ook chemici in diens.
- Die Konsultantchemikus en Chemikus in Toetsdienste wat toetse en navorsing onderneem vir ander produsente wat nie oor chemici beskik nie, byvoorbeeld die Suid-Afrikaanse Buro vir Standaard (SABS).
- Uitstekende geleenthede as chemikus, produksieleier en navorsings- of ontwikkelingsbeampte bestaan by nywerhede en instansies soos Yskor, Sasol, Foskor, die WNNR, die SABS, olieraffinaderye, springstof- en chemiese nywerhede, Sappi en ander papierfabrieke, sintetiese rubberprodusente, suikermeulens, steenkoolwaserye en veredelingsinstallasies, kragentrales, National Chemical Products, mynmaatskappye, munisipaliteite en die Spoorweë.
- Opleiding van chemici word al hoe belangriker om in die groeiende behoefte te voorsien, en daarom ontstaan daar steeds vakatures vir onderwysers aan sekondêre skole, en vir dosente aan universiteite en kolleges vir gevorderde tegniese onderwys.

Kyk ook Chemiese Ingenieurswese, p.348.

Dierkunde (Soölogie): Dierkunde op sigself is so 'n wye studiegebied dat dit gerieflikheidshalwe in 'n aantal basiese onderafdelings verdeel word soos Morfologie, Anatomie, Histologie, Fisiologie, Taksonomie, Embriologie, Paleontologie, Soögrafie, Ekologie, en ander. Ander gespesialiseerde studierigtings soos byvoorbeeld Entomologie en Genetika het tot heeltemal aparte vakke ontwikkel. Met Dierkunde as hoofvak kan studente gevolglik, vanweë die verskillende rigtings daarin, besonder interessante terreine betree. Vir baie van die werkterreine en veral vir navorsingsposte, is die vak wat saam met Soölogie as hoofvak gevolg is 'n belangrike faktor en dit moet, saam met sommige byvakke, sorgvuldig oorweeg word. Plantkunde, Chemie, Fisiologie, Geologie, Biochemie en Mikrobiologie is van die vakke wat baie goed met Dierkunde kombineer.

Dierkundiges het oor die algemeen die geleentheid om uit 'n verskeidenheid van werk-rigtings te kies. Sommige hiervan kom hoofsaaklik neer op laboratoriumwerk, terwyl ander weer werk in die buitewêreld vereis. Voorbeelde van sommige werkgewers is die volgende: Al die Onderwysdepartemente; mediese navorsingsinstitute; die WNNR; die SABS; Onderstepoort; museums; afdelings vir natuurbewaring, wildtuine, dieretuine en visserye; oseanografiese institute; nywerhede soos die vervaardigers van kunsmis-stowwe, insektegifstowwe en veemiddels; die Nasionale Parkeraad en talle groter en kleiner privaat firmas met belange in dierkundige produkte. In die Staatsdiens het gegradueerdes ewe-eens die geleentheid om uit verskillende vakkundige rigtings in die Departemente van Waterwese, Mynwese, Nywerheidswese, Landbou-tegniese Dienste, Landbou-ekonomie en -bemarking, Bantoe-administrasie en -ontwikkeling, Gesondheid en die Provinsiale Administrasies van Natal en Transvaal te kies.

Werkgewers gee in die jongste tyd egter steeds meer voorkeur aan kandidate met nagraadse opleiding - hoe hoër die kwalifikasies des te beter is die vooruitsigte op 'n aanstelling en bevordering na hoër poste. Die tekort aan goed opgeleide dierkundiges is gewoonlik so groot dat 'n groot aantal studente wat die honneursgraad voltooi het, in betrekkings opgeneem word nog voordat hulle hul opleiding afgerond het.

Kyk ook die verwante afdelings onder Landbou, p.357.

Entomologie (Insektekunde): Waar Insektekunde eers 'n onderafdeling van Dierkunde was, het dit vandag ontwikkel tot 'n gespesialiseerde wetenskap met verskeie onderafdelings. Dit bied gevolglik die geleentheid tot spesialisasie in rigtings soos die uitkenning en klassifikasie van insekte of 'n studie van die anatomie, fisiologie of gedrag van insekte. Op talle terreine, maar veral op die gebied van die landbou, is die gespesialiseerde kennis van die Entomoloog van onskatbare waarde.

Entomoloë werk gewoonlik as navorsers in byvoorbeeld museums, die Staatsdepartemente van Gesondheid en Landbou-egniese Dienste (verskeie navorsingsinstitute en streekorganisasies), die SABS, die WNNR (etlike navorsingsinstitute), die Mediese Navorsingsinstituut en die private sektor; as tegniese adviseurs by spuitstoffirmas, koöperasies, verskeie groot produsente van vrugte, suiker, hout en so meer; as bemakingsverteenwoordigers by firmas wat insektemiddels en spuittoerusting vervaardig en versprei. Poste kan ook beklee word as dosente aan universiteite of kolleges en as onderwysers in landbou en biologie. Die moontlikheid bestaan ook om as konsult-entomoloog in 'n private praktyk op te tree.

Fisika: Die mens besit die roepingsdrang om te heers oor die natuur, en om dit te kan doen, moet hy die natuur ken. Daarom behels Fisika of Natuurkunde die studie van die lewlose natuur en alle verskynsels in verband daarmee om sodende die grondliggende wetmatighede daarvan te leer ken. Dit strek van verskynsels met astronomiese afmetings, soos in die hemelruim, tot ander wat ondenkbaar klein is en byvoorbeeld in die kerne van atome waargeneem kan word. As ondersteunende vak vir die Fisika is Wiskunde onontbeerlik. Die Wiskunde gee 'n eksakte afronding van die fisiese ondersoek. Gelyktydig kry die Wiskunde ook addisionele betekenis deurdat dit op reële dinge toegepas word. Fisika kombineer ook goed met vakke soos Chemie, Geologie, Geografie, Dierkunde en Plantkunde. Die besonder wye terreine wat deur Fisika gedek word, tesame met 'n oordeelkundige hoof- en byvakkombinasie, sal nie slegs die grondslag lê vir die keuse van 'n interessante loopbaan nie, maar sal ook dien as aansporing tot nagraadse studie en navorsing wat in hierdie wetenskap uiters noodsaaklik is. Daar bestaan 'n groot vraag na fisika-onderwysers by al die Onderwysdepartemente; na atoom- en kernfisici of ander navorsingsbeamptes in diens van die WNNR, die RAK die Universiteite van Pretoria, Witwatersrand en Potchefstroom, asook die Kerninstituut van die Suidelike Universiteite en die Universiteite van Stellenbosch, Kaapstad en ander; na navorsers in diens van byvoorbeeld Yskor, Sasol, die Afrikaanse Springstowwe en Chemiese Nywerhede (A.S. en C.N.), die myne en ander nywerhede soos tekstiel- en wolbewerking, oliemaatskappye, oseanografiese institute en maatskappye wat wetenskaplike instrumente verkoop. Die ontwikkelende elektroniese nywerheid skep besondere geleentheid vir navorsing, ontwikkeling en produksie in byvoorbeeld televisie, radar, outomatisasie, asook die ontwerp en hantering van hoëspoedrekenaars. Daar bestaan ook 'n groeiende vraag na fisici en biofisici in hospitale en verwante inrigtings.

In die Staatsdiens word gegradeerdes as vakkundiges in diens geneem deur Departemente soos dié van Waterwese (hidroloë, kyk p. 176); Nywerheidswese (fisiese oseanograwe e.a.); Landbou-egniese Dienste (landbouweerkundiges e.a.); Vervoer (weerkundiges), en die Provinsiale Administrasies.

Geofisika is 'n vertakking van Fisika wat handel oor die hele aarde, sy hidrosfeer en atmosfeer ingesluit. Dit sluit in dissiplines soos seismologie, geomagnetisme, swaartekrag, meteorologie ens. Geofisiese metodes word aangewend in die soektog na en die uitkenning van strukture in die aarde wat van belang is in die soektog na mineraalafsettings, olie en ondergrondse water en in die siviele ingenieurswese. Vir hierdie doel word geofisici hoofsaaklik deur die Tak Geologiese Opname van die Departement van Mynwese in diens geneem. Die vereiste minimumkwalifikasies vir aanstelling is egter 'n B.Sc.(Hons.) of gelykwaardige vierjarige graad in Geofisika of Fisika.

Vir die heel beste studente en diegene wat gevorderde studie in Fisika en Geofisika afgelê het, is daar moontlikhede as dosente aan universiteite of as navorsers in diens van die WNNR of byvoorbeeld die Bernard Price Instituut vir Geofisiese Navorsing aan die Universiteit van die Witwatersrand.

Kyk ook Geologie, p.176.

Fisiologie: Fisiologie is 'n biologiese wetenskap wat die studie van die normale funksies van lewende wesens, veral van die mens, omvat. Dit maak 'n besondere bydrae tot die kennis van die normale funksies van die menslike liggaam en gevolglik ook indirek tot afwykings en siektes van die mens. In wese is dit 'n toegepaste lewenswetenskap wat die grondslag lê vir verdere opleiding in geneeskunde, veeartsenykunde, farmakologie, farmasie en ander spesialiteitsrigtings in die geneeskunde en paramediese dienste soos fisioterapie, arbeidsterapie, verpleging en hospitaaldietskunde. In natuurwetenskaplike verband is Fisiologie van belang vir opleiding in dietskunde, huishoudkunde en liggaamlike opvoeding en dien dit ook as 'n voorbereidende kursus vir gevorderde navorsing op die gebied van vele toegepaste rigtings.

'n Loopbaan met hierdie biologiese natuurwetenskap as hoofvak, in kombinasie met vakke soos Chemie, Fisika, Wiskunde, Dierkunde, Mikrobiologie, Psigologie, Biochemie, Plantkunde, Liggaamlike Opvoedkunde en Dietskunde, kan hoofsaaklik in twee rigtings gevind word, naamlik onderwys en navorsing.

Vir die onderrig van Biologie het dit groot waarde terwyl sommige sekondêre skole Fisiologie as 'n afsonderlike vak aanbied. Aan hoër onderwysinrigtings en tegniese kolleges bestaan daar ook 'n behoefte aan dosente met gevorderde opleiding in Fisiologie.

Verskillende laboratoria waar biologiese navorsing onderneem word, neem fisioloë in diens, soos onder meer die Kamer van Mynwese se Laboratorium vir Lewenswetenskappe, die Sentrale Geneeskundige Laboratorium van die Weermag te Voortrekkerhoogte, die Mediese Navorsingsraad en WNNR se laboratoria vir menslike voedingsnavorsing en fisiologiese chemie ens., die Raad op Atoomkrag se afdeling Lewenswetenskappe vir navorsing in verband met bestraling, Yskor se laboratorium vir Bedryfshigiëne, ens. Die NIPN van die WNNR het byvoorbeeld 'n Fisiologiese Sielkunde-program waar persone met Fisiologie en Sielkunde as vakke waardevolle werk kan verrig in verband met neurofisiologie en sensories-motoriese studies. Fisioloë werk ook as laboratorium-technici in mediese skole, hospitale, universiteite en patologiese-laboratoria.

Goeie loopbaanvooruitsigte vir Fisioloë word ook gevind in Staatsdepartemente soos dié van Landbou-tegniese Dienste, veral vir veeartsenykundige navorsing te Onderstepoort en ander Landbounavorsingsinstitute in verband met dierevoeding, vleis- en wol-produksie, plantvergiftigingsprobleme en die fisiologie van insekte; Landbou-ekonomie en -bemarking; Bantoe-administrasie en -ontwikkeling; Gesondheid, en die Administrasies van Suidwes-Afrika en Transvaal. Verskillende nywerhede soos die farmaseutiese, tabak- en visnywerheid neem fisioloë in diens, hoofsaaklik met die oog op navorsing.

Kyk ook Dierefisiologie onder Landbou, p. 357.

Genetika (Erflikheidsleer): Van al die biologiese wetenskappe is Genetika seker die deurdringendste. Hierin word 'n studie gemaak van die onderliggende oorsake van die erflike ooreenkomste en verskille in biologiese kenmerke tussen organismes wat deur afkoms verwant is. Genetika het dus te doen met die wyse waardeur lewende organismes hul eie soort reproduseer.

Navorsingsposte vir genetici in planteteelt (vir die veredeling van graansoorte, vrugte, groente, blomme, suikerriet, tabak, bosbougewasse ens.) en in die diereteelt (vir die verbetering van groot-, klein- en pluimvee, pelsdiere ens.), bestaan by die verskillende navorsingsinstitute en proefplase oor die land heen onder beheer van die Departement van Landbou-tegniese Dienste of die Departement van Bosbou, asook groot semi-privaat en private organisasies. Genetici word ook in diens geneem deur die Departemente van Landbou-ekonomie en -bemarking en Bantoe-administrasie en -ontwikkeling, die Nasionale Parkeraad, landboukolleges en universiteite. Die vraag na genetici in mediese skole en groot hospitale, om navorsing te doen in byvoorbeeld sitogenetika en biochemiese genetika, en om hulle te bekwaam as mensgenetici vir genetiese voorligting en raadgewing steeds groter.

Geografie: 'n Versigtige hoof- en byvakkeuse saam met Geografie sal beslis bydra tot die moontlikheid om 'n beroep in hierdie rigting met sukses te kan beoefen. Studente sal egter tot gevorderde en gespesialiseerde studie bereid moet wees om vir 'n lonende beroep in aanmerking te kom.

Hoewel sommige sekondêre skole nie Geografie tot op st.10-vlak aanbied nie, bly 'n loopbaan in die onderwysprofessie steeds 'n belangrike moontlikheid. Ander instansies neem gewoonlik persone in diens indien die kennis van geografie saam met 'n toepaslike tweede hoofvak direk toegepas kan word, byvoorbeeld Staatsdepartemente, waaronder dié van Beplanning en die Omgewing, Bantoe-administrasie en -ontwikkeling, Waterwese, Landbou-ekonomie en -bemarking, Landbou-tegniese Dienste, Vervoer, Gemeenskapsbou, Toerisme, Verdediging, asook sommige van die Provinsiale Administrasies, groot munisipaliteite en ondernemings in die private sektor. Verder is daar betrekkinge beskikbaar vir byvoorbeeld geografe of kartograwe, stads- en streekbeplanners, bemarkingsnavorsers en verkoopsadviseurs verbonde aan die uitvoerdepartemente van groot ondernemings, en dosente aan universiteite.

Geologie (met inbegrip van Paleontologie): Iemand met Geologie as hoofvak vir 'n graad is in die gewone sin nog geen geoloog, of paleontoloog nie. Hiervoor is 'n graadse opleiding, wat ook deur die groot werkgewers verkies word, noodsaaklik.

Waar die geoloog voorheen gesien is as iemand wat gemoed is met die vind en ontginning van bruikbare metale en minerale soos diamante, goud, koper, asbes, steenkool ens., is dit van belang om te weet dat hulle in 'n toenemende mate met die oog op produksie van materiaal waarop die beskawing vandag gebaseer word, in diens geneem word. Voorbeelde van hierdie funksies, wat ook beroepstendense aandui, is die volgende: Onderzoek van klipsamestelling vir boukonstruksie en paaie, van kalkklip vir sement, van bousand, van klei vir stene en teëls, en so meer. Hulle werk baie nou saam met siviele ingenieurs ten opsigte van fundamente en betonkonstruksies, uitgraving en verskuiving van grond, bestryding van gronderosie, ens.

In 'n land soos Suid-Afrika waar die ekonomie in 'n hoë mate op mineraalproduksie berus, is dit vanselfsprekend dat 'n vak soos Geologie in kombinasie met vakke soos Chemie, Fisika, Wiskunde, Wiskundige Statistiek en Geografie, 'n belangrike rol speel. Dit bied geleentheid vir studie en werk in die natuur aan diegene wat lief is vir die buitelug. Dit bied egter ook voldoende geleentheid vir navorsing in die laboratorium met aparate soos die optiese mikroskoop, die elektronmikroskoop, die X-straal-diffrakometer, die massa-spektrograaf en ander moderne toerusting.

Die Departement van Waterwese neem gegradueerdes wat reeds honneursvlak bereik het, in diens vir aanstelling as geoloog, paleontoloog of geofisici in een van die afdelings van die Tak Geologiese Opname. Ander Staatsdepartemente wat gegradueerdes in diens neem, is dié van Waterwese, Landbou-tegniese Dienste, Beplanning en die Omgewing en die Provinsiale Administrasies.

Die meeste geoloog tree egter by myngroepe in diens in die rigtings veldeksplorasië of myngeologie. Die res is verbonde aan universiteite as lektore, aan wetenskaplike liggame of institute soos die WNNR, museums en die Bernard Price Instituut vir Geofisiese Navorsing aan die Universiteit van die Witwatersrand. Sommige word vir geologiese werk in diens geneem deur ondernemings soos Sasol, Yskor, Soekor, ander groot nywerhede en siviele ingenieursfirmas. Ander tree as private konsultante op.

Kyk ook Geofisika, p. 174.

Grondkunde/Bodemkunde: Kyk Akkerbou, p. 357 en Grondkunde, p. 358.

Hidrologie: Hidrologie is die wetenskap wat handel oor die waters van die aarde en die verspreiding daarvan in die atmosfeer, oor die oppervlak en in die grond- en rotslae; hul wetmatighede en verskynsels sowel as die invloed van daardie verskynsels op die mens en sy aktiwiteite.

Dit is geen hoofvak vir 'n graad nie en studente wat hieraan as beroepsrigting dink, moet van die volgende as hoofvakke vir die B.Sc.-graad (verkieslik vierjarige graad), kies: Geografie, Fisika, Geofisika, Plantkunde, Skeikunde, Toegepaste Wiskunde, Wiskunde, Wiskundige Statistiek, Rekenaarwetenskap en Operasionele Navorsing.

Die vernaamste werkgewer is die Afdeling Hidrologiese Navorsing van die Departement van Waterwese met werkgeleentheid in die Seksies Opname, Verwerking, Basiese Hidrologie (oppervlakte- en bodemwater) en Koördinerings. Die vereiste vir aanstelling is 'n

B.Sc.(Hons.)-graad of 'n vierjarige graad met een van die vakke hierbo genoem as hoofvak. 'n Graad in Landbou, Bosbou of Siviele Ingenieurswese is ook toepaslik.

Die waarde van water word vandag deeglik besef en veral in Suid-Afrika speel hidroloë 'n baie belangrike rol in die besteding en bewaring van die land se watervoorrade. Dames wat in hierdie rigting belangstel, kom hoofsaaklik vir poste in aanmerking in die afdelings waaraan daar geen of baie min veldwerk verbonde is.

Metallurgie: Metallurge, wie se rigting die wetenskap en tegnologie van metale is, kan in drie breë groepe verdeel word, naamlik die ekstraktiewe metallurge, wat erts verwerk en die metaal daaruit onttrek; die vervaardigingsmetallurge, wat metaal tot allooie in verskillende bruikbare vorms verwerk, en die fisiese metallurge, wat hoofsaaklik die fisiese gedrag van verwerkte metale en allooie, wanneer dit gebruik word, bestudeer. Vir navorsingswerk wat veral in ekstraktiewe metallurgie gedoen moet word, dien die Nasionale Instituut vir Metallurgie, Johannesburg, as 'n navorsingsentrum vir feitlik die hele Suid-Afrikaanse minerale nywerheid. Die werk van die Instituut word deur verskeie afdelings behartig. Sommige mynmaatskappye onderneem self ook navorsingswerk in hul eie laboratoria, terwyl die Kamer van Mynwese 'n groot navorsingsorganisasie in Johannesburg het.

Vir nadere besonderhede in verband met indiensneming, opleiding en so meer, word die voornemende studente in hierdie rigting, na die volgende instansies, wat ook die vernaamste werkgewers verteenwoordig, verwys: Die Kamer van Mynwese, die individuele myngroepe, Yskor, die Nasionale Instituut vir Metallurgie, die RAK en die Universiteite van Pretoria en die Witwatersrand.

Kyk ook Metallurgiese Ingenieurswese. p.349.

Mikrobiologie: Hierdie vakrigting lewer 'n besondere bydrae tot die kennis van siektes by mense, diere en plante. Nuttige mikroörganismes word vandag tot voordeel van die mens ingespan in so 'n mate dat selfs die leefwyse van die mens daardeur beïnvloed word. So word mikrobe gebruik vir die bereiding van verskeie drankke en voedselsoorte, vir die vervaardiging van antibiotika, om die doeltreffendheid van ontsmettingsmiddels en inmaakprosesse te evalueer en selfs vir die reiniging en hergebruik van water. Die groot menigte bakterieë, swamme en ander mikroörganismes wat in die grond gehuisves word, is van groot belang vir die landbou.

Verskeie spesialiseringsrigtings kom in Mikrobiologie voor en soms ontstaan die naam van die rigting as gevolg van die tipe van organisme wat bestudeer word. So het virologie te doen met virusse, bakteriologie met bakterieë, ens. Die rigtings dien dan ook as leidraad vir 'n moontlike beroepsrigting, byvoorbeeld algemene mikrobiologie, landbou-mikrobiologie, industriële mikrobiologie, mediese en veeartsenykundige mikrobiologie, seemikrobiologie en geobiologie. Gegradueerdes in hierdie rigting kwalifiseer vir werk hoofsaaklik as navorsers by industrieë, munisipaliteite en navorsingsinrigtings soos die WNNR, SABS en die Mediese Navorsingsraad waarvan verskillende navorsingseenhede en -institute in verskeie dele van die land gevestig is. Mikrobiologiese navorsing word ook onderneem deur die Departement van Landbou-tegniese Dienste by die navorsingsinstitute vir Plantbeskerming, Vrugte en Voedseltegnologie, Sitrus en Subtropiese Vrugte, Tuinbou, Tabak, Wynbou en Wynbereiding, Veeartsenykunde, Veeteelt en Suiwel, Grond en ander navorsingsinrigtings. Ander Staatsdepartemente wat werk in hierdie rigting verskaf, is dié van Nywerheidswese, Landbou-ekonomie en -bemarking, Bantoe-administrasie en -ontwikkeling, Gesondheid en Waterwese. Hulle kan ook werk as laboratoriumtegnici by mediese skole en hospitale, en met die regte vakkombinasie die onderwys as beroep kies. Nagraadse opleiding is egter noodsaaklik vir 'n aanstelling as dosent aan 'n universiteit. Hierby vorm navorsing die ruggraat van die studie van Mikrobiologie en bly die mikrobioloog steeds 'n student indien hy sukses in sy loopbaan wil ervaar.

Natuurverbewaring: Georganiseerde instellings in die RSA neem opgeleide persone in diens om professionele dienste te lewer ter bewaring van die land se fauna en flora. Sommige van die organisasies spits hulle toe op beskerming en navorsing ten opsigte van fauna, ander weer uitsluitlik ten opsigte van flora. Gegradueerdes word as vak kundiges in diens geneem. Hulle moet in besit van 'n B.Sc.-graad wees en bereid wees om met toepaslike nagraadse studie en navorsing voort te gaan.

Hierdie instansies is die Staatsdepartemente van Waterwese (Afdeling Waternavorsing), Nywerheidswese (Afdeling Seevisserye), Landbouegniese Dienste (Afdeling Bodembeskerming/Nasionale Herbarium) en Bosbou; die departemente van Natuurbewaring van die Provinsiale Administrasies en Suidwes-Afrika; die Nasionale Parkeraad; die Oseanografiese Navorsingsinstituut, Durban; die WNNR; die Natalse Herbarium, Durban; die Moss Herbarium, Universiteit van die Witwatersrand; die Compton Herbarium, Nuweland, K.P.; die Bolus Herbarium, Universiteit van Kaapstad en 'n aantal museums wat oor die hele land versprei is.

Ornitologie: In Suid-Afrika word tans geen spesifieke opleiding vir die studie van voëls aangebied nie. Ornitoloë word gevolglik uit die geleedere van gekwalifiseerde dierkundiges aangestel. Die vereiste vir aanstelling is normaalweg 'n B.Sc.-graad met Dierkunde as hoofvak in kombinasie met vakke soos Plantkunde, Entomologie, Aardrykskunde, Geologie ens. 'n Honneurs- of Magistergraad sal egter 'n sterk aanbeveling wees.

Werkgeleenthede vir Ornitoloë is uiters beperk en slegs werklik toegewyde persone met besondere aanleg en belangstelling in dié rigting, het hoop om 'n betrekking te bekom en sukses in so 'n loopbaan te behaal. Hulle word byvoorbeeld in diens geneem deur die Nasionale Parkeraad, die Provinsiale Administrasies, die Departement van Landbou-egniese Dienste en sommige museums.

Oseanografie: Oseanografie is die studie van die see - met inbegrip van die lewe daarin, die bodem daarvan en die lug daarbo. Dit is 'n samestelling van verskeie vakgebiede wat die gekoördineerde dienste vereis van uiteenlopende soorte wetenskaplikes wat as gevolg van hul besondere belangstelling in die see en sy omgewing by mekaar aansluiting vind. Hier word byvoorbeeld gedink aan die seegeoloë, chemici, fisici, bioloë en meteoroloë wat op hul beurt weer afhanklik is van die wiskundiges, ingenieurs, tegnoloë en tegnici om op verskillende terreine te help met die versameling en verwerking van gegewens.

Vanweë hierdie groot bestek van basiese vakgebiede wat betrek word, begin die gespecialiseerde opleiding van 'n oseanograaf eintlik eers nadat hy 'n B.Sc.-graad of, verkieslik, 'n B.Sc.(Hons.)-graad in gewone wetenskapvakke behaal het. Hierdie vakke behoort, benewens Plantkunde, Dierkunde, Chemie, Geologie, Fisika of Mikrobiologie as een of meer van die hoofvakke, ook Wiskunde in te sluit en daarby 'n sorgvuldig gekose kombinasie van byvakke. 'n Graad in die ingenieurswese bied 'n uitstekende basis vir spesialisering in sekere aspekte van fisiese oseanografie. (Die Universiteit van Kaapstad is tans die enigste Suid-Afrikaanse universiteit wat spesifiek 'n graad in Oseanografie aanbied.) Oseanografiese werk is egter nie tot diegene met 'n graad spesifiek in oseanografie beperk nie. Oseanografiese kennis word oor die algemeen in die praktyk opgedoen.

Oseanograwe word in diens geneem deur die Afdeling Seevisserye van die Departement van Nywerheidswese. Die geleentheid bestaan om te spesialiseer in rigtings soos chemiese en fisiese oseanografie, planktonnavorsing, visnavorsing, biologiese oseanografie, statistiek, sardynnavorsing, vislewensgeskiedenisnavorsing, en voël- en robbenavorsing. Ander inrigtings en firmas wat oseanograwe en seedeskundiges in diens neem is die volgende: Instituut vir Oseanografie, Universiteit van Kaapstad; Oseanografiese Navorsingsinstituut, Universiteit van Natal, Durban; Afdeling Oseanografie, WNNR, Natal; Natalse Streeklaboratorium, Nasionale Instituut vir Waternavorsing, WNNR, Natal; Departement Igtiologie, Universiteit Rhodes; Departement Soölogie, Universiteit van die Witwatersrand; Bernard Price Instituut vir Geofisiese Navorsing, Universiteit van die Witwatersrand; Die Suid-Afrikaanse Museum, Kaapstad; Hidrografiese Kantoor van die SA Vloot, Simonstad; Oseanografiese Navorsingseenheid van die SA Vloot, Youngsfield; Roberts Construction (Land and Marine), Kaapstad; Kantoor vir Visserye in Suidwes-Afrika, Walvisbaai; Visserye-ontwikkelingskorporasie, Kaapstad; Collins Submarine Pipelines, Africa (Pty) Ltd., Kaapstad; Oseanografiese Navorsingseenheid, Anglo American Corporation, Johannesburg; Marine Diamond Corporation Ltd. (SWA), Kaapstad.

Van die belowendste marine-bioloë in die land is dames, en daar is geen rede waarom hulle nie ook tot die terrein van die fisiese oseanografie sal toetree nie.

Plantkunde (Botanie): Die wetenskap van lewende wesens (organismes) staan bekend as die Biologie. Die twee hoofvertakings van hierdie wetenskap is die Dierkunde en die Plantkunde. Laasgenoemde is dan die wetenskap wat die lewende plant as leerstof het en dit is uit 'n wetenskaplike, praktiese en utiliteitsoogpunt beskou, 'n omvattende, lewensbelangrike en interessante studierrein vir mans sowel as dames.

Met 'n gepaste tweede hoofvak of byvakke uit byvoorbeeld Dierkunde, Chemie, Biochemie, Mikrobiologie, Geografie, Geologie, Fisiologie, Fisika en Wiskunde en uiteindelijke spesialisering, behoort die geskoolde plantkundige 'n lonende beroep in een of meer van die volgende rigtings te vind: Plantmorfologie (vorm en bou van plante); planttaksonomie (klassifikasie van plante); plantfisiologie (lewensprosesse en lewensbedrywighede van plante); plantgenetika (oorerwing by plante); plantekologie (verhouding tussen plante en hul omgewing); plantpatologie (plantsiektes en hul bestryding); ekonomiese plantkunde (nut en ekonomiese belangrikheid van plante), en so meer.

Die Departement van Landbou- en Tegniese Dienste lewer verskeie dienste wat bydrae tot die bewaring en funksionele aanwending van die land se flora. So neem die Navorsingsinstituut vir Plantkunde, plantkundiges (vakkundiges) in diens vir die werksaamhede van die afdelings Botaniese Opname (Durban, Stellenbosch, Middelburg (KP) en Pretoria); Herbariumdienste (Nasionale Herbarium, Pretoria en Streeksherbaria te Durban, Grahamstad, Stellenbosch en Kimberley); Floranavorsing; Ekonomiese Plantkunde en Botaniese Tuine; en die Administratiewe afdeling.

Benewens die werk van dié Instituut word heelwat plantkundige navorsingswerk ook deur ander institute en die streekorganisasies gedoen, veral in verband met weiding, akkerbou, tuinbou en plantfisiologie.

Ander Staatsdepartemente wat plantkundiges in diens neem, is die Departemente van Waterwese, Mynwese, Bantoe-administrasie en -ontwikkeling, Nywerheidswese en die Provinsiale Administrasie van Transvaal.

Werkvooruitsigte bestaan ook as onderwysers in Biologie en Plantkunde aan die sekondêre skool en, met gevorderde studie, as dosent aan 'n universiteit; as vakkundige beamptes aan die landbouproefstasies; as navorsers by die SABS, die WNNR en die oseaanografiese navorsingsinstitute; as 'n beampte in diens van die Nasionale Parkeraad, die Afdelings Natuurbewaring van die verskillende provinsies en private ondernemings, soos kunsmismaatskappye, vervaardigers van plantsiektebestrydingsmiddels en kwekerye. Betrekkings is gereedelik beskikbaar vir persone met 'n B.Sc.-graad, maar kandidate met nagraadse opleiding kry steeds voorkeur.

Kyk ook Akkerbou, Plantsiektekunde en ander verwante rigtings onder Landbou, p.357.

Rekenaarwetenskap: Soos in elke tegnologies-gevorderde land, het die rekenaarbedryf in die RSA gedurende die afgelope vyftien jaar geweldig vinnig gegroei. Die belangrikste vervaardigers van rekenaars is almal in die Republiek verteenwoordig en minstens duisend rekenaars word reeds gebruik deur byvoorbeeld die universiteite, die openbare sektor, wetenskaplike navorsingsinstansies en die handel en nywerheid. Daar is reeds 'n groot tekort aan opgeleide personeel en die aanvraag is besig om steeds te groei in verhouding met die ontwikkeling van hierdie bedryf.

Werkgewers wat loopbane in elektroniese dataverwerking in Suid-Afrika aanbied, kan in die volgende vier hoofgroepe verdeel word:

- Die maatskappye wat rekenaars vervaardig;
- ondernemings in die handel en nywerheid wat rekenaars gebruik;
- die openbare sektor wat rekenaars reeds op groot skaal gebruik ('n hele aantal Staatsdepartemente, die provinsiale administrasies, die S.A. Spoorweë, die WNNR, die RGN en so meer);
- ondernemings, bekend as diensburo's, wat rekenaar dienste en -tyd verskaf aan ondernemings wat nie 'n eie rekenaar kan regverdig nie.

Elk van hierdie groepe bied loopbane in elektroniese dataverwerking in 'n aantal moontlike rigtings soos dié van operateurs, programmeerders, stelselontleders, tegnisi, dataverwerkingsbestuurders en bemerkingsvertegenwoordigers. Daar is gevolglik geleentheid vir die handelstudente, die wiskundig georiënteerdes, dié met 'n natuurwetenskaplike agtergrond en diegene met 'n primêre belangstelling in die rekenaar self. Die keuse van 'n besondere rigting sal hoofsaaklik bepaal word deur die kandidaat se opleiding, belangstelling en aanleg. Die aflê van een of meer aanlegtoetse word ook as 'n voorvereiste gestel.

Gespesialiseerde kennis van die werksaamhede van die rekenaar kan prakties ervaar of deur middel van intensiewe onderrigkorsusse by verskaffingsmaatskappye of elders opgedoen word. Die rekenaarwetenskaplike is egter 'n persoon wat by uitstek die wyere implikasies van outomatisering kan evalueer en wat die rekenaar se potensiaal ten volle kan benut. Die universiteitsopleiding rus die studente toe met daardie noodsaaklike agtergrondskennis op 'n baie breë terrein en die kursus behels gevolglik veel meer as blote programmering.

In die Staatsdiens word graduandi wat oor 'n graad met Rekenaarwetenskap as vak beskik, aan 'n aanlegtoets onderwerp en daarna as programmeerders aangestel. Die huidige vorderingsbaan in 'n programmeringsafdeling is: Assistent-programmeerder, Programmeerder, Senior en dan Hoofprogrammeerder.

Sterrekunde: Hoewel die belangstelling in die Sterrekunde gedurende die jongste tyd vanweë ruimtenavorsing baie toegeneem het, word voornemende studente tog aangeraai om soveel as moontlik van die vakke Wiskunde, Toegepaste Wiskunde, Fisika en Statistiek by die leergang in te sluit met die oog op 'n moontlike verandering van loopbaan. Vooruitsigte vir die astronoom het egter die afgelope tyd baie verbeter en daar bestaan 'n groot vraag na tegniese wetenskaplike personeel. Ontwikkelings kan ook die vraag na sterrekundiges van hoogstaande gehalte aansienlik laat toeneem.

By die South African Astronomical Observatory, Kaapstad (voorheen die Republiek-Sterrewag, Johannesburg, en die Koninklike Sterrewag, Kaapstad), wat deur die WNNR as 'n nasionale navorsingsinstituut geadministreer word, asook by die Boyden-Sterrewag in Bloemfontein en die Leidense Suiderstasie by Hartebeespoort, bestaan geleenthede om as navorsings- of tegniese beamptes in diens geneem te word.

Vir navorsingswerk is 'n B.-graad 'n vereiste maar nouliks voldoende en belangstellendes sal by voorbaat moet dink aan nagraadse studie in die Sterrekunde.

Tekstielwetenskap: Die Tekstielbedryf in Suid-Afrika is 'n belangrike toekomstige bron van werkgeleentheid. Vanweë sy fenomenale uitbreiding bied hierdie kragtige bedryf wonderlike geleenthede aan mans en dames wat as tekstieltegnoloë opgelei is.

Die vooruitsigte is voor-die-hand-liggend. Tekstielwetenskaplikes word gretiglik in diens geneem, hoofsaaklik deur die tekstielvervaardigers in byvoorbeeld die volgende afdelings: was, verkoling, kaard en kam, afduiming en spin, brei, weef, kleuring en afwerking en kwaliteitsbeheer. Gegradueerdes word ook in diens geneem deur byvoorbeeld die Wol en Tekstiel-navorsingsinstituut van die WNNR en die toetsingslaboratoria van die SABS.

Watersuiwering en -herwinning: Een van die metodes om 'n moontlike tekort aan water in Suid-Afrika die hoof te bied, is deur dit te suiwer vir hergebruik. Suiweringprosesse vereis egter gespesialiseerde kennis en die toepassing van gevorderde tegnieke. Daar bestaan gevolglik 'n behoefte aan persone met, onder meer, toepaslike universitêre kwalifikasies wat op die gebied van watersuiwering en -herwinning benut kan word. Die Nasionale Instituut vir Waternavorsing (WNNR) stel byvoorbeeld persone met B.Sc.-grade wat vakke soos Chemie, Plantkunde en Dierkunde insluit, as tegniese beamptes aan. Ten einde op navorsingsvlak te kan werk, moet 'n persoon oor 'n vierjarige graad, soos 'n honneurs-, ingenieurs- of landbougraad ens. beskik. Daar bestaan gevolglik ruim geleentheid vir bioloë, plantkundiges, dierkundiges, chemici, chemiese en siviele ingenieurs, biochemici en mikrobioloë.

Weerkunde: Kandidate wat hierdie loopbaan met sukses wil volg, moet in die weer en atmosferiese verskynsels en die oorsaaklike verband van grootskaalse natuurverskynsels belangstel. Hulle word in diens geneem deur die Departement van Vervoer vir aanstelling in die Weerburo. Hier verrig die Weerkundige (man of dame) sy pligte in goed toegeruste kantore. 'n Beperkte hoeveelheid navorsing word ook in die laboratoriums gedoen.

Vir aanstelling as Assistent-weerkundige is 'n B.Sc.-graad met een van die volgende hoofvakke 'n vereiste: Fisika, Toegepaste Wiskunde, Wiskunde of Wiskundige Statistiek. Vir aanstelling as Weerkundige word 'n B.Sc.(Hons.)-graad in Weerkunde of 'n vierjarige B.Sc.-graad in Weerkunde vereis. Indiensopleiding in weerwaarneming, die hantering van weerkundige instrumente en weervoorspelling word onder leiding van senior beamptes in die Weerburo behartig.

Weerkundiges kan op 'n vrywillige basis vir 'n tydperk van 'n jaar of langer diens doen by Marioneiland of Gougheiland en Antarktika. Verdienstelike werk word steeds paslik beloon en Weerkundiges kan na Senior Weerkundiges en Hoofweerkundiges bevorder word.

Kyk ook Landbouweerkunde, p. 358.

Wiskundige wetenskappe: Die wiskundige wetenskappe (hier word veral gedink aan Wiskunde, Toegepaste Wiskunde en Statistiek) vervul 'n belangrike rol as hulpwetenskap vir die natuur-, ingenieurs-, landbou-, handels- en mediese wetenskappe, asook vir ander geesteswetenskappe en ander dissiplines. Gevolglik is die tyd toe 'n kandidaat met wiskundige kwalifikasies (veral ook in die Suiwer Wiskunde), uitsluitlik op die onderwys aangewys was, lankal agter die rug. As gevolg van die groeiende arbeidsveld neem die tekort aan wiskundiges en statistici steeds groter afmetings aan.

- Statistiek: Aan die een kant rus die Statistiek baie sterk op die Wiskunde en die Waarskynlikheidsleer; aan die ander kant is daar verskeie wetenskappe wat weer baie sterk op Statistiek berus, soos die aktuariswese (versekeringswese ens.) en operasionele analise om doeltreffendheid in nywerheidsprosesse en handelondernemings teweeg te bring). Talle wetenskappe gebruik ook statistiese metodes as 'n essensiële hulpmiddel, soos die biologiese wetenskappe (biometrie), sielkundige en sosiologiese wetenskappe (psigometrie en sosiometrie), ekonomiese wetenskap (ekonometrie), ens. Ook die Rekenaarwetenskap is nou verwant aan Statistiek.

Die omvangrykheid van die toepassingsgebied van die Statistiek (Statistiek, Wiskundige Statistiek, en so meer) kan met die oog op beroepsmoontlikhede, kortliks deur 'n paar voorbeelde aangedui word:

- Op landbougebied het die statistikus die taak om gegewens te interpreteer wat spruit uit eksperimente met sake soos die invloed van bemestingstowwe, grondbewaringsmetodes, grondvrugbaarheid, saadtipes ens. op die opbrengs; die uitwerking van voedingstowwe, voedingsmengsels, erflikheidseienskappe ens. op die produksie van vleisrasse.
- Die hantering van statistiese probleme op die gebied van ander biologiese wetenskappe soos dier- en plantkunde, genees- en dieetkunde, fisiologie ens.
- Die bydrae van statistiese metodes byvoorbeeld ten opsigte van meting van intelligensie, gedrag, opstelling van skale ens. in die geesteswetenskappe soos psigologie, opvoedkunde en sosiologie.
- Op die uitgebreide gebied van die ekonomiese wetenskappe, nywerheidsondernemings, ingenieursprobleme, mynbou, finansies en so meer, het die gebruik van statistiese metodes onmisbaar geword.
- Statistici hou hulle verder besig met die bestudering en verbetering van metodes om beter wiskundige beskrywings te vind van die verskynsels wat in hul toepassingsgebiede voorkom.

Die taak en loopbaan wat byvoorbeeld insluit wetenskaplike beplanning van eksperimentele opnames, die ontleding van gegewens, die maak van gevolgtrekkings en die moontlike neem van besluite, is vir die statistici derhalwe interessant en stimulerend.

Statistici word dan ook as navorsingsbeamptes of roetienewerkers om byvoorbeeld statistiese werk, operasionele analise of rekenaarswerk te verrig, in diens geneem deur 'n groot verskeidenheid van instansies soos versekerings- en beleggingsmaatskappye; nywerhede soos Yskor, Sasol en ander met navorsingslaboratoria; die mynweese, vervoer- en kommunikasiewese; Staatsdepartemente (kyk by Wiskunde); die WNNR, die RGN en ander semi-staatsinrigtings; die MNR, NIPN (WNNR), universiteite, en oral waar numeriese gegewens verwerk en geïnterpreteer moet word.

- Wiskunde en Toegepaste Wiskunde: Afgesien van die vraag na wiskundiges met Suiwer Wiskunde of Toegepaste Wiskunde as hoofvakke, is een van hierdie twee vakke 'n noodsaaklike vereiste vir spesialisering in byvoorbeeld Fisika, Chemie, Ingenieurswese, Sterrekunde, Ekonomie en selfs Biologie, Sielkunde en baie ander. By die keuse van 'n beroepsrigting moet die student ook in gedagte hou dat die vakke Wiskunde, Toegepaste Wiskunde en Fisika nou met mekaar verweef is wat studieterrein en metode betref. In baie gevalle is kennis van Statistiek 'n vereiste of ten minste 'n aanbeveling.

Wiskundiges word in diens geneem as navorsers of roetienewerkers by byvoorbeeld die volgende: Die WNNR, die RAK, die RGN, die verskillende navorsingsinstitute in die land, industrieë soos Yskor, Sasol, die Spoorweë, die Weerburo, groot koöperasies en versekeringsmaatskappye. Verskillende ondernemings neem wiskundiges in diens om opgelei te word as aktuarisse.

Dit is bekend dat daar 'n groot tekort aan wiskundeonderwysers in die provinsiale hoërskole bestaan. Verder bestaan daar 'n groot vraag na dosente met nagraadse opleiding aan die kolleges vir gevorderde tegniese onderwys, tegniese kolleges en universiteite.

Die volgende Staatsdepartemente, wat ook goeie vooruitsigte vir bevordering bied, neem persone as vakkundige beamptes in diens wat oor kombinasies van die wiskundige wetenskap met ander vakke beskik:

Arbeid (Statistiek as hoofvak, of met Wiskunde en Statistiek as vakke).

Beplanning en die Omgewing (Statistiek as hoofvak).

Bantoe-administrasie en -ontwikkeling (Statistiek as hoofvak, of met Wiskunde en Statistiek as vakke).

Bantoe-onderwys (Statistiek as hoofvak, of met Wiskunde en Statistiek as vakke).

Statistiek (Een of meer van die volgende as hoofvakke: Ekonomie, Bedryfsekonomie, Rekeningkunde, Statistiek, Wiskunde, Wiskundige Statistiek).

Nywerheidswese ((i) 'n Kursus in een van die volgende: Wiskunde, Statistiese Metodes en Statistiek, Ekonomie of Rekeningkunde; (ii) B.Sc.-graad met Wiskunde of Wiskundige Statistiek as hoofvak).

Landbou-ekonomie en -bemarking (Een of meer van die volgende hoofvakke: Ekonomie, Bedryfsekonomie, Landbou-ekonomie en Rekeningkunde. Wiskunde en Statistiek is 'n sterk aanbeveling).

Landbou-tegniese Dienste (Hoofvak uit Statistiek, Biometrie, Wiskunde, Wiskundige Statistiek).

Vervoer (Een van die volgende hoofvakke: Wiskunde, Toegepaste Wiskunde, Wiskundige Statistiek, Fisika).

Kyk ook Rekenaarwetenskap, p. 179.

Aktuaris: Ten einde te kwalifiseer as 'n aktuaris, word vereis dat in 'n reeks eksamens geslaag moet word. Die onderrig geskied deur middel van korrespondensiekursusse. Daar is twee professionele liggame wat aktuariële eksamens afneem, te wete die Institute of Actuaries met sy hoofkwartier in Londen, en The Faculty of Actuaries met sy hoofkwartier

te Edinburgh. Die twee liggame beheer gesamentlik The Actuarial Tuition Service in Londen wat alle onderrigaangeleenthede hanteer. Daar is 'n plaaslike sentrum van dié onderrigdiens in Johannesburg en nog een in Kaapstad.

Aspirant-aktuarisse kan eers 'n B.Com.-, B.Sc.- of selfs 'n B.A.-graad voltooi en dan hul studie vir aktuaris voortsit. Die belangrikste vereiste is egter dat hul universiteitskursus ten minste twee jaar Suiwer Wiskunde moet behels, en indien moontlik ook 'n inleiding tot Statistiek, Rekeningkunde en Ekonomie. Alhoewel die universiteitstudie van groot hulp is om die aktuariële eksamens te slaag, is sodanige studie nie 'n vereiste nie. 'n Kandidaat kan ná skoolverlating in diens van 'n lewensversekeringsmaatskappy of 'n firma van konsulerende aktuarisse tree en dadelik met sy aktuariële studie begin.

Die Universiteit van Kaapstad bied 'n aktuariële studierigting aan vir die graad B. Business Science wat gedeeltelike vrystelling vir die aktuariële eksamens verleen.

Die besondere opleiding van 'n aktuaris open beslis die weg na 'n wye verskeidenheid van ander rigtings wat gevolg kan word. Aktuarisse is skaars en hoofbestuursposte is binne hul bereik selfs terwyl hulle nog studeer.

Die meeste aktuarisse is in diens van lewensversekeringsmaatskappye wat ook besonder gunstige vooruitsigte op bevordering bied. Ander tree in konsulerende hoedanigheid op of tree in diens van byvoorbeeld bouverenigings en ander finansiële instellings; handelsmaatskappye, nywerhede, myne, die Departement van Statistiek, die Spoorweë, munisipaliteite en so meer. Die uitbreiding van die handel en nywerheid bring mee dat steeds meer en meer aktuarisse in die private sektor aangestel word. Sommige Staatsdepartemente stel aktuarisse voltyds of in konsulerende hoedanigheid aan.

Nadere besonderhede is van die Eresekretaris, Die Aktuariële Vereniging van Suid-Afrika, Posbus 4464, Kaapstad, 8000, verkrygbaar.

CHAPTER - 5 - H O O F S T U K
THE TRAINING OF TEACHERS

Degrees, Diplomas and Certificates

All the universities in the Republic of South Africa train teachers. See under the universities concerned for the degrees, diplomas and certificates offered by each university.

POST-GRADUATE DEGREES

Bachelor of Education (Baccalaureus Educationis): B.Ed. (All the universities)

Admission requirements: A Bachelor's degree, a teacher's diploma and at least two years' teaching experience. Some universities require more teaching experience, others none at all.

Curriculum: One year of full-time study or two years of part-time study. The curriculum comprises different specialized fields.

Master's degree

Master of Education (Magister Educationis): M.Ed. (All the universities)

Doctor's degrees

Doctor of Philosophy: Ph.D. (UCT, Natal, Rhodes, Wits)

Doctor of Literature: D.Litt. (Natal, Rhodes)

Doctor of Education (Doctor Educationis): D.Ed. (UOFS, UPE, PU for CHE, UP, RAU, US, Unisa)

UNIVERSITIES

UNIVERSITY OF CAPE TOWN

Secondary teachers' courses

Secondary Teacher's Diploma: One year after an approved Bachelor's degree which includes a suitable combination of school teaching subjects.

Secondary Teacher's Diploma (Technical): One year of full-time study after one of the following:

- A degree in Engineering, Pure Science or Applied Science
- Higher National Diploma for Technicians (four-year course)
- National Diploma for Technicians (three-year course)
- a recognized equivalent of any one of the above.

Higher Teacher's Diploma in Commerce: Four years of full-time study after a Standard 10 Certificate or an equivalent certificate. The course, which is given in collaboration with the Cape College for Advanced Technical Education, provides training for secondary school teachers of commercial subjects.

Higher Teacher's Diploma in Home Economics: Four years of full-time study after a Standard 10 Certificate or an equivalent certificate. The course, which is given in collaboration with the Cape College for Advanced Technical Education, provides training for secondary school teachers of subjects in the field of Home Economics.

Primary teachers' courses

Bachelor's degree in Primary Education: Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with an aggregate of not less than 50 per cent. (See Admission requirements for the B.A. and B.Sc. degrees at the University of Cape Town.)

Post-graduate Primary Teacher's Diploma: One academic year after an approved degree including prescribed school subjects.

Primary and/or Secondary teachers' courses

Bachelor of Arts in Art - B.A.(Art): Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with an aggregate of at least 50 per cent. In their fourth year students are admitted to the course for the Secondary Teacher's Diploma or that for the Post-graduate Primary Teacher's Diploma. See also FINE ARTS p. 244.

B.Mus. (School Music): Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with an aggregate of at least 50 per cent. Candidates must display a certain proficiency on the piano and in general musicianship. In their fourth year students are admitted to the course for the Secondary Teacher's Diploma or that for the Post-graduate Primary Teacher's Diploma. On completion both the degree and diploma are awarded.

See also MUSIC p. 272.

Teacher's Licentiate Diploma in Music: Four years after a Standard 10 Certificate with an aggregate pass mark of at least 50 per cent.

Teacher's Diploma in Opera: Four years after a Standard 10 Certificate with an aggregate pass mark of at least 50 per cent.

Special Endorsement in Music for holders of the Primary Teacher's Certificate: One year after a Standard 10 Certificate and the Primary Teacher's Certificate.

Specialist Teacher's Diploma in Speech and Drama: One year after:

- A B.A. degree including at least two courses in Drama; or
- a B.A. degree including three courses in English and a qualification in Speech and Drama or practical experience and studies to the satisfaction of the Head of the Department.

Special Endorsement in Speech and Drama for holders of Primary Teachers' Certificates: Special one year course after a Standard 10 Certificate and the Primary Teacher's Certificate.

Other teachers' courses

Diploma for Teachers of Special Classes: One academic year after an approved three-year teacher's certificate.

Diploma for Teachers of Children Handicapped in Speech and Hearing: One academic year after an approved three-year teacher's certificate.

Diploma for Teachers of the Deaf: One academic year after a Standard 10 Certificate and an approved three-year teacher's certificate.

Diploma in Clinical Remedial Teaching: One academic year after an approved three-year teacher's certificate and at least two years' teaching experience in schools.

Certificate in Teaching Physiotherapy: See PHYSIOTHERAPY p. 289.

UNIVERSITY OF NATAL

Secondary teachers' courses

University Education Diploma (Graduate) or the Higher Education Diploma (Post-Graduate): One year after an approved degree containing the requisite number of school subjects.

University Education Diploma (Non-Graduate): One year after a student has completed courses of study towards an approved degree, in such a manner that all the requirements of the degree may be fulfilled by one further year of study.

The University Education Diploma (Non-Graduate) may be converted into the Higher Education Diploma (Post-Graduate) or the University Education Diploma (Graduate) on completion by the candidate of the remaining admission requirements for such Diploma.

Teacher's course in Remedial Education

Certificate in Remedial Education: One year of full-time study or at least two years of part-time study after -

- a degree plus a recognized teaching qualification; or
- a recognized Teacher's Diploma requiring two years of training, and in addition three years of approved teaching experience; or
- a recognized Teacher's Diploma requiring three years of training and in addition two years of approved teaching experience.

UNIVERSITY OF THE ORANGE FREE STATE

Secondary teachers' courses

Higher Education Diploma (Post-graduate) - H.E.D. Post-graduate: One year of full-time study or 18 months (3 semesters) of part-time study after a recognized degree which must also include approved subjects.

Higher Education Diploma (Non-graduate) - H.E.D. (Non-graduate): Four years of full-time study after a Standard 10 Certificate or equivalent, with or without Matriculation exemption, and passes in both official languages. This Diploma is offered in the following fields: General; Physical Science; Physical Education; Industrial Arts (Men and Women) and/or Technical Drawing; Home Economics - Needlework; Art Education; Commercial subjects; Dramatic and Theatrical Art; School Librarianship. For some of these fields there are additional admission requirements, mainly concerning school subjects passed.

Bachelor of Agriculture - B.Agric.: Three years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics on the Standard Grade.

This degree grants admission to the H.E.D. post-graduate course for the professional training of prospective teachers.

Bachelor of Science in Home Economics (Teacher training) - B.Sc. in Home Economics (Ed.): Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with pass marks in Mathematics and Physical Science on the Standard Grade.

Primary and/or secondary teachers' courses

UOFS Teacher's Diploma in Music: Four years after a Standard 10 Certificate.

See also MUSIC p. 274.

UOFS Teacher's Licentiate in Music: Three years after a Standard 10 Certificate.

See also MUSIC p. 275.

Diploma in Nursing

Post-Basic Diploma in Nursing (with specialization in, inter alia, Nursing Education):
See NURSING p. 280.

UNIVERSITY OF PORT ELIZABETH

Primary and/or secondary teachers' courses

Baccalaureus Artium (Educationis) - B.A. (Ed.): A four-year integrated academic and professional degree course which fulfils all the requirements for the B.A. degree as well as the requirements for the training of teachers. There are three curricula, namely Junior Primary Teaching, Senior Primary Teaching and Secondary Teaching.

Secondary teachers' courses

Baccalaureus Scientiae (Educationis) - B.Sc. (Ed.) and

Baccalaureus Commercii (Educationis) - B.Com. (Ed.)

Each of the curricula of the above-mentioned degrees is a four-year integrated academic and professional degree course which fulfils all the requirements for the degree concerned as well as the requirements for the training of teachers for secondary schools.

The admission qualifications for all three of the above-mentioned degrees are the same as for the degree concerned. See B.A. p. 29; B.Sc. p. 135 and B.Com. p. 82.

Higher Education Diploma (Post-graduate) - H.E.D. (Post-graduate): One year after an approved Bachelor's degree of a recognized university which includes the minimum number of approved school subjects.

Higher Education Diploma - H.E.D.: Four years after a Matriculation Certificate or a Standard 10 Certificate. This Diploma may be obtained with the following endorsements: Human Sciences; Natural Sciences (in the field of Physical and Mathematical Sciences or in the field of Biological Sciences); Economic Sciences; Physical Education; Woodwork and Metalwork; School Music; Art; Typing, Snelskrif and Shorthand.

National Teacher's Diploma (Technical): Two years of part-time study after one of the following:

- An approved degree
- a Standard 10 Certificate or equivalent qualification* and a qualification evaluated as Std. 10 + 3, including two school subjects (which may be technical subjects in which the candidate has specialized) on at least second-year degree level.

Conditional admission to the study may be granted by the Senate to immigrants who have resided in the Republic for less than four years and who have not yet fulfilled the language requirements.

*A four-subject NTC III and the two official languages of which at least one has been passed on the Higher Grade and of which one must be English Language (except English Literature); Abitur, etc., will for example be regarded as equivalent.

Primary teachers' courses

Education Diploma - E.D.: A three-year course in Junior Primary Teaching or Senior Primary Teaching. Admission requirement is at least a Standard 10 Certificate.

Diploma in Musical Education: Three years after Standard 10. See also MUSIC p. 275.

Other teachers' courses

Diploma in Special Education - D.S.E. (Special classes for the mentally handicapped):
Two years of part-time study after one of the following:

- A degree and a post-graduate secondary teacher's diploma
- a degree and a lower secondary teacher's diploma
- a lower secondary teacher's diploma
- a three-year primary teacher's certificate
- any three-year teaching qualification which the Senate recognizes for the purpose.

Bachelor of Nursing Education and Nursing Administration - B.Cur. (I. et A.):
See NURSING p. 279.

Diploma in Nursing Education: See p. 280.

POTCHEFSTROOM UNIVERSITY FOR CHRISTIAN HIGHER EDUCATION

Secondary teachers' courses

Bachelor of Science (Domestic Science) (Education) - B.Sc. (Dom. Sc.Ed.): Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics on the Higher Grade and in Physical Science at least on the Standard Grade.

See also HOME ECONOMICS/DOMESTIC SCIENCE p. 252.

University Education Diploma - U.E.D.: One year after an approved degree of a recognized university which includes the minimum number of prescribed school subjects.

University Education Diploma (Guidance): One year after a B.A., B.Sc. or B.Comm. (Industrial Psychology) degree with a major in Psychology and which also includes two school subjects of which one must be at least on second-year level and the other at least on first-year level. One course in Sociology or Social Work is recommended for the B.A. degree.

University Education Diploma (School Librarianship): One year after a Bachelor's degree with Library Science I and II in the curriculum. If these courses were not included, students will nevertheless be admitted on condition that they take and pass a supplementary course in Library Science during the diploma year.

Higher National Education Diploma for Secondary Schools: Four years after a Matriculation Certificate or a Standard 10 Certificate. The course will, with regard to the academic part be adapted to the needs of the various specialized fields, for example Domestic Science and Music. Uniform curricula, but with optional subjects, are recommended for the following specialized fields: Human Sciences, Pure Sciences, Economic Sciences, Music, Domestic Science, Industrial Arts, School Librarianship.

University Education Diploma in Fine Arts: Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

A student must enrol for the B.A.(F.A.) degree and the Diploma at the beginning of his first or second year and he can then obtain the degree and the diploma after four years of study. The minimum number of approved school subjects must be included in the course.

Potchefstroom University Teacher's Licentiate in Music: Three years after a Matriculation Certificate or a Standard 10 Certificate.

A student must satisfy the Head of the Department of Music in a practical and theoretical test that his standard is high enough to attend the course with profit. He must have passed Music as a subject for the Std 10 examination or have obtained the advanced

standard of the University of South Africa in the chosen practical subject.

Primary teacher's course

Primary National Education Diploma: Four years after a Matriculation Certificate or a Standard 10 Certificate. During the first three years all the students take a general primary school course and in the fourth year, should it be offered, they have a choice among a pre-primary, junior primary and senior primary course. The senior primary course may be taken in general school subjects or in remedial teaching for the primary school.

Teacher's Diploma in Nursing

University Education Diploma (Nursing): See p. 280.

UNIVERSITY OF PRETORIA

Secondary teachers' courses

Bachelor of Arts (Education) - B.A. (Ed.)

Bachelor of Commerce (Education) - B.Com. (Ed.)

Bachelor of Science (Education) - B.Sc. (Ed.)

Each of the curricula of the above-mentioned three degrees is a four-year integrated academic and professional degree course which fulfils all the requirements for the degree concerned as well as the requirements for the training of teachers for the secondary school.

The admission requirements for all three of the above-mentioned degrees are the same as for the degree concerned. See B.A. p. 57, B.Com. p. 110 and B.Sc. p. 164.

Bachelor of Agriculture (Education) - B.Sc. (Agric.) (Ed.): Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See AGRICULTURE p. 218.

Bachelor of Science in Domestic Science (Education) - B.Sc. (Dom.Sc.) (Ed.): Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See HOME ECONOMICS p. 252.

Bachelor of Arts (Education) (Art) - B.A. (Ed.) (Art): Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See FINE ARTS p. 245.

Bachelor of Arts (Education) (Music) - B.A. (Ed.) (Music): Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See MUSIC p. 273.

Higher Education Diploma (Post-graduate): One year of full-time study after a Bachelor's degree which either includes the minimum number of courses in approved school subjects or is recognized for teaching purposes irrespective of the subject combination.

Higher Education Diploma (Post-graduate) (Extramural): An extramural course extending over three semesters. Only candidates who are employed in a permanent capacity and who have fulfilled the admission requirements for the one-year full-time post-graduate course for Secondary teaching will be admitted to the extramural course.

Higher Education Diploma: Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate with Afrikaans and English as subjects passed. This diploma is offered with the following endorsements: General; Art; Commerce;

Commerce Secretarial; Home Economics; Industrial Arts; Music; Physical Education; Technical Education.

With the exception of two cases, there are additional admission requirements for each endorsement (specialized fields) mainly concerning subjects passed in the Std 10 examinations.

Secondary and/or primary teacher's course

Diploma in Music (Individual Teaching): Three years after a Standard 10 Certificate. See MUSIC p. 275.

Primary teachers' courses

Bachelor of Arts (Education)(Senior Primary) - B.A.(Ed.)(Senior Primary) and

Bachelor of Arts (Education)(Junior Primary) - B.A.(Ed.)(Junior Primary)

Each of the curricula of the above-mentioned two degrees is a four-year integrated academic and professional degree course which fulfils all the requirements for the B.A. degree as well as the requirements for the training of teachers for primary schools.

The admission requirements are the same as for the ordinary B.A. degree. See B.A. p. 57.

Pre-Primary teachers' courses

Bachelor of Arts (Education)(Pre-Primary) - B.A.(Ed.)(Pre-Primary): The curriculum is a four-year integrated academic and professional degree course which fulfils all the requirements for the B.A. degree as well as the requirements for the training of pre-primary teachers.

The admission requirements are the same as for the ordinary B.A. degree. See p. 57.

Higher National Education Diploma (Pre-Primary): One year of full-time study after a three-year teacher's certificate or after an approved degree for teaching purposes, provided that one course in each of the official languages is included and one course in Education or one course in Sociology as well as in Psychology.

Other teachers' courses

Higher National Education Diploma (Special Education): One year of full-time study after a three-year teacher's certificate or a Bachelor's degree and a one-year post-graduate teacher's diploma. Candidates follow the prescribed courses and may specialize in at least one of the following endorsements: Brain-injured children; Deaf children; Children who are hard-of-hearing; Children with learning disabilities; Partially sighted children; Mentally handicapped children.

Diploma in Special Education (Pedotherapy): One extended academic year after:

- The degrees B.A.(Hons.)(Psychology); or B.A.(Hons.)(Sociology); or B.A.(S.W.) (Hons.) and Psychology III; or
- a Bachelor's degree with Psychology III or Sociology III and an H.E.D. (Post-graduate) or another approved secondary teacher's diploma; or
- the B.A. (Log.) degree of the University of Pretoria; or
- other qualifications which the Faculty Council may regard as adequate for admission.

Teachers' Diploma in Occupational Therapy: See p. 283.

Teachers' Diploma in Physiotherapy: See p. 289.

Diploma in Nursing Education: See p. 280.

Bachelor of Nursing (Instruction and Administration) - B.Cur. (I. et A.): See p. 279.

RAND AFRIKAANS UNIVERSITY

Secondary teachers' courses

B.A. (Education) degree

B.Bibl. (Education) degree

B.Com. (Education) degree

B.Sc. (Education) degree

Each of the curricula of the above-mentioned four degrees is a four-year integrated academic and professional degree curriculum which fulfils all the requirements for the degree concerned as well as the requirements laid down by the Committee of Educational Heads for the training of teachers for secondary schools.

The admission requirements are the same as for the ordinary degree concerned. For B.A. see p. 59, B.Bibl. p. 59, B.Com. p. 114 and B.Sc. p. 166.

Post-graduate Higher Education Diploma - H.E.D. (Post-graduate): One summer term (approximately 1½ months) and two semesters of full-time study or one summer term and three semesters of part-time study after an approved Bachelor's degree which includes the minimum number of subjects for teaching purposes as stipulated by the Committee of Educational Heads.

Four-year Higher Education Diploma - H.E.D.: Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate with at least a D symbol (50 per cent) and Afrikaans and English as subjects passed. This Diploma may be obtained in the following fields: Languages and Human Sciences; Commercial field (academic subjects); Commercial field (subjects requiring proficiency); Physical Education.

For each of these fields there are additional admission qualifications, mainly concerning pass marks in particular subjects in the Matriculation and Standard 10 examinations.

One-year Post-graduate Higher Education Diploma (Technical): One year after a Bachelor's degree with approved school subjects, e.g. Mathematics and Physical Science.

One-year Higher Education Diploma (Technical): One year after a Standard 10 Certificate or equivalent qualification and a three-year diploma which includes at least two school subjects (technical subjects) on second-year level, e.g. motor mechanics, electricity, radio mechanics, woodworking, plumbing, and welding and metal work.

RHODES UNIVERSITY

Secondary teachers' courses

National Higher Education Diploma (Graduate): One year after an approved degree in Arts, Science or Commerce with certain specified courses included in the curriculum for that degree.

National Higher Education Diploma (Non-Graduate): Four years after a Standard 10 Certificate. The Diploma qualifies the holder as a high school teacher.

The curriculum for the Diploma shall be arranged in accordance with certain provisions with regard to the courses to be followed.

University Art Teacher's Certificate - U.A.T.C.: One year after a Diploma in Fine Art and a Standard 10 Certificate.

University Diploma for Teachers of Music - U.D.T.M.: Two years after the Primary Teacher's Certificate of the Cape Education Department or another recognized teacher's certificate. Candidates must have passed an examination in singing or an instrument at the Advanced Grade or an examination deemed by the Senate to be equivalent.

Candidates who hold a Higher Primary Teacher's Certificate in Music and have passed an examination in singing or an instrument at the Final Grade of the Associated Board of the Royal Schools of Music or of the University of South Africa, or an examination deemed by the Senate to be equivalent, may be given credit for courses in the first-year curriculum.

This Diploma qualifies the holder to teach music in the secondary school.

Primary teachers' courses

National Higher Education Diploma (Graduate, for senior-primary school teachers): One year after a Bachelor's or higher degree which includes certain prescribed school subjects.

Lower and Higher Primary Teacher's Certificate - L.P.T.C./H.P.T.C.: Three years after a Standard 10 Certificate.

Primary Teacher's Art Certificate - P.T.A.C.: One year after the Primary Teacher's Certificate of the Cape Education Department or another recognized teacher's certificate.

Primary Music Teacher's Certificate - P.M.T.C.: Three years after a Standard 10 Certificate. This Certificate qualifies the holder to teach music in the primary school.

UNIVERSITY OF SOUTH AFRICA

Secondary teacher's course

Higher Education Diploma (Post-graduate) - H.E.D. (Post-graduate): One or two years after an approved degree which includes the required number of courses in the approved school subjects and a teacher's diploma recognized by the Senate; or

two years after the above-mentioned degree without a diploma: provided that the completion of the H.E.D. (Post-graduate) shall be subject to at least two full school terms' or six months' satisfactory experience as a teacher or a lecturer at a teacher's training college in a South African Education Department.

Tertiary teacher's course

Diploma in Tertiary Education - D.T.E.: A student must hold at least a Bachelor's degree. The Diploma will not, however, be issued until a student has completed at least two years' appropriate experience in an institution providing training at tertiary level.

The examination consists of two parts which may be written separately or simultaneously.

Secondary and/or primary teachers' courses

Certificate in School Library Science: A student must hold:

- A lower diploma in Library Science; or
- a teacher's certificate; or
- a university degree.

The curriculum comprises School Library Science I and II and these two courses may be written simultaneously.

Diploma in School Library Science: Two years after:

- A recognized three-year teacher's certificate; or
- a recognized post-graduate teacher's diploma; or
- a four-year Bachelor's degree in Education.

Pre-Primary teachers' courses

Higher Education Diploma (Pre-Primary) - H.E.D. (Pre-Primary) and

Higher Education Diploma (Post-graduate Pre-Primary) - H.E.D. (Post-graduate Pre-Primary): At least two years after:

- A recognized teacher's diploma issued after a three-year teacher's training course; or
- a degree which includes the required number of courses in the approved school subjects, and at least one course in each of the official languages and at least one course in Education or at least one course in each of two of the following: Sociology, Psychology, Logopedics, Social Work.

Diploma in Nursery Education - D.N.E.

(N.B. This Diploma does not comply with the criteria for the evaluation of South African qualifications for purpose of employment in Provincial Education Departments.)

The curriculum extends over at least two years after:

- A recognized two-year teacher's diploma for admission to which a Std 10 Certificate was required; or
- a degree with three courses in one and at least one course in another of the following subjects: Psychology, Sociology, Social Work, Education, Philosophy; or
- a degree, or a diploma for which a Std 10 Certificate was a prerequisite, in nursing, speech therapy, physiotherapy, occupational therapy or Social Work.

Other teachers' courses

Diploma in Specialized Education - D.S.E.

A. Special Education

Special education for the visually handicapped (blind and partially sighted); the aurally handicapped (deaf and hard of hearing); the epileptic; the cerebral palsied.

The curriculum extends over at least two years after:

- A recognized teacher's diploma issued after a three-year teacher's training course; or
- a degree and a recognized teacher's diploma.

B. Remedial Education

The curriculum extends over at least two years after:

- A recognized teacher's diploma issued after a three-year teacher's training course; or
- a degree and a recognized teacher's diploma.

Diploma for Therapists (Special Education) - D.T.S.E.: At least two years after either an appropriate degree or an appropriate three-year diploma in Physiotherapy, or Occupational Therapy, or Speech Therapy by virtue of which the South African Medical and Dental Council has approved registration with the Council as a physiotherapist, or an occupational therapist, or a speech therapist.

Certificate in Special Education - C.S.E.

(N.B. This Certificate is not recognized for salary purposes by the Department of National Education or the Provincial Education Departments, but Coloureds, Indians and Bantu may possibly receive recognition from their respective Departments.)

Special education for epileptics, the cerebral palsied, the visually handicapped and the aurally handicapped.

The curriculum extends over at least two years after a recognized teacher's diploma issued after a two-year teacher's training course for admission to which a Std 10 Certificate was required.

UNIVERSITY OF STELLENBOSCH

Secondary teachers' courses

B.Sc. in Home Economics (Ed.): Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See HOME ECONOMICS/DOMESTIC SCIENCE p. 252.

B. in Home Economics (Ed.): As for the above-mentioned degree. See also p. 253.

B.Mus.(Ed.) Specialization: Teaching of an Instrument or Singing

and

B.Mus. (Ed.) Specialization: School Music
As for B.Mus. See MUSIC p. 271.

Higher Education Diploma (Secondary - Music) - H.E.D. (Secondary - Music): Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate, provided that the candidate has obtained

- a pass mark in Music of at least 50 per cent on the Higher Grade or 60 per cent on the Standard Grade in the Standard 10 examination, or
- a pass in the Advanced Examination (University of South Africa) in the practical major subject, with a standard in Harmony equivalent to the Higher Division (University of South Africa), or
- a pass mark in the entrance examination, equivalent to the above-mentioned examinations in the practical major subject and in Harmony.

This Diploma may be obtained in the following specialized fields: Teaching of an Instrument or Singing; School Music.

Bachelor of Agricultural Education: Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with passes in Mathematics and Physical Science on the Standard Grade. See AGRICULTURE p. 218.

Higher Education Diploma (Post-graduate)(Secondary) - H.E.D.: One year after a Bachelor's degree of a recognized university which includes the minimum number of prescribed school subjects.

Four-year Higher Education Diploma (Secondary) - H.E.D.: Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate. This Diploma may be obtained in the following specialized fields: Human Sciences and Languages; Natural

Sciences; Commerce; Physical Education; Home Economics and Needlework. The Commercial field is also offered extramurally.

Students who wish to specialize in Natural Sciences must hold a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics.

Primary teachers' courses

Bachelor's degree course in Primary Education (General field): Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption), provided that the candidate has passed in at least one Mathematical/Arithmetical subject in the Junior Certificate (Standard 8) examination and obtained a satisfactory standard in both the official languages in the final examination in Std 9 and the June examination in Std 10.

A pass in Mathematics and a science subject on the Standard Grade in the Matriculation examination is required for admission to Mathematics III (Ed.) and Natural Science III (Ed.), respectively.

Bachelor's degree course in Primary Education with Specialization in Physical Education: Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). Also see Bachelor's degree course in Primary Education (General field).

Bachelor's degree course in Primary Education with Specialization in School Music: Four years after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption), provided that the candidate

- obtained at least a 60 per cent pass mark in Music (examination subject) in Std 8; or
- passed the Grade VI (Intermediate) Examination in piano of the University of South Africa; or
- sat for an entrance examination in piano equivalent to the above-mentioned examinations.

A satisfactory standard in both the official languages must have been obtained in the final examination in Std 9 and in the June examination in Std 10.

Bachelor's degree course in Primary Education with Specialization in Learning and Educational Difficulties: Four years. The following are admitted:

- Students who have passed the second year of study for the Bachelor's degree course in Primary Education (general field); or in the case of students from other training institutions who qualify for admission to the third year of study for the B.degree course in Primary Education (general field); and
- on written application are admitted to the course by the Senate, or by the Executive Committee acting for the Senate.

Lower Diploma in School Librarianship: One year after an approved three-year primary teachers' qualification.

Secondary and/or primary teachers' courses

Teachers' Licentiate in Music: Three years of full-time study after a Matriculation Certificate or a Standard 10 Certificate, provided the candidate has obtained

- a pass mark in Music of at least 60 per cent in the Standard 10 examination, or
- a pass in the Grade VII examination (University of South Africa) in the practical major subject, with a standard in Harmony equivalent to Grade V (University of South Africa), or

- a pass mark in the entrance examination, equivalent to the above-mentioned examinations, in the practical major subject and in Harmony.

Diploma in Specialized Education (School Librarianship): One year after an approved three-year Primary Teachers' Diploma.

Diploma in Specialized Education (School Music): One year after an approved three-year Primary Teachers' Diploma. Students must pass an entrance examination in Piano in which the standard of Grade VII of the University of South Africa is required. Candidates who obtained a pass during the preceding year in the Grade VII or higher examination in Piano of UNISA or the Associated Board of Royal Schools of Music are exempted from the aforementioned entrance examination.

Persons who have already studied School Music as an intensive specialized field may not be admitted to this course.

Diploma in Specialized Education (Speech and Drama): One year after an approved three-year Primary Teachers' Diploma with

- at least 60 per cent in Speech and Drama as a third-year subject for the Primary Teachers' Diploma (Senior Standards); or
- at least 70 per cent or an A symbol in Speech Training for the Primary Teachers' Diploma (Junior Standards).

Other teachers' courses

Diploma in Special Education: Three years after a recognized degree with Psychology as a major subject as well as a teachers' certificate, or other qualifications approved by the Senate for this purpose. Candidates must already be employed as school psychologists and/or teachers of retarded children.

Candidates must attend intensive courses of two weeks each at the University of Stellenbosch twice a year.

Diploma in Specialized Education (Clinical Remedial): One year of full-time study after successful completion of at least a three-year teachers' training course; at least three years' teaching or other adequate experience and admission to the course through written application to the Senate.

Diploma in Specialized Education (Mentally Retarded): One year after:

- The Higher Primary Teachers' Diploma of this University or another three-year teachers' diploma or certificate which can be regarded as equivalent thereto; or
- a degree and the Secondary Teachers' Diploma (S.T.D.) of this University or equivalent qualifications.

Teachers' Diploma in Occupational Therapy: See p. 283.

Diploma in Nursing Education: See p. 280.

UNIVERSITY OF THE WITWATERSRAND

Secondary teachers' courses

Higher Education Diploma (Post-graduate): One year of full-time study or two years of part-time study after an approved degree which includes a suitable combination of school teaching subjects.

Higher Education Diploma: Four years of full-time study after a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). The Senate may, for an interim period until the end of 1975, grant admission to a person who is not so qualified but who holds an approved Standard Ten Certificate.

Every curriculum shall include, inter alia:

- Four courses in one of the following practical subjects, one course in each year of the curriculum:
 - . Home Economics
 - . Industrial Arts
 - . Physical Education
 - . Typewriting
- courses in certain prescribed academic subjects.

Other teachers' courses

Diploma in Education of the Deaf: Two years after a recognized Teachers' Diploma obtained after not less than two years' study after having obtained a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). The curriculum for the Teachers' Diploma must have contained an approved course in Psychology and courses in spoken English and spoken Afrikaans.

Diploma in Remedial Education: Two years of part-time study after -

- a degree and a recognized teacher's diploma and at least two years' experience in teaching; or
- a recognized teacher's diploma and a Standard 10 Certificate (Matriculation Exemption) and at least five years' experience in teaching; or
- a degree and at least three years' experience in teaching.

Diploma in Nursing Education - D.N.Ed.: See p. 280.

Diploma in Physiotherapy Education - D.P.E.: See p. 289.

V O C A T I O N A L S E R V I C E

Anybody who becomes a teacher embarks upon a very special career, one which entails greater responsibility and imposes higher demands on the dedicated person than any other career. There are, of course, some persons in the profession who cruise comfortably through their careers, without worrying too much about the responsibility which rests on them, but it is to be hoped that they are few in number.

There are also persons who enter the profession for reasons other than the desire to render service as true educators, those, for instance, who go to a teachers' training institution because they find it easy to obtain financial assistance to study; or because they think that the training courses are easier than others; or because they want to use the training for another purpose, thus making of teaching a stepping-stone to what they regard as something better; or because teachers have 'so many holidays'; or because it appears to be an 'easy' job which requires less exertion than other occupations; or because they are not 'clever' enough to become doctors, advocates, engineers, architects or building contractors; or simply because they can find nothing else to do.

The teaching profession can - and must - do without these people because the education of our children is too important to be entrusted to them.

What demands are imposed on the "good" teacher? Here are a few:

- The good teacher must possess above-average intelligence, the more superior the better. He (or she) will normally have to deal with children at all intellectual levels, from "below-average" to highly superior, and must be intellectually

equipped to do so.

- The good teacher must possess the correct type of temperament and personality for the job. He (she) must be of high integrity, with vision, drive, a sincere love of mankind, perseverance and the will and desire to serve; he (she) must have an understanding of children and their problems in their development towards adulthood, and he (she) must know how to handle them and their problems and to assist in satisfying their educational needs.
- The good teacher must have a thorough knowledge of his subject or subjects. There is nothing more pathetic in teaching than the teacher who doesn't know what he is talking about, who teaches the wrong things or teaches things wrongly. The good teacher will move mountains to keep fully abreast of the contents of his subjects.
- The good teacher is one who is thoroughly trained for his job. Bad doctors can harm their patients' bodies, bad lawyers can drive their clients to bankruptcy, but bad teachers harm children in mind and in spirit.
- The good teacher believes in children; never underestimates their abilities and potential; encourages them to aim high and ever higher and not to be satisfied with the minimum; does not bully children, either physically or mentally; does not try to get rid of pupils if they do not progress rapidly enough to assist him in obtaining 'good results'; does not seek merely to further his own interests; is not in a hurry to see the fruits of his labour; never loses courage and hope; knows that his job is not merely an occupation or a profession but a vocation and that the good (or bad) work he does will live on in the hearts and minds of people long after he has passed on.

If requirements such as those above are to be satisfied, it is obvious that teaching is not for just anybody. Our country's human material is too precious for that.

The teacher has the task and shares in the responsibility of helping to lead the child to adulthood and no greater responsibility could be laid on anyone's shoulders. In conjunction with this, learning matter must be presented in such a way that the child can assimilate it. This responsibility rests particularly heavily on the teacher in the primary school who must also inculcate in the child a positive attitude towards and an enjoyment of education. A child's earliest schooldays largely determine what he is to become, what his attitude to life will be, his future success or failure and whether or not he will be a happy and useful person and citizen.

These days teachers work under very pleasant circumstances. Modern school buildings are spacious, attractive, convenient and equipped with a multitude of modern aids. School halls form part of the equipment of virtually every school, while many schools have swimming pools, fine sports fields and even school buses. The remuneration of teachers compares very favourably with that in other fields for which a similar degree of training is required.

Teachers of physical education usually have the largest share in extramural sporting activities, but all teachers have the opportunity of becoming better acquainted with pupils through the medium of the manifold extramural activities and, in this way, also of contributing towards leading them to normal and balanced adulthood.

There are many educational fields for which candidates can equip themselves and a number of types of schools from which to choose, according to their aptitude and interest. They may choose from, e.g. nursery education, primary education, secondary education in the "ordinary schools"; special education provided by the provincial education departments (the teaching of the mentally retarded, behavioural deviates, those with defective hearing and speech and chronically ill pupils attached to hospitals, etc.); special education under the jurisdiction of the Department of National Education (the teaching of the visually handicapped, aurally handicapped, epileptics, those with cerebral palsy and brain injury as well as the physically handicapped), and special education in accordance with the Children's Act (schools of industries and reform schools).

Other branches which the teacher can choose are agricultural education, commercial edu=

cation, domestic science teaching, technical education (technical schools, technical colleges, technical institutes and colleges for advanced technical education), art education, and so on. Those who have the necessary qualifications and experience and are interested in the training of students, can be considered for positions as lecturers at colleges for advanced technical education, the various types of teacher training colleges and universities.

There are also many occupations outside school-teaching to which teachers with the necessary training and experience can be appointed, for example those connected with the expert auxiliary services instituted by the various education departments, such as the Psychological and Guidance Services, with posts as school psychologists, vocational guidance officers, speech therapists, remedial teachers and so forth.

Teachers usually start off as junior assistants. Those who are competent and conscientious, who have initiative and the capacity for organization and leadership can, in the course of time, progress to positions such as those of senior assistant, vice-principal, deputy principal and principal. Other professional posts in the various education departments, such as those of subject inspectors, planners and researchers, are also filled from the ranks of the teachers' corps.

The conscientious and successful teacher always remains a student who immerses himself in his work, keeps abreast of changes and reforms, particularly in his own subject, and always tries to let the child share in his own wealth of knowledge and wisdom. For this reason, further study is strongly emphasized. Not only is the deepening of subject knowledge desirable, but also the attainment of advanced educational qualifications such as the B.Ed. degree and other degrees and diplomas.

In this era of frenetic scientific and technical development, both formal and formative education are undergoing a reformation, growth and change as regards learning content, methods, procedures and approach. The profession offers bright and dynamic young people manifold and exciting challenges, and they are the kind the teaching profession needs. Education is the one field in which South Africa cannot afford inferiority.

D I E O P L E I D I N G V A N O N D E R W Y S E R S

Grade, Diplomas en Sertifikate

Al die universiteite in die Republiek van Suid-Afrika lei onderwysers op. Kyk onder die verskillende universiteite vir die grade, diplomas en sertifikate wat elke universiteit aanbied.

NAGRAADSE GRADE

Baccalaureus Educationis: B.Ed. of
Baccalaureus in Opvoedkunde: B.Ed. of
Baccalaureus in die Opvoedkunde: B.Ed.
(Al die universiteite)

Toelatingsvereistes: 'n Baccalaureusgraad, 'n onderwysersdiploma en minstens twee jaar ervaring. Sommige universiteite vereis meer en ander weer geen ervaring nie.

Leergang: Een jaar voltydse of twee jaar deeltydse studie. Die leergang behels verskillende spesialiseringrigtings.

Magistergraad

Magister in Opvoedkunde (Magister Educationis): M.Ed. (Al die universiteite)

Doktorsgrade

Doktor in Wysbegeerte: Ph.D. (UK, Natal, Rhodes, Wits)
Doktor in die Letterkunde: D. Litt. (Natal, Rhodes)
Doctor Educationis: D.Ed. (UOVS, UPE, PU vir CHO, US, Unisa)
Doktor in Opvoedkunde: D.Ed. (UP)
Doktor in die Opvoedkunde: D.Ed. (RAU)

UNIVERSITEITE

UNIVERSITEIT VAN KAAPSTAD

Sekondêre onderwyserskursusse

Sekondêre Onderwysersdiploma: Een jaar na 'n goedgekeurde Baccalaureusgraad wat 'n toepaslike samestelling van skoolvakke insluit.

Sekondêre Onderwysersdiploma (Tegnies): Een jaar voltydse studie na een van die volgende:

- 'n Graad in Ingenieurswese, Suiwer Wetenskappe of Toegepaste Wetenskappe
- Hoër Nasionale Diploma vir Tegnici (vierjaarkursus)
- Nasionale Diploma vir Tegnici (driejaarkursus)
- 'n erkende gelykwaardige kwalifikasie van enige van bogenoemde.

Hoër Onderwysersdiploma in Handel: Vier jaar voltydse studie na 'n Standaard 10- of gelykwaardige sertifikaat. Die kursus, wat in samewerking met die Kaapse Kollege vir Gevorderde Tegniese Onderwys aangebied word, verskaf opleiding aan sekondêre onderwysers van handelsvakke.

Hoër Onderwysersdiploma in Huishoudkunde: Vier jaar voltydse studie na 'n Standaard 10- of gelykwaardige sertifikaat. Die kursus, wat in samewerking met die Kaapse Kollege vir Gevorderde Tegniese Onderwys aangebied word, verskaf opleiding aan sekondêre onderwyseresse van vakke in die Huishoudkunde-rigting.

Primêre onderwyserskursusse

Baccalaureusgraad in Primêre Onderwys: Vier jaar voltydse studie na 'n Matrikulasie-sertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n groot totaal van minstens 50 persent. (Kyk Toelatingsvereistes vir die B.A.- en B.Sc.-grade aan die Universiteit van Kaapstad.)

Nagraadse Primêre Onderwysersdiploma: Een akademiese jaar na 'n goedgekeurde graad wat voorgeskrewe skoolvakke insluit.

Primêre en/of sekondêre onderwyserskursusse

Baccalaureus Artium in Kuns - B.A. (Kuns): Vier jaar na 'n Matrikulasie- of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n groot totaal van minstens 50 persent. In hul vierde jaar word studente tot die kursus vir die Sekondêre Onderwysersdiploma of dié vir die Nagraadse Primêre Onderwysersdiploma toegelaat. (Kyk ook BEELDENDE KUNSTE p. 317.)

B.Mus. (Skoolmusiek): Vier jaar na 'n Matrikulasie- of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n groot totaal van minstens 50 persent. Kandidate moet bewys lewer van 'n sekere mate van vaardigheid op die klavier en in algemene musikaliteit. In hul vierde jaar word studente tot die kursus vir die Sekondêre Onderwysersdiploma of dié vir die Nagraadse Primêre Onderwysersdiploma toegelaat. Na voltooiing word sowel die graad as die diploma toegeken. (Kyk ook MUSIEK p. 368.)

Onderwyserslisensiaatdiploma in Musiek: Vier jaar na 'n Standaard 10-sertifikaat met 'n

groottotaal van minstens 50 persent.

Onderwysersdiploma in Opera: Vier jaar na 'n Standerd 10-sertifikaat met 'n groot-totaal van minstens 50 persent.

Spesiale Endossement in Musiek vir houers van die Primêre Onderwysersertifikaat: Een jaar na 'n Standerd 10-sertifikaat en die Primêre Onderwysersertifikaat.

Spesialisanderwysersdiploma in Spraakleer en Drama: Een jaar na:

- 'n B.A.-graad met minstens twee kursusse in Drama; of
- 'n B.A. graad met drie kursusse in Engels en 'n kwalifikasie in Spraakleer en Drama, of praktiese ondervinding en studies tot bevrediging van die Hoof van die Departement.

Spesiale Endossement in Spraakleer en Drama vir houers van die Primêre Onderwysersertifikaat: Spesiale eenjarige kursus na 'n Standerd 10-sertifikaat en die Primêre Onderwysersertifikaat.

Ander onderwyserskursusse

Diploma vir Onderwysers van Spesiale Klasse: Een akademiese jaar na 'n goedgekeurde driejarige onderwysersertifikaat.

Diploma vir Onderwysers van Kinders met Spraak- en Gehoorgebreke: Een akademiese jaar na 'n goedgekeurde driejarige onderwysersertifikaat.

Diploma vir Onderwysers van Doves: Een akademiese jaar na 'n Standerd 10-sertifikaat en 'n goedgekeurde driejarige onderwysersertifikaat.

Diploma in Klinies-remediërende Onderwys: Een akademiese jaar na 'n goedgekeurde driejarige onderwysersertifikaat en minstens twee jaar onderwyservaring in skole.

Onderwysersertifikaat in Fisioterapie: Kyk FISIOTERAPIE p. 335.

UNIVERSITEIT VAN NATAL

Sekondêre onderwyserskursusse

Universiteitsonderwysdiploma (Gegradueerd) of die Hoër Onderwysdiploma (Nagraads): Een jaar na 'n goedgekeurde graad wat die vereiste aantal skoolvakke insluit.

Universiteitsonderwysdiploma (Nie-gradueerd): Een jaar nadat 'n student studiekursusse vir 'n goedgekeurde graad voltooi het, op so 'n wyse dat al die vereistes vir die graad na een jaar verdere studie nagekom kan word.

Die Universiteitsonderwysdiploma (Nie-gradueerd) kan in 'n Universiteitsonderwysdiploma (Gegradueerd) of 'n Hoër Onderwysdiploma (Nagraads) omgeskep word nadat die kandidaat aan die orige toelatingsvereistes vir dié Diploma voldoen het.

Onderwyserskursus in Remediërende Onderwys

Sertifikaat in Remediërende Onderwys: Een jaar voltydse studie of minstens twee jaar deelydse studie na:

- 'n Graad asook 'n erkende onderwyserskwalifikasie; of
- 'n erkende Onderwysersdiploma wat twee jaar opleiding vereis, en boonop drie jaar goedgekeurde onderwyservaring; of
- 'n erkende Onderwysersdiploma wat drie jaar opleiding vereis, en boonop drie jaar goedgekeurde onderwyservaring.

UNIVERSITEIT VAN DIE ORANJE-VRYSTAAT

Sekondêre onderwyserskursusse

Hoër Onderwysdiploma (Nagraads) - H.O.D.-nagraads: Een jaar voltydse studie of 18 maande (3 semesters) deeltydse studie na 'n erkende graad wat ook goedgekeurde vakke moet insluit.

Hoër Onderwysdiploma (Nie-graads) - H.O.D. (Nie-graads): Vier jaar voltyds na 'n St. 10- of gelykwaardige sertifikaat, met of sonder Matrikulasievrystelling, en 'n slaagpunt in albei amptelike tale. Hierdie Diploma word in die volgende rigtings aangebied: Algemeen; Natuurwetenskaplik; Liggaamlike Opvoeding; Bedryfskennis (Mans en Dames) en/of Tegniese Tekene; Huishoudkunde - Naaldwerk; Kunsonderwys; Handelsvakke; Drama- en Toneelkunde; Skoolbiblioteekkunde.

Vir sommige van die rigtings bestaan daar ook addisionele toelatingsvereistes, hoofsaaklik wat geslaagde skoolvakke betref.

Baccalaureus Agriculturae - B. Agric.: Drie jaar na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling) met 'n slaagsyfer in Wiskunde op die Standaardgraad.

Hierdie kursus verleen toelating tot die H.O.D.-nagraadse kursus vir die professionele opleiding van voornemende onderwysers.

Baccalaureus Scientiae in Huishoudkunde (Onderwysopleiding) - B.Sc. Huish. (Ondw.): Vier jaar na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling) met slaagsyfers in Wiskunde en Skei- en Natuurkunde op die Standaardgraad.

Primêre en/of sekondêre onderwyserskursusse

UOVS - Onderwysdiploma in Musiek: Vier jaar na 'n Standaard 10-sertifikaat. Kyk ook MUSIEK p. 371.

UOVS - Onderwyslisensiaat in Musiek: Drie jaar na 'n Standaard 10-sertifikaat. Kyk ook MUSIEK p. 371.

Diploma in Verpleegkunde

Na-basiese Diploma in Verpleegkunde (met spesialisasie in onder andere Verplegingsonderwys): Kyk VERPLEEGKUNDE p. 404.

UNIVERSITEIT VAN PORT ELIZABETH

Primêre en/of sekondêre onderwyserskursusse

Baccalaureus Artium (Educationis) - B.A. (Ed.): 'n Vierjarige samegestelde akademiese en professionele graadleergang wat voldoen aan al die vereistes vir die B.A.-graad asook aan die vereistes vir die opleiding van onderwysers/esse. Daar is drie leergange, naamlik Junior Primêre Onderwys, Senior Primêre Onderwys en Sekondêre Onderwys.

Sekondêre onderwyserskursusse

Baccalaureus Scientiae (Educationis) - B.Sc. (Ed.)

en

Baccalaureus Commercii (Educationis) - B.Com. (Ed.)

Die leergange van bogenoemde twee grade is elk 'n vierjarige samegestelde akademiese en professionele leergang wat voldoen aan al die vereistes vir die betrokke graad asook aan die vereistes vir die opleiding van onderwysers vir sekondêre skole.

Die toelatingsvereistes vir al drie bogenoemde grade is dieselfde soos vir die betrokke

gewone graad. Kyk B.A. p. 52; B.Sc. p. 158 en B. Com. p. 104.

Hoër Onderwysdiploma (Nagraads) - H.O.D. (Nagraads): Een jaar na 'n goedgekeurde Baccalaureusgraad van 'n erkende universiteit wat die minimum aantal goedgekeurde skoolvakke insluit.

Hoër Onderwysdiploma - H.O.D.: Vier jaar na 'n Matrikulasië- of Standaard 10-sertifikaat. Hierdie Diploma kan met een van die volgende endossemente verwerf word: Geesteswetenskappe; Natuurwetenskappe (rigting Fisiese en Wiskundige Wetenskappe of rigting Biologiese Wetenskappe); Ekonomiese Wetenskappe; Liggaamlike Opvoeding; Houtwerk en Metaalwerk; Skoolmusiek; Kuns; Tikskrif, Snelskrif en Shorthand.

Vir sommige van die spesialiseringrigtings bestaan daar addisionele toelatingsvereistes, hoofsaaklik wat geslaagde vakke betref.

Nasionale Onderwysersdiploma (Tegnies): Twee jaar deeltydse studie na een van die volgende:

- 'n Goedgekeurde graad
- 'n Standaard 10-sertifikaat of gelykwaardige kwalifikasie* plus 'n kwalifikasie wat geëvalueer word as Standaard 10 + 3 wat twee skoolvakke (met inbegrip van tegniese vakke waarin die kandidaat gespesialiseer het) op minstens tweedejaargraadpeil insluit.

Voorwaardelike toelating tot die studie kan deur die Senaat verleen word aan immigrante wat minder as vier jaar in die Republiek woonagtig is en nog nie aan die taalvereistes voldoen nie.

* 'n Vier-vak NTS III plus die twee amptelike tale waarvan minstens een op die Hoër Graad geslaag is en waarvan Engelse Taal (uitgesonderd Engelse Letterkunde) een moet wees; Abitur, ens. sal byvoorbeeld as gelykwaardig beskou word.

Primêre onderwyserskursusse

Onderwysdiploma - O.D.: 'n Driejarige kursus in Junior Primêre Onderwys of Senior Primêre Onderwys. Toelatingsvereistes is minstens 'n Standaard 10-sertifikaat.

Diploma in Musiekonderwys: Drie jaar na Standaard 10. Kyk ook MUSIEK p. 371.

Ander onderwyserskursusse

Diploma in Spesialiseringsonderwys D.S.O. (Spesiale Klasse vir verstandelik gestremdes): Twee jaar deeltydse studie na een van die volgende:

- 'n Graad en 'n nagraadse sekondêre onderwysersdiploma
- 'n graad en 'n laer sekondêre onderwysersdiploma
- 'n laer sekondêre onderwysersdiploma
- 'n driejarige primêre onderwyserssertifikaat
- enige driejarige onderwyskwalifikasie wat die Senaat vir die doel erken.

Baccalaureus in Verpleegkundige Onderrig en -Administrasie - B.Cur. (I. et A.): Kyk VERPLEEGKUNDE p. 404.

Diploma in Verplegingsonderwys: Kyk p. 405.

POTCHEFSTROOMSE UNIVERSITEIT VIR CHRISTELIKE HOËR ONDERWYS

Sekondêre onderwyserskursusse

Baccalaureus Scientiae (Huishoudkunde) (Educationis) - B.Sc. (Huish.Ed.): Vier jaar na

'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Hoër Graad en in Skei- en Natuurkunde minstens op Standaardgraad. Kyk ook HUISHOUDKUNDE p. 342.

Universiteitsonderwysdiploma - U.O.D.: Een jaar na 'n goedgekeurde graad van 'n erkende universiteit wat die minimum aantal voorgeskrewe skoolvakke insluit.

Universiteitsonderwysdiploma (Voorligting) - U.O.D. (Voorl.): Een jaar na 'n B.A.-, B.Sc.- of B.Comm. (Bedryfsielkunde)-graad met Sielkunde as hoofvak en wat verder twee skoolvakke insluit, een minstens op tweedejaar- en een minstens op eerstejaarbasis. Een kursus in Sosiologie of Maatskaplike Werk vir die B.A.-graad word aanbeveel.

Universiteitsonderwysdiploma (Skoolbiblioteekkunde) - U.O.D. (Skoolbibl.): Een jaar na 'n Baccalaureusgraad met Biblioteekkunde I en II in die leergang. Indien dié kursus nie ingesluit was nie, sal persone nogtans toegelaat word op voorwaarde dat hulle gedurende die diplomajaar 'n aanvullende kursus in Biblioteekkunde sal volg en slaag.

Hoër Nasionale Onderwysdiploma vir Sekondêre Skole - H.N.O.D.: Vier jaar na 'n Matrikulasie- of Standaard 10-sertifikaat. Die kursus sal, wat die akademiese gedeelte betref, aangepas word by die behoeftes van verskillende spesialiseringrigtings, onder meer Huishoudkunde en Musiek. Eenvormige leergange, maar met keusevakke, word vir die volgende spesialiseringrigtings aanbeveel: Geesteswetenskappe, Natuurwetenskappe, Ekonomiese Wetenskappe, Musiek, Huishoudkunde, Bedryfskennis, Skoolbiblioteekkunde.

Universiteitsonderwysdiploma in Beeldende Kunste - U.O.D.B.K.: Vier jaar na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

'n Student moet gelyktydig vir die B.A.(B.K.)-graad en die Diploma aan die begin van sy eerste of tweede studiejaar inskryf en kan die graad en die diploma na 'n vierjarige studie verwerf. Die minimum aantal goedgekeurde skoolvakke moet by die kursus ingesluit word.

Potchefstroomse Universiteitsonderwyslisensiaat in Musiek - P.U.O.L.M.: Drie jaar na 'n Matrikulasie- of Standaard 10-sertifikaat.

'n Student moet die Hoof van die Musiekdepartement in 'n praktiese en teoretiese toets bevredig dat sy standaard hoog genoeg is om met vrag die kursus te volg. Hy moet Musiek as vak vir st. 10 geslaag het of die gevorderde standaard van die Universiteit van Suid-Afrika in die gekose praktiese vak behaal het.

Primêre onderwyserskursus

Primêre Nasionale Onderwysdiploma - P.N.O.D.: Vier jaar na 'n Matrikulasie- of Standaard 10-sertifikaat. Gedurende die eerste drie jaar volg al die studente 'n algemene primêre skoolkursus en in die vierde jaar, indien dit aangebied word, het hulle 'n keuse tussen 'n pre-primêre, junior primêre en senior primêre kursus. Die senior primêre kursus kan geneem word in algemene skoolvakke of in remediërende onderwys vir die primêre skool.

Onderwysersdiploma in Verpleegkunde

Universiteitsonderwysdiploma (Verpleegkunde): Kyk p. 405.

UNIVERSITEIT VAN PRETORIA

Sekondêre onderwyserskursusse

Baccalaureus in Lettere en Wysbegeerte (Educationis) - B.A. (Ed.)

Baccalaureus in Handel (Educationis) - B.Com. (Ed.)

Baccalaureus in Wis- en Natuurkunde (Educationis) - B.Sc. (Ed.)

Die leergange vir bogenoemde drie grade is elk 'n vierjarige samegestelde akademiese en

professionele graadleergang wat voldoen aan al die vereistes vir die betrokke graad asook aan die vereistes vir die opleiding van onderwysers vir sekondêre skole.

Die toelatingsvereistes is vir al drie bogenoemde grade dieselfde soos vir die betrokke gewone graad. Kyk B.A. p. 57, B.Com. p. 110 en B.Sc. p. 164.

Baccalaureus in Landbou (Educationis) - B.Sc. (Agric.) (Ed.): Vier jaar voltydse studie na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling). Kyk LANDBOU p. 356.

Baccalaureus in Wis- en Natuurkunde in Huishoudkunde (Educationis) - B.Sc. (Huish.) (Ed.): Vier jaar voltydse studie na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling). Kyk HUISHOUDKUNDE p. 342.

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Kuns) - B.A. (Ed.) (Kuns): Vier jaar voltydse studie na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling). Kyk BEELDENDE KUNSTE p. 317.

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Musiek) - B.A. (Ed.) (Musiek): Vier jaar voltydse studie na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling). Kyk MUSIEK p. 369.

Hoër Onderwysdiploma (Nagraads): Een jaar voltydse studie na 'n Baccalaureusgraad wat òf die minimum aantal kursusse in goedgekeurde skoolvakke insluit òf vir onderwysdoel= eindes erken word afgesien van die vaksamestelling.

Hoër Onderwysdiploma (Nagraads) (Na-uurs): 'n Na-uurse nagraadse kursus wat oor drie semesters strek. Slegs 'n kandidaat wat in 'n vaste betrekking staan en aan die toelatingsvereistes vir die eenjarige voltydse nagraadse kursus vir Sekondêre onderwys voldoen, word tot die na-uurse kursus toegelaat.

Hoër Onderwysdiploma: Vier jaar voltydse studie na 'n Matrikulasie- of Standaard 10-sertifikaat met Afrikaans en Engels as geslaagde vakke. Hierdie Diploma word met die volgende endossemente aangebied: Algemeen; Bedryfskennis; Handel; Handel Sekretarieel; Huishoudkunde; Kuns; Liggaamlike Opvoedkunde; Musiek; Tegnieese Onderwys.

Met die uitsondering van twee gevalle bestaan daar vir elke endossement (spesialiteits= rigting) ook addisionele toelatingsvereistes, hoofsaaklik wat geslaagde vakke vir die st. 10-eksamens betref.

Sekondêre en/of primêre onderwyserskursus

Diploma in Musiek (Individuele Onderwys): Drie jaar na 'n Standaard 10-sertifikaat. Kyk MUSIEK p. 372.

Primêre onderwyserskursusse

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Senior Primêr) - B.A. (Ed.) (Senior Primêr)

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Junior Primêr) - B.A. (Ed.) (Junior Primêr)

Die leergange vir bogenoemde twee grade is elk 'n vierjarige samegestelde akademiese en professionele graadleergang wat voldoen aan al die vereistes vir die B.A.-graad asook aan die vereistes vir die opleiding van onderwysers vir primêre skole.

Die toelatingsvereistes is dieselfde soos vir die gewone B.A.-graad. Kyk p. 57.

Pre-primêre onderwyserskursusse

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Pre-primêr) - B.A. (Ed.) (Pre-primêr): Die leergang is 'n vierjarige samegestelde akademiese en professionele graadleergang wat voldoen aan die vereistes vir die B.A.-graad, asook aan die vereistes vir die

opleiding van pre-primêre onderwysers.

Die toelatingsvereistes is dieselfde soos vir die gewone B.A.-graad. Kyk p. 57.

Hoër Nasionale Onderwysersdiploma (Pre-primêr): Een jaar voltydse studie na 'n driejarige onderwysersertifikaat; of na 'n goedgekeurde graad vir onderwysdoeleindes, met dien verstande dat een kursus in elk van die amptelike tale en een kursus in Opvoedkunde of een kursus elk in Sosiologie sowel as Sielkunde ingesluit is.

Ander onderwyserskursusse

Hoër Nasionale Onderwysdiploma (Buitengewone Onderwys): Een jaar voltydse studie na 'n driejarige onderwyssertifikaat of 'n Baccalaureusgraad en 'n eenjarige nagraadse onderwysdiploma. Kandidate volg die voorgeskrewe kursusse en kan dan in minstens een van die volgende endossemente spesialiseer: Breinbeskadigde kinders; Dowe kinders; Hardhorende kinders; Leergestremde kinders; Swaksiende kinders; Verstandelik gestremde kinders.

Diploma in Speciale Onderwys (Pedoterapie): Een verlengde akademiese jaar na:

- Die grade B.A. (Hons.)(Sielkunde); of B.A. (Hons.)(Sosiologie); of B.A.(S.W.) (Hons.) en Sielkunde III; of
- 'n Baccalaureusgraad met Sielkunde III of Sosiologie III en 'n H.O.D. (Nagraads) of 'n ander goedgekeurde middelbare onderwysdiploma; of
- die B.A. (Log.)-graad van die Universiteit; of
- ander kwalifikasies wat deur die Fakulteitsraad as voldoende vir toelating beskou word.

Onderwysdiploma in Arbeidsterapie: Kyk p. 313.

Onderwysdiploma in Fisioterapie: Kyk p. 335.

Diploma in Verplegingsonderwys: Kyk p. 405.

Baccalaureus in Verpleegkunde (Onderrig en Administrasie) - B.Cur. (I. et A.) Kyk p.404.

RANDSE AFRIKAANSE UNIVERSITEIT

Sekondêre onderwyserskursusse

B.A. (Opvoedkunde) - graad

B.Bibl. (Opvoedkunde) - graad

B.Com. (Opvoedkunde) - graad

B.Sc. (Opvoedkunde) - graad

Die leergange vir bogenoemde vier grade is elk 'n vierjarige samegestelde akademiese en professionele graadleergang wat voldoen aan al die vereistes vir die betrokke graad sowel as aan die vereistes gestel deur die Komitee vir Onderwyshoofde vir die opleiding van onderwysers vir sekondêre skole.

Die toelatingsvereistes is dieselfde soos vir die betrokke gewone graad. Vir B.A. kyk p. 59, B.Bibl. p. 59, B.Com. p. 114 en vir B.Sc. 166.

Nagraadse Hoër Onderwysdiploma - N.H.O.D.: Een somertermyn (ongeveer 1½ maande) en twee semesters voltydse studie of een somertermyn en drie semesters deeltydse studie na 'n goedgekeurde Baccalaureusgraad wat die minimum aantal vakke vir onderwysdoeleindes, soos bepaal deur die Komitee vir Onderwyshoofde, insluit.

Vierjarige Diploma vir Hoër Onderwys - H.O.D.: Vier jaar voltydse studie na 'n Matri-

kulasie of Standaard 10-sertifikaat met ten minste 'n D-simbool (50 persent) en Afrikaans en Engels as geslaagde vakke. Hierdie Diploma kan in die volgende rigtings verwerf word: Tale en Geesteswetenskappe; Handelsrigting (akademiese vakke); Handelsrigting (vaardigheidsvakke); Liggaamlike Opvoeding.

Vir elke rigting bestaan daar ook addisionele toelatingsvereistes, hoofsaaklik wat slaagsyfers in bepaalde vakke vir die Matrikulasie of st. 10-eksamens betref.

Eenjarige Nagraadse Hoër Onderwysdiploma (Tegnies) - N.H.O.D. (Tegnies): Een jaar na 'n Baccalaureusgraad met goedgekeurde skoolgerigte hoofvakke, bv. Wiskunde en Natuur- en Skeikunde.

Eenjarige Hoër Onderwysdiploma (Tegnies) - H.O.D. (Tegnies): Een jaar na 'n Standaard 10-sertifikaat of gelykwaardige kwalifikasie en 'n driejarige diploma wat minstens twee skoolvakke (tegniese vakke) op 'n twee-jaar peil insluit, bv. motorwerktuigkunde, elektrisiteit, radiowerktuigkunde, houtbewerking, loodgieterswerk, en sweis- en metaalwerk.

RHODES-UNIVERSITEIT

Sekondêre onderwyserskursusse

Nasionale Hoër Onderwysdiploma (Gegradueerd): Een jaar na 'n goedgekeurde graad in Lettere en Wysbegeerte, Natuurwetenskappe of Handel, met sekere bepaalde kursusse in die leergang van dié graad ingesluit.

Nasionale Hoër Onderwysdiploma (Nie-gegradueerd): Vier jaar na 'n Standaard 10-sertifikaat. Die Diploma kwalifiseer die houer daarvan as 'n hoërskoolonderwyser.

Die leergang van die Diploma sal kragtens sekere bepalinge gereël word met inagneming van die kursusse wat gevolg moet word.

Universiteitcertifikaat vir Kunsonderwysers: Een jaar na 'n Diploma in Beeldende Kunste en 'n Standaard 10-sertifikaat.

Universiteitsdiploma vir Musiekonderwysers: Twee jaar na die Primêre Onderwyserssertifikaat van die Onderwysdepartement van die Kaap die Goeie Hoop of 'n ander erkende onderwyserssertifikaat. Kandidate moet 'n eksamen in sang of 'n instrument in die Gevorderde Graad, of 'n eksamen wat die Senaat as gelykwaardig beskou, geslaag het.

Aan kandidate in besit van die Hoër Primêre Onderwyserssertifikaat in Musiek wat 'n eksamen in sang of 'n instrument in die Finale Graad van die Associated Board of the Royal Schools of Music of van die Universiteit van Suid-Afrika of 'n eksamen wat die Senaat as gelykwaardig beskou, geslaag het, kan krediet verleen word vir die eerstejaarskursusse van die leergang.

Hierdie Diploma kwalifiseer die houer daarvan om musiek in die sekondêre skool te onder- rig.

Primêre onderwyserskursusse

Nasionale Hoër Onderwysdiploma (Gegradueerd, vir senior primêre skoolonderwysers): Een jaar na 'n Baccalaureus- of hoër graad wat sekere voorgeskrewe skoolvakke insluit.

Laer en Hoër Primêre Onderwyserssertifikaat: Drie jaar na 'n Standaard 10-sertifikaat.

Primêre Onderwyserssertifikaat in Kuns: Een jaar na 'n Primêre Onderwyserssertifikaat van die Onderwysdepartement van die Kaap die Goeie Hoop of 'n ander erkende onderwyserssertifi- kaat.

Primêre Musiekonderwyserssertifikaat: Drie jaar na 'n Standaard 10-sertifikaat. Hierdie Sertifikaat kwalifiseer die houer daarvan as 'n musiekonderwyser in die primêre skool.

Sekondêre onderwyserskursusse

B.Sc. in Huishoudkunde (Ed.): Vier jaar voltydse studie na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk HUISHOUDKUNDE p. 342.

B. in Huishoudkunde (Ed.): Soos vir B.Sc. in Huishoudkunde (Ed.). Kyk ook p. 343.

B.Mus. (Ed.) Spesialisering: Instrumentale of Sang-onderwys

en

B.Mus. (Ed.) Spesialisering: Skoolmusiek

Soos vir B.Mus. Kyk MUSIEK p. 368.

Hoër Onderwysdiploma (Sekondêr - Musiek) - H.O.D. (Sekondêr - Musiek): Vier jaar voltyds na 'n Matrikulasie- of Standaard 10-sertifikaat, op voorwaarde dat die kandidaat

- 'n slaagsyfer in Musiek van minstens 50 persent op die Hoër Graad of 60 persent op die Standaardgraad in die Standaard 10-eksamen behaal het, of
- die Gevorderde Eksamen (Universiteit van Suid-Afrika) in die praktiese hoofonderwerp afgelê het, en in Harmonie 'n standaard gelykstaande aan die Hoër afdeling (Universiteit van Suid-Afrika) bereik het, of
- 'n toelatingseksamen, gelykstaande aan die eksamens hierbo vermeld, aflê in die praktiese hoofonderwerp en in Harmonie.

Hierdie Diploma kan in die volgende spesialiseringrigtings verwerf word: Instrumentale of Sang-onderwys; Skoolmusiek.

B. in Landbou-onderwys: Vier jaar na 'n Matrikulasie- of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Standaardgraad. Kyk LANDBOU p. 356.

Hoër Onderwysdiploma (Nagraads)(Sekondêr) - H.O.D.: Een jaar na 'n B.-graad van 'n erkende universiteit wat die minimum aantal voorgeskrewe skoolvakke insluit.

Vierjarige Hoër Onderwysdiploma (Sekondêr) - H.O.D.: Vier jaar voltyds na 'n Matrikulasie- of Standaard 10-sertifikaat. Hierdie Diploma kan in die volgende spesialiseringrigtings verwerf word: Geesteswetenskappe en Tale; Natuurwetenskappe; Handel; Liggaamlike Opvoedkunde; Huishoudkunde en Naaldwerk. Die Handelsrigting word ook buitemuurs aangebied.

Studente wat die Natuurwetenskaplike rigting wil volg, moet in besit wees van 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde.

Primêre onderwyserskursusse

B.-graadkursus in Primêre Onderwys (Algemene Rigting): Vier jaar na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) op voorwaarde dat die kandidaat in die Junior Sertifikaat (Standaard 8) in minstens een Wiskundige/Syferkundige vak geslaag het en by die eindeksamen van st. 9 en by die Junie-eksamen van st. 10 'n bevredigende standaard in albei die amptelike landstale behaal het.

Vir toelating tot Wiskunde III (Ond.) en Natuurwetenskap III (Ond.) is 'n slaagsyfer in onderskeidelik Wiskunde en 'n natuurwetenskap op die Standaardgraad in die Matrikulasie-eksamen 'n vereiste.

B.-graadkursus in Primêre Onderwys met Spesialisering in Liggaamlike Opvoedkunde: Vier jaar na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook B.-graadkursus in Primêre Onderwys (Algemene rigting).

B.-graadkursus in Primêre Onderwys met Spesialisering in Skoolmusiek: Vier jaar na 'n

Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling), mits die kandidaat

- minstens 60 persent as slaagsyfer in Musiek (eksamenvak) vir st. 8 behaal het; of
- die Graad VI (Intermediêr)-eksamen in klavier van die Universiteit van Suid-Afrika geslaag het; of
- 'n toelatingseksamen in klavier aflê gelykstaande aan bogenoemde.

By die eindeksamen van st. 9 en by die Junie-eksamen van st. 10 moes die kandidaat 'n bevredigende standaard in albei die landstale behaal het.

B.-graadkursus in Primêre Onderwys met Spesialisering in Leer- en Opvoedingsmoelikhede: Vier jaar. Tot die kursus word toegelaat studente

- wat die tweede studiejaar van die B.-graadkursus in Primêre Onderwys (algemene rigting) suksesvol voltooi het; of

in die geval van studente van ander opleidingsrigtings wat kwalifiseer vir toelating tot die derde studiejaar van die B.-graadkursus in Primêre Onderwys (algemene rigting), en

- wat op skriftelike aansoek deur die Senaat, of deur die Uitvoerende Komitee handelende namens die Senaat, tot die kursus toegelaat is.

Laer Diploma in Skoolbiblioteekkunde: Een jaar na 'n goedgekeurde driejarige primêre onderwyskwalifikasie.

Sekondêre en/of primêre onderwyserskursusse

Lisensiaat in Musiekonderwys - L.M.O.: Drie jaar voltyds na 'n Matrikulasie- of Standaard 10-sertifikaat, op voorwaarde dat die kandidaat

- 'n slaagsyfer in Musiek van minstens 60 persent in die Standaard 10-eksamen behaal het, of
- die Graad VII-eksamen (Universiteit van Suid-Afrika) in die praktiese hoofonderwerp afgelê het, en in Harmonie 'n standaard gelykstaande aan Graad V (Universiteit van Suid-Afrika) bereik het, of
- 'n toelatingseksamen, gelykstaande aan die eksamens hierbo vermeld, aflê in die praktiese hoofonderwerp en in Harmonie.

Diploma in Spesialiseringsonderwys (Skoolbiblioteekwese): Een jaar na 'n goedgekeurde driejarige Primêre Onderwysdiploma.

Diploma in Spesialiseringsonderwys (Skoolmusiek): Een jaar na 'n goedgekeurde driejarige Primêre Onderwysdiploma. Studente moet 'n toelatingseksamen in Klavier aflê waarin die standaard van Graad VII van die Universiteit van Suid-Afrika vereis word. Kandidate wat in die jaar onmiddellik voor toelating die Graad VII of 'n hoër eksamen in Klavier van UNISA of die Associated Board of Royal Schools of Music geslaag het, word van hierdie toelatingseksamen vrygestel.

Persone wat reeds Skoolmusiek as intensiewe spesialisering rigting gevolg het, word nie tot die kursus toegelaat nie.

Diploma in Spesialiseringsonderwys (Sprak en Drama): Een jaar na 'n goedgekeurde driejarige Primêre Onderwysdiploma met

- minstens 60 persent in Sprak en Drama as derdejaarsvak vir die Primêre Onderwysdiploma (Senior Standerds); of
- minstens 70 persent of 'n A-simbool in Sprakopleiding vir die Primêre Onderwysdiploma (Junior Standerds).

Ander onderwyserskursusse

Diploma in Buitengewone Onderwys: Drie jaar na 'n erkende graad met Sielkunde as hoofvak, asook 'n onderwysersertifikaat, of 'n ander kwalifikasie wat deur die Senaat vir die doel goedgekeur word. Kandidate moet reeds in 'n betrekking staan waarin hulle skoolsielkundige werk doen en/of waarin hulle onderrig gee aan vertraagde leerlinge.

Kandidate moet twee keer per jaar vir twee weke op 'n keer intensiewe kursusse aan die Universiteit van Stellenbosch bywoon.

Diploma in Spesialiseringsonderwys (Klinies-remediërend) - D.S.K.R.: Een jaar voltydse studie na suksesvolle voltooiing van minstens 'n driejarige onderwysersopleidingskursus; minstens drie jaar onderwys- of enige ander voldoende ervaring en toelating tot die kursus deur die Senaat op skriftelike aansoek.

Diploma in Spesialiseringsonderwys (Verstandelik Gestremdheid) - D.S.V.G.: Een jaar na:

- Die Hoër Primêre Onderwysersdiploma (H.P.O.D.) van hierdie Universiteit of 'n ander driejarige onderwysdiploma of -sertifikaat wat daarmee gelyk gestel kan word; of
- 'n graad en die Sekondêre Onderwysersdiploma (S.O.D.) van hierdie Universiteit of daarmee gelykstaande kwalifikasies.

Onderwysersdiploma in Arbeidsterapie: Kyk p. 314.

Diploma in Verplegingsonderwys: Kyk p. 405.

UNIVERSITEIT VAN SUID-AFRIKA

Sekondêre onderwyserskursus

Hoër Onderwysdiploma (Nagraads) - H.O.D. (Nagraads): Een of twee jaar na 'n goedgekeurde graad wat die vereiste aantal kursusse in die goedgekeurde skoolvakke insluit en 'n onderwysdiploma wat deur die Senaat erken word; of

twee jaar na bogenoemde graad sonder 'n diploma: met dien verstande dat die voltooiing van die H.O.D. (Nagraads) onderworpe sal wees aan twee volle skoolkwartale of ses maande bevredigende ervaring, as onderwyser of dosent aan 'n onderwysersopleidingskollege, in diens van 'n Suid-Afrikaanse Onderwysdepartement.

Tersiêre onderwyserskursus

Diploma in Tersiêre Onderwys - D.T.O.: 'n Student moet in besit wees van minstens 'n Baccalaureusgraad. Die Diploma sal egter nie uitgereik word alvorens die kandidaat minstens twee jaar toepaslike ervaring voltooi het in 'n inrigting wat opleiding op tersiêre vlak verskaf nie.

Die eksamen bestaan uit twee dele wat òf afsonderlik òf gelyktydig afgelê mag word.

Primêre en/of sekondêre onderwyserskursusse

Sertifikaat in Skoolbiblioteekkunde: 'n Student moet in besit wees van:

- 'n Laer diploma in Biblioteekkunde; of
- 'n onderwysersertifikaat; of
- 'n universiteitsgraad.

Die leergang bestaan uit Skoolbiblioteekkunde I en II en hierdie kursusse kan gelyktydig afgelê word.

Diploma in Skoolbiblioteekkunde: Twee jaar na:

- 'n Erkende driejarige onderwyserssertifikaat; of
- 'n erkende nagraadse onderwysersdiploma; of
- 'n vierjarige Baccalaureusgraad in die Opvoedkunde.

Pre-primêre onderwyserskursusse

Hoër Onderwysdiploma (Pre-Primêr) - H.O.D. (Pre-Primêr) en

Hoër Onderwysdiploma (Nagraads Pre-Primêr) - H.O.D. (Nagraads Pre-Primêr):
Minstens twee jaar na:

- 'n Erkende onderwysersdiploma wat na 'n driejarige onderwysersopleidingskursus uitgereik is; of
- 'n graad wat die vereiste aantal kursusse in die goedgekeurde skoolvakke insluit, asook minstens een kursus in elk van die amptelike tale en minstens een kursus in Opvoedkunde of minstens een kursus in elk van twee van die volgende vakke: Sosiologie, Sielkunde, Logopedika, Maatskaplike Werk.

Diploma in Kleuteropvoeding - D.K.O.:

(L.W. Hierdie Diploma voldoen nie aan die kriteria vir die waardebeoordeling van Suid-Afrikaanse kwalifikasies vir indiensneming in die Provinsiale Onderwysdepartemente nie.)

Die leergang duur minstens twee jaar na:

- 'n Erkende tweejarige onderwysdiploma waarvoor 'n Standaard 10-sertifikaat 'n toelatingsvereiste was; of
- 'n graad met drie kursusse in een en minstens een kursus in 'n ander van die volgende vakke: Sielkunde, Sosiologie, Maatskaplike Werk, Opvoedkunde, Filosofie; of
- 'n graad, of 'n diploma waarvoor 'n Standaard 10-sertifikaat 'n toelatingsvereiste was, in verpleging, spraakterapie, fisioterapie, arbeidsterapie of Maatskaplike Werk.

Ander onderwyserskursusse

Diploma in Spesialiseringsonderwys - D.S.O.

A. Buitengewone Onderwys

Buitengewone onderwys vir Gesigsgestremdes (blindes en swaksiendes); Gehoorgestremdes (dowes en hardhorendes); Epileptici; Serebraal verlamdes.

Die leergang duur minstens twee jaar na:

- 'n Erkende onderwysersdiploma wat na 'n driejarige onderwysersopleidingskursus uitgereik is; of
- 'n graad en 'n erkende onderwysersdiploma.

B. Remediërende Onderwys

Die leergang duur minstens twee jaar na:

- 'n Erkende onderwysersdiploma wat na 'n driejarige onderwysersopleidingskursus uitgereik is; of
- 'n graad en 'n erkende onderwysersdiploma.

Diploma vir Terapeute (Buitengewone Onderwys) - D.T.B.O.: Minstens twee jaar na òf 'n toepaslike graad òf 'n toepaslike driejarige diploma in Fisioterapie, of Arbeidsterapie, of Spraakterapie op grond waarvan die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad registrasie as fisioterapeut, of arbeidsterapeut, of spraakterapeut by die Raad goedgekeur is.

Sertifikaat in Buitengewone Onderwys - S.B.O.

(L.W. Hierdie Sertifikaat word nie deur die Departement van Nasionale Opvoeding of die Provinsiale Onderwysdepartemente vir salarisdoeleindes erken nie, maar Kleurlinge, Indiërs en Bantoes mag moontlik erkenning van hul Departemente ontvang.)

Buitengewone onderwys vir Epileptici, Serebraal Verlamdes, Gesigsgestremdes en Gehoorgestremdes.

Die leergang duur minstens twee jaar na 'n erkende onderwysersdiploma wat na 'n tweejarige onderwysersopleidingskursus uitgereik is, waarvoor 'n Standaard 10-sertifikaat 'n toelatingsvereiste was.

UNIVERSITEIT VAN DIE WITWATERSRAND

Sekondêre onderwyserskursusse

Hoër Onderwysdiploma (Nagraads): Een jaar voltydse studie of twee jaar deeltydse studie na 'n goedgekeurde graad wat 'n geskikte samestelling van skoolvakke insluit.

Hoër Onderwysdiploma: Vier jaar voltydse studie na 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Die Senaat kan in die tussentyd, tot die einde van 1975, toelating verleen aan 'n persoon wat nie so gekwalifiseerd is nie, maar wat in besit is van 'n goedgekeurde standaard tien-sertifikaat.

Elke leergang sal onder andere insluit:

- Vier kursusse in een van die volgende praktiese vakke, een kursus gedurende elke jaar van die leergang:
 - . Huishoudkunde
 - . Bedryfskennis
 - . Liggaamlike Opvoeding
 - . Tikskrif
- kursusse in sekere voorgeskrewe akademiese vakke.

Ander onderwyserskursusse

Diploma in Remediërende Onderwys: Twee jaar deeltydse studie na

- 'n graad en 'n erkende onderwysersdiploma en minstens twee jaar onderwyservaring; of
- 'n erkende onderwysersdiploma en 'n Standaard 10-sertifikaat (Matrikulasievystelling) en minstens vyf jaar onderwyservaring; of
- 'n graad en minstens drie jaar onderwyservaring.

Diploma in Onderwys vir Dowes: Twee jaar na 'n erkende Onderwysersdiploma wat behaal is na minstens twee jaar studie na 'n Matrikulasië- of 'n Standaard 10-sertifikaat (Matrikulasiëvrystelling). Die leergang vir die Onderwysersdiploma moet 'n goedgekeurde kursus in Sielkunde en kursusse in Engelse asook Afrikaanse spreektaal insluit.

Diploma in Verplegingsonderwys: Kyk p. 405.

Onderwysdiploma in Fisioterapie: Kyk p. 335.

B E R O E P S D I E N S

Iemand wat 'n onderwyser word, betree 'n besondere loopbaan, 'n loopbaan wat groter verantwoordelikheid meebring en aan die toegewyde persoon hoër eise stel as enige ander loopbaan. Daar is wel mense in die professie wat met groot gemak deur hul loopbaan heen seil, sonder veel kommer oor die verantwoordelikheid wat op hulle rus, maar hul getalle is hopelik klein.

Daar is ook mense wat in die professie beland om ander redes as die begeerte om as ware opvoeders diens te lewer, byvoorbeeld mense wat na 'n opleidingsinrigting vir onderwysers gaan omdat hulle maklik finansiële hulp kan kry om te studeer; of omdat hulle dink die opleidingskursusse is makliker as ander kursusse; of omdat hulle die opleiding wil gebruik vir 'n ander beroep en die onderwys dan maar net 'n "stepping-stone" is tot, na hul mening, iets beters; of omdat die onderwysers "so baie vakansie" kry; of omdat dit vir hulle na 'n "maklike" werk lyk wat minder inspanning en toewyding vereis as ander beroepe; of omdat hulle nie "slim" genoeg is om dokters, advokate, ingenieurs, argitekte of bouaannemers te word nie; of sommer net omdat hulle niks anders kan kry om te doen nie.

Die onderwysprofessie kan – en moet – sonder hierdie mense klaarkom, want die onderwys en opvoeding van ons kinders is te belangrik om aan hulle soort toevertrou te word.

Watter eise word daar dan aan die "goeie" onderwyser gestel? Hier is 'n paar daarvan:

– Die goeie onderwyser moet meer as gemiddeld intelligent wees, hoe hoër bogemiddeld hoe beter. Hy (sy) sal normaalweg met kinders uit al die verstandelike lae werk, van "ondergemiddeld" tot hoogs superieur, en moet verstandelik toegegerus wees om dit te kan doen.

– Die goeie onderwyser moet die regte soort temperament en persoonlikheid hê vir die werk. Hy (sy) moet iemand van hoë integriteit wees, met visie, dryfkrag, opregte menseliefde, deursettingsvermoë en die wil en begeerte om te dien; hy (sy) moet 'n begrip van kinders hê, en van hul probleme op die pad na grootmens word, en hy (sy) moet weet hoe om die kinders en hul probleme te hanteer en in hul opvoedingsbehoefte te help voorsien.

– Die goeie onderwyser moet sy vak of vakke deur-en-deur ken. Daar is niks meer pateties in die onderwys as die onderwyser wat nie weet waarvan hy praat nie, wat verkeerde dinge leer of dinge verkeerd leer. Die goeie onderwyser vind geen moeite te veel om hom deeglik op die hoogte te stel met die leerinhoud van sy vakke nie.

– Die goeie onderwyser is een wat deeglik opgelei is vir sy werk. Slegte dokters kan mense se liggame beskadig, slegte prokureurs kan hul kliënte laat bankrot speel, maar slegte onderwysers beskadig kinders na siel en gees.

– Die goeie onderwyser glo in kinders; onderskat nooit hul vermoëns en moontlikhede nie; moedig hulle aan om hoog en hoër te mik en om nie met minimums tevrede te wees nie; knou kinders nie af nie, nóg liggaamlik nóg geestelik; probeer nie van kinders ontslae raak as hulle nie vinnig genoeg vorder om vir die onderwyser 'n reputasie vir "goeie uitslae" te help verwerf nie; soek nie net om sy eie belang te bevorder nie; is nie te haastig om vrag op sy arbeid te sien nie; gee die moed en die hoop nooit op nie; weet dat sy werk nie net 'n beroep of 'n professie is nie, maar 'n roeping, en dat die goeie (of die slegte) werk wat hy doen in die harte en die gees van mense sal voortleef

lank nadat hy nie meer daar is nie.

As aan vereistes soos die bogenoemde voldoen moet word, spreek dit vanself dat nie sommer enigeen onderwyser kan word nie. Daarvoor is ons land se mense materiaal te kosbaar. Die onderwyser het die taak en deel in die verantwoordelikheid om die kind tot volwassenheid te help lei, en geen groter verantwoordelikheid as dit kan op enige mens geplaas word nie. Gelyktydig hiermee moet leerstof op so 'n wyse aangebied word dat die kind dit sy eie kan maak. Hierdie verantwoordelikheid rus veral swaar op die onderwyser in die primêre skool wat die kind ook moet leer om positief teenoor die onderwys te staan en om dit te geniet. Wat van 'n kind eendag gaan word, hoe hy teenoor die lewe gaan staan, sy toekomstige sukses of mislukkings, of hy 'n gelukkige en nuttige mens en burger gaan wees, word in 'n hoë mate reeds in sy vroegste skooljare bepaal.

Omstandighede waaronder onderwysers vandag werk, is deesdae beslis aangenaam. Moderne skoolgeboue is ruim, aantreklik, gerieflik en met 'n menigte moderne hulpmiddels toegevoeged. Skoolsale vorm deel van die toerusting van feitlik elke skool, terwyl baie skole oor swembaddens, doeltreffende sportterreine en selfs dinge soos eie skoolbusse beskik. Die besoldiging van onderwysers vergelyk baie goed met dié in ander rigtings waarvoor 'n soortgelyke mate van opleiding vereis word.

Onderwysers van Liggaamlike Opvoeding het gewoonlik die grootste aandeel in na-uurse sportaktiwiteite, maar alle onderwysers het die geleentheid om deur middel van die vele buitenuurse bedrywighede die leerlinge beter te leer ken en ook langs dié weg by te dra om hulle tot normale en gebalanseerde volwassenheid te lei.

Daar is baie rigtings in die onderwys waarvoor kandidate hulle kan bekwaam en 'n hele aantal soorte skole waaruit hulle kan kies, volgens hul aanleg en belangstelling. Daar is byvoorbeeld kleuteronderwys, primêre onderwys, sekondêre onderwys in die "gewone" skole; buitengewone onderwys deur die Provinsiale Onderwysdepartemente voorsien (onderwys van verstandelik vertraagdes, gedragsafwykendes, hardhorendes, spraakgebrekkiges, kroniese siek leerlinge verbonde aan hospitale ens.); buitengewone onderwys wat onder die Departement van Nasionale Opvoeding ressorteer (onderwys van gesigsgestremdes, gehoorgestremdes, epileptici, serebraal verlamdes en breinbeskadigdes, asook liggaamlik gebrekkiges) en buitengewone onderwys ingevolge die Kinderwet (nywerheidskole en verbeteringskole).

Ander rigtings wat die onderwysers kan kies, is landbou-onderwys, handelsonderwys, huishoudkunde-onderwys, tegniese onderwys (tegniese skole, tegniese kolleges, tegniese institute en kolleges vir gevorderde tegniese onderwys), kunsonderwys, en so meer. Diegene wat oor die nodige kwalifikasies en ondervinding beskik en belangstel in die opleiding van studente, kan in aanmerking kom vir betrekkinge as dosente aan kolleges vir gevorderde tegniese onderwys, die verskillende soorte onderwysersopleidingskolleges en universiteite.

Buite die skoolonderwys is daar 'n verskeidenheid van betrekkinge waarin onderwysers met die nodige opleiding en ondervinding aangestel kan word, soos byvoorbeeld dié verbonde aan die deskundige hulpdienste wat deur die onderskeie onderwysdepartemente ingestel is, soos die Sielkundige en Voorligtingsdienste met poste as skoolsielkundiges, beroepsvoorligters, spraakterapeute, remediërende onderwysers en so meer.

Onderwysers begin gewoonlik as junior assistente. Dié wat bekwaam en pligsgetrou is, wat oor inisiatief, organisasievermoë en leierskaphoedanighede beskik, kan mettertyd vorder na betrekkinge soos dié van senior assistent, vise-hoof, adjunk-hoof en hoof. Uit die geledere van die onderwyserskorps word ook ander professionele poste gevul wat in die onderskeie onderwysdepartemente bestaan, soos dié van vakinspekteurs, beplanners, navorsers e.d.m.

Die konsensieuse en suksesvolle onderwyser bly altyd 'n student wat homself verdiep in sy werk, op die hoogte bly met veranderings en vernuwings, veral op sy eie vakgebied, en steeds probeer om die kind te laat deel in sy eie rykdom van kennis en lewenswyshheid. Daarom word verdere studie besonder sterk beklemtoon. Nie alleen is verdieping van vakkennis wenslik nie, maar ook die verwerking van gevorderde opvoedkundige kwalifikasies soos die B.Ed.-graad en verdere grade en diplomas.

Ook die onderwys en die opvoeding staan in hierdie eeu van wetenskaplike en tegnologiese ontploffing in die teken van vernuwing, groei en verandering wat betref leerinhoud, metodes, prosedures en benadering. Die uitdagings vir knap en dinamiese jongmense binne die professie is opwindend en talryk, en dis hulle wat gesoek word. Die onderwys is die een gebied waarop Suid-Afrika minderwaardigheid nie kan bekostig nie.

CHAPTER - 6 - HOOFSTUK

OTHER FIELDS OF STUDY AND VOCATIONAL SERVICE

NOTE: In this chapter all the degrees, diplomas and certificates are mentioned which may be obtained in each field of study, but in most of these fields only the first degrees and diplomas and certificates are treated, since such degree, diploma or certificate usually enables the candidate to enter a profession. When candidates have obtained the first degree, they themselves can obtain the necessary information concerning post-graduate study from the university or universities concerned. Normally the regulations will be the same as those applicable in the Faculties of Arts, Science and Commerce.

The table below indicates which of the fields of study discussed in this chapter are offered by the different universities.

TABLE
FIELDS OF STUDY OFFERED BY UNIVERSITIES

Fields of Study	UCT	NATAL	UOFS	UPE	PU for CHE	UP	RAU	RHODES	US	UNISA	WITS
Agriculture		x	x			x			x		
Architecture	x	x	x	x		x					x
Building Science	x	x	x	x		x					x
Communication/Journalism			x		x		x	x		x	
Dentistry						x			x		x
Dietetics	x	x	x		x	x			x		
Engineering	x	x				x			x		x
Fine Arts	x	x	x		x	x		x	x	x	x
Food Science									x		
Forestry									x		
Home Economics/Domestic Science	x	x	x		x	x			x		
Landscape Architecture						x					
Land Surveying	x	x				x					x
Law	x	x	x	x	x	x	x	x	x	x	x
Librarianship/Library Science	x	x	x		x	x	x	x	x	x	x
Medicine	x	x	x			x			x		x
Military Science									x		
Music	x	x	x	x	x	x		x	x	x	x
Nursing	x	x	x	x	x	x	x		x		x
Occupational Therapy	x								x		x
Pharmacy					x			x			
Physical Education			x		x	x		x	x		
Physiotherapy	x		x						x		x
Quantity Surveying	x	x	x	x		x					x
Radiography			x			x					
Social Science/Social Work	x	x	x	x	x	x	x	x	x	x	x
Speech and Drama	x	x	x		x	x		x	x		x
Speech Therapy and Audiology/Logopaedics	x	x				x					x
Theology/Divinity		x			x	x		x	x	x	
Town and Regional Planning	x	x			x	x			x		x
Veterinary Science						x					

AGRICULTURE

Universities: Natal, Orange Free State, Pretoria, Stellenbosch

Degrees

Bachelor of Science in Agriculture: B.Sc. Agric. (Natal, UOFS)

Bachelor of Agriculture: B.Sc. (Agric.) (UP)

B.Sc. in Agriculture (US)

Bachelor of Agriculture: B. Agric. (UOFS)

Bachelor of Agriculture (Education): B.Sc. (Agric.)(Ed.) (UP)

Bachelor of Agricultural Education (US)

Bachelor of Agricultural Management (US)

Honours degrees

Bachelor of Science in Agriculture (Honours): B.Sc. Agric. (Hons.) (UOFS)

Bachelor of Agriculture (Honours): B.Agric. (Hons.) (UOFS)

Bachelor of Agriculture (Honours): B.Sc. (Agric.)(Hons.) (UP)

Baccalaureus Honores Institutionis Agrariae: B.Inst.Agrar. (Hons.) (UP)

Hons. B.Sc. in Agriculture (US)

Hons. B. of Agricultural Management (US)

Master's degrees

Master of Science in Agriculture: M.Sc. Agric. (Natal, UOFS)

Master of Agriculture: M.Agric. (UOFS)

Master of Agriculture: M.Sc.Agric. (UP)

Magister Institutionis Agrariae: M.Inst.Agrar. (UP)

M.Sc. in Agriculture (US)

M. of Agricultural Management (US)

Doctor's degrees

Doctor of Science in Agriculture: D.Sc. Agric. (Natal, UOFS)

Doctor of Philosophy: Ph.D. (Natal)

Doctor of Agriculture: D.Sc. (Agric.) (UP)

Doctor Institutionis Agrariae: D.Inst.Agrar. (UP)

Ph.D. (Agriculture) (US)

D.Sc. in Agriculture (US)

Ph.D. (Agricultural Management) (US)

DEGREES

Bachelor of Science in Agriculture: B.Sc. Agric. or

Bachelor of Agriculture: B.Sc. (Agric.) or

B.Sc. in Agriculture (Natal, Orange Free State, Pretoria, Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Natal: See p. 132.

Orange Free State: A pass in Mathematics on the Standard Grade.

Pretoria: See p. 164.

Stellenbosch: A pass in Mathematics and Physical Science on the Standard Grade.

Curriculum: Four years of full-time study. First year subjects include, inter alia, Chemistry, Physics, Mathematics, Biology or Botany or Zoology, but the subjects may vary according to the choice of major subjects.

In the second year students begin studying one or two of the following major subjects which in some cases differ from one university to another, since each university adapts its courses to the area in which it is situated: Agricultural Economics, Agro-meteorology (Natal, UOFS), Animal Science or Animal Production, Biochemistry, Biometry, Crop Science or Agronomy, Dairy Science, Enology and Viticulture (US), Entomology, Genetics, Horticultural Science (Natal, UP) or Ornamental Floriculture and Flower Production (US), Microbiology, Pasture Science, Plant Pathology, Pomology (US), Poultry Science, Soil Science.

Candidates are usually required to devote a specified period during the university vacations in their third or fourth years to practical work at an approved institution or farm.

The Universities of Natal, Pretoria and Stellenbosch offer Agricultural Engineering under the Faculty of Engineering (see p.239) and the University of the Orange Free State offers it as one of the subjects in the Faculty of Agriculture.

Bachelor of Agriculture: B.Agric. (Orange Free State)

Admission requirement: As for B.Sc. Agric.

Curriculum: Three years of full-time study. There are four different curricula:

- Plants/Animal field, which has been designed for the training of farmers, teachers and industrial advisers.
- Plants/Animal field/Protection Science, which has been designed for industrial advisers.
- Dairy/Animal Science/Microbiology, which has been designed to provide for the needs of dairy technologists, industrial advisers and farmers.
- Irrigation Science: This curriculum provides for the needs of the prospective irrigation farmer.

Bachelor of Agriculture (Education): B.Sc. (Agric.)(Ed.) (Pretoria)

Admission requirement: See p. 164.

Curriculum: Four years of full-time study. First year subjects comprise Chemistry, Physics, Biological Science, Pedagogics I and Agricultural Science. The subjects for the third year are, inter alia, Plant Production, Animal Production, Dairy Technology, Genetics, Entomology. The fourth year includes only educational subjects with Pedagogics III as the major subject.

Bachelor of Agricultural Education (Stellenbosch)

Admission requirement: As for B.Sc. in Agriculture.

Curriculum: Four years of full-time study. The subjects for the first year are Biology, Chemistry, Physics and Mathematics. The second and the third year include, inter alia,

the following: Agronomy - Pasture, Animal Physiology, Animal Production, Soil Science, Biometry and Genetics. The fourth study year comprises the complete course as prescribed for the H.E.D. See p. 194.

Bachelor of Agricultural Management (Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics and a science subject on the Standard Grade.

Curriculum: Three years of full-time study.

Students are required to do practical work for at least two months during the summer and/or winter vacations on an approved farm or at another institution before completion of the third year of the course.

The two major subjects are Management and Planning III and Business Economics III. Other subjects included are, inter alia, Principles of Agricultural Science, Fruit Production, Animal Production, Animal Diseases, Mercantile Law, Personnel Management, Public Administration I.

This course is intended to give persons who wish to take up farming or qualify as farm managers, thorough training in the management and planning of farming.

Baccalaureus Honores Institutionis Agrariae: B.Inst.Agrar. (Hons.) (Pretoria)

Admission requirements: A candidate must hold one of the following degrees or be admitted to the status thereof: Three- or four-year degree in Agriculture; B.Sc.(Eng.) (Agric.); B.V.Sc.; B.Sc. (Home Economics); B.Sc. (Dietetics); B.Sc. (Forestry).

Curriculum: At least one academic year. The curriculum includes Agrarian Extension and other prescribed courses which may be recommended.

Students are required to do practicals or research work or special study during university vacations.

VOCATIONAL SERVICE

Research into improved, more productive and more economic methods of primary food production is one of the major fields of labour for graduates in Agriculture. This is why agriculture offers such a wide variety of possibilities, not only in farming itself, but in commerce, industry, research, teaching, conservation and other specialized services. Occupations are steadily becoming specialized and, in many cases, professional training at university level has become necessary, particularly as regards the non-farming aspects of agriculture. The courses offer a basis for research and its practical application. In industries, for example factories which manufacture agricultural requisites, agriculture graduates are placed in the posts of technical service officers, sales representatives, research officers, production guidance officers and many more. However, it should be stressed that the attainment of a bachelor's degree is merely the first step in the direction of professional training. Post-graduate study is particularly important in the field of research.

It is of equal importance that candidates should consider well beforehand what subjects they want to study for a particular field or conversely, that they should have certainty about the job prospects if they have specific subjects in mind.

The following are some of the chief fields of study or subjects and an indication of job opportunities:

Agricultural Economics: At present there is a great shortage of agricultural economists, mainly as a result of the emphasis on scientific farming techniques which continually brings the problem of production costs to the fore. The training is mainly intended for prospective researchers, extension officers, agricultural entrepreneurs, agricultural administrators, lecturers and teachers. Agricultural economists may, inter

alia, be employed as: Teachers and researchers at agricultural colleges and universities; economists in the Government Departments of Agricultural Economics and Marketing (divisions of agricultural production economics, agricultural marketing research, co-operatives and the National Marketing Council), Agricultural Technical Services and Bantu Administration and Development (various divisions); researchers and/or advisers in the employ of the CSIR, the IDC, agricultural control boards, agricultural organizations such as the SAAU, agricultural co-operatives and private bodies such as companies which supply fertilizer and agricultural requisites, chemical concerns, etc. An agricultural economist may also act as a private consultant.

Also see Economics, p. 97.

Agricultural Education: Qualified teachers of agriculture are employed by the Provincial Education Departments for appointment to secondary schools to which an agricultural field of study is attached. Teacher training, in addition to post-graduate qualifications is an ideal combination for posts at agricultural colleges, colleges for advanced technical education and universities. Teachers of agriculture who have the necessary experience, may also be appointed by the Department of National Education as Land Service Officers. In this capacity they act as organizers for the Land Service Movement and they have to promote the interests of this movement.

Agricultural Engineering: See p. 241.

Agricultural Management: See p. 219.

Agricultural Meteorology: Agricultural Meteorologists in the Department of Agricultural Technical Services do research over a wide field and in a variety of specialized branches such as radiation, movement of air, heat, moisture and climatic conditions. They normally act in co-operation with researchers in other branches of agriculture. Consequently the entire field from basic research to practical application of knowledge is covered.

Although it is a new branch of study, Agricultural Meteorology has become one of the most vital branches of meteorology in South Africa. It offers interesting employment and research opportunities owing to the country's extremes of heat, cold, rain and droughts, as well as sunshine, frost, hail and even snow. Researchers therefore have the opportunity of making an important contribution in the field of agriculture. Furthermore, the faculties of agriculture of the two universities concerned offer positions as lecturers to qualified agricultural meteorologists.

Also see Meteorology, p. 152.

Agronomy (Crop Science): This supplies the necessary background for prospective farmers who are going to till the soil. The private sector offers good positions as sales agents or researchers in the employ of fertilizer companies, seed advisers, evaluators and controllers of crops, managers of large farming undertakings etc. There is a demand for inspectors and technologists with the various Control Boards, while millers, bakers, malters and firms which manufacture and distribute sprays such as weed-killers also need people with Crop Science as a subject. Co-operatives also need an increasing number of produce managers who are trained in this field. The Department of Agricultural Technical Services employs agronomists to do research in connection with new varieties, cultivation practices, harvesting methods etc., while others undertake guidance in this field. The Agricultural and Development Work Sections of the Department of Bantu Administration and Development employ agriculturists for the development of the homelands.

Animal Physiology: Physiologists can occupy posts as lecturers at various universities where instruction in animal and human physiology is given; as teachers of subjects such as physiology, biology, biochemistry and agriculture; as consultants or researchers in the service of firms which produce feed, co-operatives, nutrition research institutes and laboratories; as professional officers attached to institutes where biological and/or biochemical research is done, such as in the Government Departments of Agricultural Technical Services, Agricultural Economics and Marketing, Bantu Administration and Development, Health, the Transvaal Provincial Administration and the

Administration of South-West Africa.

Also see Physiology, p. 155.

Animal Science/Animal Production: Students who are interested in animals and who have chosen this field of study, have a wide choice as regards careers. In addition to practical animal farming there are opportunities, for example, in the employ of the control boards, private marketing organizations, cattle-feed companies, the South African Society for Animal Production, large farming companies and co-operatives. The Department of Agricultural Technical Services offers abundant opportunities for research in various branches of Animal Science. Researchers may specialize in general animal husbandry, physiology, feeding, breeding and meat or wool technology. The most important centre for this purpose is the Animal and Dairy Science Research Institute near Pretoria. In addition, there are many professional officers who are responsible for the administration and control of national schemes. Other Government departments which employ animal scientists are those of Agricultural Economics and Marketing and Bantu Administration and Development.

Biochemistry: See p. 145.

Biometry: The biometrician's major task is to assist researchers and managers in the planning of experiments and surveys and the analysis of findings. They usually occupy posts at agricultural, biological and medical research institutes; at universities as lecturers in Biometry as well as in Mathematical Statistics and in research departments of large commercial firms. They also enter the service of the CSIR, the SABS and the education departments. The Public Service offers various job opportunities and, particularly in the Department of Agricultural Technical Services, there are opportunities of undertaking research in various fields on one's own.

Botany: See p. 146.

Chemistry: See p. 146.

Dairy Science: As a result of the shortage of qualified dairy experts and food experts in general, there are adequate job opportunities for those who have completed their studies, for example as researchers at the Research Institute for Animal and Dairy Science in the Department of Agricultural Technical Services and the National Food Research Institute of the CSIR; as technical control and development officers in the dairy industry and the food industry in general (private concerns); as standards officers at the SABS; as factory advisers and quality control officials in the Department of Agricultural Technical Services or in private concerns; as lecturers and researchers at universities and also at training institutions such as the Agricultural College at Glen where technicians are trained for the dairy industry.

Examples of other possible employers are municipalities, the Dairy Board and concerns which manufacture and sell dairy equipment.

Entomology: See p. 148.

Fruit Science: See Food Science, p. 247.

Genetics: See p. 148.

Horticulture/Ornamental Floriculture and Flower Production: The study of Horticulture embraces the production of horticultural crops and of the way in which the normal behaviour of plants can be changed to satisfy the requirements of man. Ornamental Floriculture and Flower Production are the fields of study concerned with plants which have such particularly ornamental characteristics that, commercially and economically, they are important or may become important. Job opportunities are available as owners of a farming concern; in the service of municipalities or commercial nurseries for ornamental plants, and producers of cut flowers and pot-plants; as managers of or technical advisers to large fruit, vegetable and flower farms; as extension officers employed by the Departments of Agricultural Technical Services and Bantu Administration and Development, the SA Citrus Board and companies producing agricultural chemicals and

fertilizers.

Students are encouraged to undertake post-graduate study in order to be employed as researchers at the research institutes under the control of the Citrus Board, the Deciduous and Dried Fruit Boards, the large fruit-growing companies, commercial firms and the Department of Agricultural Technical Services (for Horticulture in Pretoria, for Fruit and Food Technology in Stellenbosch, for Citrus and Subtropical Fruit in Nelspruit and for Viticulture and Oenology in Stellenbosch).

As a subsection of Horticulture, Pomology (the science of fruit and fruit-growing), is receiving a great deal of attention at the University of Stellenbosch. Career prospects are approximately the same as those mentioned above. The development of giant irrigation schemes in parts of the country will no doubt cause an increase in the demand for horticulturists and pomologists in the future.

Microbiology: See p. 152.

Pasture Science: In many cases students of Pasture Science are prospective farmers. Since they must also have an intimate knowledge of related subjects such as Animal Science, Crop Science, Soil Science, Biochemistry, Microbiology and Genetics, career possibilities will, in this case, correspond to a large extent to those for the subjects mentioned. The syllabus makes provision for basic knowledge for research which can be undertaken at any agricultural research institute of, for example, the Department of Agricultural Technical Services, a university or a scientific, agricultural or industrial organization. Pasture scientists can also be appointed as extension officers; as lecturers at agricultural colleges and in agricultural faculties; as technical salesmen for manufacturers of agricultural chemicals, seed or food and also as managers of large agricultural enterprises. There are also posts in the Department of Bantu Administration and Development.

Physics: See p. 154.

Plant Pathology: This specialized field of study opens the door to interesting careers in agriculture, for example as extension officers or advisers in the Department of Agricultural Technical Services, the various Control Boards such as the Deciduous Fruit, Citrus and Maize Boards, private concerns such as the Sugar Institute, canning enterprises and firms which deal in pest control preparations. The Department of Agricultural Technical Services also offers particular opportunities for researchers in the various Research Institutes such as those for Plant Protection, Fruit and Food Technology, Oenology and Viticulture, Citrus and Subtropical Fruit, Horticulture and Tobacco. Apart from posts for lecturers, various universities also make ample provision for research. It is possible to teach biological subjects at schools and agricultural colleges. Graduates can also enter the private service of owners of large farms or plantations, nurseries and so forth.

Poultry Science: This branch of study covers the entire field of management, feeding, breeding and the processing and preserving of poultry products. Most poultry scientists accept posts in the Government Departments of Bantu Administration and Development, Agricultural Economics and Marketing and Agricultural Technical Services. The last-mentioned department offers posts to extension officers and researchers who have specialized in, for example, feeding, breeding, or physiology. Graduates are also employed as researchers or advisers by Onderstepoort, the cattle-feed manufacturing industry, the South African Poultry Association, commercial concerns which deal in medicines and related products, large breeding enterprises and concerns which produce eggs and table-fowl. There are posts for lecturers in Poultry Science at certain universities and most of the agricultural colleges.

Soil Science and Plant Nutrition: There are virtually unlimited job opportunities for soil scientists of which only a few are mentioned here. The Department of Agricultural Technical Services employs soil scientists for research work and, for example, surveys and planning of irrigation schemes, catchment areas and farms. Experiments are done with fertilizers, while extension officers advise farmers on fertilization, irrigation, soil cultivation, etc.

Fertilizer firms also need soil scientists to carry out research projects or give advice to farmers, while large undertakings such as the sugar industry, large farming concerns, engineering firms and co-operatives need the services of soil scientists for various purposes. Outside the field of agriculture there is also scope for applying the specialized knowledge of soil scientists in town and regional planning, road-building, prospecting for minerals and soil surveys.

Universities, colleges for advanced technical education and secondary schools with an agricultural field of study offer posts in Soil Science for lecturers and teachers. This field of study is invaluable for persons who choose farming as a career.

Viticulture and Oenology: Career possibilities in this field are largely to be found in the three branches from which the student can choose, namely:

- The general branch which complies with the requirements of the farming industry, oenological practice and agricultural extension;
- Viticulture which complies with the requirements for research and extension;
- Oenology, which complies with the requirements for oenological research and practice and wine technology.

Employment opportunities can be found as viticultural extension, inspection or research officers in the Departments of Agricultural Technical Services and Bantu Administration and Development; as independent farmers or managers of vineyards; as wine-maker-managers, quality control officers, wine technologists, production managers, wine-cellar managers and so forth in the wine industry.

Zoology: See p. 156.

Further job opportunities for agriculturists:

- Agricultural extension: An indication has already been given in some fields of study or subjects of a career in agricultural extension. This field comprises a large variety of activities which are directed towards the optimal utilization of the country's agricultural potential. The task of the extension officer involves making farmers aware of the deficiencies in their industry and motivating them towards greater efficiency in farming methods.

Graduates in agriculture can be appointed as extension officers in any of the approximately 120 extension offices in the Department of Agricultural Technical Services. Roughly the same number of professional officers are responsible for the work in the private sector or in the service of agricultural co-operatives. However, more candidates are urgently required to render this comprehensive, vital and interesting service to farmers. There are opportunities for similar services in the Department of Bantu Administration and Development.

- Plant and seed control: The Plant and Seed Control Division of the Department of Agricultural Technical Services employs graduates, inter alia, to control the quality of seed marketed in South Africa or exported and for the rating of new varieties.

- Publications: For appointment to this division the Department of Agricultural Technical Services demands an appropriate university degree, for instance B.Sc.(Agric.) or B.A. with, for example, Afrikaans, English, Communication, Psychology or Sociology as major or subsidiary subjects.

Also see p. 44.

- Liaison: The Department of Agricultural Technical Services has posts for liaison officers in the following three fields: Professional Officer (Liaison) (requirement: B.Sc. (Agric.) degree, or another degree in addition to experience in the field of liaison and with an agricultural background); Engineer (Liaison) (requirement: as for an engineer); Veterinary Surgeon (Liaison) (requirement: as for a veterinary surgeon).

Also consult Tertiary Training.

ARCHITECTURE

Universities: Cape Town, Natal, Orange Free State, Port Elizabeth, Pretoria, Witwatersrand

Degrees

Bachelor of Architecture: B.Arch. (UCT, Natal, UOFS, UPE, UP, Wits)

Master's degree

Master of Architecture: M.Arch. (UCT, Natal, UOFS, UPE, UP, Wits)

Doctor's degrees

Doctor of Architecture: D.Arch. (Natal, UOFS, UPE, UP, Wits)

Doctor of Science in Architecture: D.Sc.(Arch.) (Wits)

Doctor of Philosophy: Ph.D. (Natal, Wits)

DEGREE

Bachelor of Architecture: B.Arch.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Cape Town: A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade, and a pass in a science subject (preferably Physical Science or Physics) on the Standard Grade.

Natal: See p.132.

Orange Free State: See p. 156.

Port Elizabeth: A pass in Mathematics of at least 40 per cent on the Standard Grade.

Pretoria: See p. 164.

Witwatersrand: A pass on the Higher Grade or at least 60 per cent on the Standard Grade in Mathematics and in one of the following subjects: Biology, Physical Science, Physiology.

Curriculum: Five years of full-time study and one year of practical experience under the supervision of the university. Students must submit a report at the conclusion of the practical training.

The curriculum includes, inter alia, the following courses: Design V or Architectural Design V (Natal) or Studiowork V (Cape Town) or Theory and Practice of Architecture V (Witwatersrand); Building Technology; Building Construction; Professional Practice; Theory of Structures; Urban Studies or Civic Design.

A dissertation or thesis is usually required.

VOCATIONAL SERVICE

The architect is responsible for the design, planning and ornamentation of buildings, with a view to utility, durability, beauty and convenience. His success is to a very large extent dependent upon innate aptitude for and interest in both practical and artistic work. Under prevailing conditions in South Africa, the young architect's prospects are very promising. He usually commences working for an established firm

until he has sufficient capital and experience to enter a partnership with other architects or to open a practice of his own.

In the Public Service architects are employed by the Departments of Bantu Administration and Development, Community Development and Public Works, as well as the Administrations of the four provinces and South-West Africa. There are also favourable opportunities in large municipalities and organizations such as Iscor, Escom, the Railways, mining companies and so on. With post-graduate training an architect can obtain a lecturing post at a university. Many architects work as town planners on the layout of new towns and cities or the redesigning of centres in existing towns and cities.

People wishing to make architecture their career in the hope of becoming rich without doing much work, are doomed to disappointment. Normally the larger financial rewards come later in life, and the newcomer must be prepared for many years of hard work. An architect's main reward lies in achieving and realizing his personal ambitions. However, there are a large number of wealthy architects in the world.

There are also many female architects. The abilities demanded by architecture are by no means limited to men. If a woman has an inclination for this profession, there is no reason whatsoever why she should not be a successful architect.

Also see Landscape Architecture, p. 254.

Also consult Tertiary Training.

BUILDING SCIENCE

Universities: Cape Town, Natal, Orange Free State, Port Elizabeth, Pretoria, Witwatersrand

Degrees

Bachelor of Building Science: B.B.Sc. (UCT)

Bachelor of Science in Building: B.Sc.Bldg. (Natal)

Bachelor of Science in Building Administration: B.Sc. (Building Administration) (UOFS)

Bachelor of Building: B.Build. (UPE)

Bachelor of Building Management: B.B.M. (UPE)

Bachelor of Building Management: B.Sc. (Building Management) (UP)

Bachelor of Building Science: B.Sc. (Building Science) (UP)

Bachelor of Science in Building: B.Sc. (Building) (Wits)

Master's degrees

Master of Building Management: M.Sc. (Building Management) (UP)

Master of Science in Building: M.Sc. (Building) (Wits)

Doctor's degrees

Doctor of Science in Building: D.Sc. (Building) (Wits)

Doctor of Philosophy: Ph.D. (Wits)

Doctor of Building Management: D.Sc. (Building Management) (UP)

DEGREES

Bachelor of Building Science: B.B.Sc. (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade, and a pass in a science subject (preferably Physical

Science or Physics) on the Standard Grade.

Curriculum: Four years of full-time study. Every student must obtain three periods each of not less than six weeks of experience during the vacations with an approved building contractor before admission to the 2nd, 3rd and 4th years respectively.

The curriculum includes, inter alia, the following courses: Building Construction, Analysis of Prices, Building Finance and Estimating, Building Management, Quantities, Mercantile Law.

Bachelor of Science in Building: B.Sc. Bldg. (Natal)

Admission requirements: See p. 132.

Curriculum: Four years of full-time study. All candidates must, before being permitted to enter upon the work of the subsequent year, obtain at least six weeks' continuous practical experience with a firm of general building contractors.

The curriculum includes, inter alia, the following courses: Business Administration, Building Construction, Theory and Design of Structures, Economics, Building Law, Commercial Law, Applied Industrial Psychology, Construction Design and Practice.

Bachelor of Science in Building Administration: B.Sc. (Building Administration)
(Orange Free State)

Admission requirements: See p. 156.

Curriculum: Four years' study comprising two years of full-time study followed by two years of part-time study, during which a candidate is required to be employed full-time in the office of a building contractor.

The first two years of the curriculum is equivalent to that of the degree of B.Sc. in Quantity Surveying.

The other subjects for the curriculum are, inter alia, the following: Building Construction, Price Analysis, Building Contracts and Procedures, Building Finance, Specification, Labour Law.

Bachelor of Building: B.Build. (Port Elizabeth)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics of at least 40 per cent on the Standard Grade.

Curriculum: Three years of full-time study. Candidates will be permitted to study part-time only if they are in full-time employment in the office of a registered practising architect.

After having successfully completed the curriculum for the degree of Bachelor of Building, and the practical year, a candidate may continue with fourth and fifth years of full-time study. On completion of these two years he shall be awarded the B.Arch. degree.

The curriculum comprises, inter alia, the following courses: Design, Building Materials, Theory of Structures, History and Theory of Art and Architecture, Professional Practice, Building Economics for Architects.

Bachelor of Building Management: B.B.M. (Port Elizabeth)

or

Bachelor of Building Management: B.Sc. (Building Management) (Pretoria)

Admission requirements:

Port Elizabeth: See B.Build.

Pretoria: See p. 164.

Curriculum: The curriculum extends over a period of five years, comprising two years of full-time study and three years of part-time study, during which a candidate is required to be employed full-time in the office of a building contractor.

The curriculum includes, inter alia, the following courses: Building Management, Quantities, Building Finance, Analysis of Prices, Labour Law, Occupational Safety.

Bachelor of Building Science: B.Sc. (Building Science) (Pretoria)

Admission requirements: See p. 164.

Curriculum: Three years of full-time study. Candidates are advised to gain practical experience in the office of an architect during university vacations.

The curriculum includes, inter alia, the following courses: Building Science, Office Practice, Theory of Structures, Building Services, Industrial Psychology, Building Technology, Quantities, Applied Mathematics.

Bachelor of Science in Building: B.Sc. (Building) (Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics on the Higher Grade or at least 60 per cent on the Standard Grade and a pass on the Higher Grade or at least 60 per cent on the Standard Grade in one of the following subjects: Biology, Physical Science, Physiology.

Curriculum: Four years of full-time study. After each of the first, second and third years of study, the student must spend at least six weeks in the next succeeding long vacation carrying out practical work on specified construction sites. In addition a student must participate in such visits and tours as may be determined by the Senate.

The curriculum includes, inter alia, the following courses: Building Science, Production Planning and Design, Theory of Structures, Analysis of Prices and Building Costs, Industrial Organization and Management, Mathematics.

VOCATIONAL SERVICE

In the past the building industry depended to a large extent on the knowledge of architects, quantity surveyors and civil engineers. However, the rapid expansion of this industry, the replacement of the traditional by modern building materials (for example those of a synthetic nature), the application of sophisticated building techniques and the attendant organization to erect buildings quickly and efficiently, are all aspects of building technology which make specialized study indispensable. The larger construction companies, in particular, are to an increasing extent realising the value of the supplementary knowledge of graduates in building management and building science. Of the small group who already possess this qualification, there are various known examples of young men who have been placed in command of million-rand building projects and have carried these out successfully.

Building managers (men, and to a lesser extent also women) are normally employed by established building contractors. In due course, as capital is obtained and experience gained, the building manager may himself become a building contractor.

Graduates in Building Science are mainly employed as senior assistants by architects, in whose offices they are particularly concerned with building technology. Manufacturers of building materials employ graduates in building science with a view to office and publicity work.

Also consult Tertiary Training.

COMMUNICATION/JOURNALISM

Universities: Orange Free State, Potchefstroom, Rand Afrikaans University, Rhodes, South Africa

Degrees

Bachelor of Arts (Communication): B.A. (Communication) (UOFS, PU for CHE)

Bachelor of Arts: B.A. (RAU, Unisa)

Bachelor of Journalism: B. Journ. (Rhodes)

Honours degrees

Honours Bachelor of Arts (Communication): B.A. (Hons.)(Communication) (UOFS)

Honours Bachelor of Arts: Hons. B.A. (RAU, Unisa) .

Bachelor of Arts with Honours: B.A. (Hons.) (Rhodes)

Master's degrees

Master of Arts (Communication): M.A. (Communication) (UOFS, PU for CHE)

Master of Arts: M.A. (RAU, Rhodes, Unisa)

Doctor's degrees

Doctor Philosophiae: D.Phil. (UOFS, PU for CHE)

Doctor of Philosophy: Ph.D. (Rhodes)

Doctor of Literature and Philosophy: D.Litt. et Phil. (RAU, Unisa)

Diplomas

University Diploma in Communication (PU for CHE)

Post-graduate Diploma in Communication (RAU)

DEGREES

Bachelor of Arts (Communication): B.A. (Communication) (Orange Free State)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study. Eleven courses with Communication as one of the major subjects. The second major subject must be selected from the following: A modern language (including Bantu languages), Anthropology, Applied Anthropology, Economics, History, History and Appreciation of Art, Philosophy, Political Science, Private Law, Psychology, Sociology.

A reading knowledge of German and/or French is recommended for students who intend to undertake post-graduate study in Communication.

Efficiency in typing up to the standard of at least Typewriting I is recommended for students who intend taking up journalism as a career.

Bachelor of Arts (Communication): B.A. (Communication) (Potchefstroom)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Four years of full-time study. A candidate must pass in at least 15 courses. A student takes Communication I and II in the first and second years respectively, and Journalism III and IV and Public Relations and Advertising III and IV in the third

and fourth years. Law of Communications is taken in the second and third years. The other courses are selected from the ordinary B.A. subjects, one of which must be a major subject.

The B.A. (Communication) degree grants admission to study for the degree of M.A. (Communication).

Bachelor of Arts: B.A. (Communication) (Rand Afrikaans University)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 59.

Curriculum: Three years of full-time study. The curriculum consists of eleven courses. Communication is a compulsory major subject. The second major subject must be selected from:

A language, Sociology, Psychology, Education, Economics, History, History of Art, Biblical Science, General Linguistics, Philosophy, Anthropology, Political Science, Mathematical Statistics, Mathematics.

Compulsory ancillary (minor) subjects are: Psychology I, Sociology I, Statistical Methods A and four semester courses in a language or languages.

Bachelor of Journalism: B. Journ. (Rhodes)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 32.

Curriculum: Three years of full-time study. The curriculum comprises ten courses, three of which must be in Journalism and three in the second major subject selected from the ordinary B.A. subjects. Should this major subject be a language, at least one course must be taken in another language.

Bachelor of Arts: B.A. (South Africa)

Admission requirements: See p. 34.

Curriculum: At least three years. Students follow the curriculum of the ordinary B.A. degree (see p. 35) with Communication as one of the major subjects. The second major subject must be one of the following: A language, History, Criminology, Education, Psychology, Sociology, Political Science, Anthropology.

Compulsory ancillary subjects are: Linguistics I or Philosophy I or a course in any subject not already selected from the above-mentioned as a second major subject.

DIPLOMAS

University Diploma in Communication (Potchefstroom)

Admission requirement: An approved Bachelor's degree.

Curriculum: One year of full-time study or two years of part-time study.

Post-graduate Diploma in Communication (Rand Afrikaans University)

Admission requirement: A Bachelor's degree.

Curriculum: Two years.

The Diploma is offered to students who have not previously studied Communication.

During the first year students must complete the compulsory minor subjects together with Communication I and take Communication II and III in their second year.

See B.A. (Communication) (RAU) for the compulsory minor subjects.

In years to come Communication will play an increasingly important part in respect of human and international relations. It opens up the new world of the twentieth century in which things occur at a staggeringly fast pace and in which motives and objectives of individuals and nations may easily be misinterpreted. Communication media such as newspapers, the radio, television, magazines and the cinema have made the world shrink, so that today little remains hidden in any part of the world.

In this changing world, man has an increasing need of reliable information about what is happening around him. Therefore more demands are made upon the person who relays information to others, and the emphasis is on what is relayed and how it is relayed. Thus the task of the communication scientist demands that the information which he/she relays, will be compiled in such a way that it will have the biggest impact and will lead to mutual understanding and trust between individuals and nations.

Some of the career possibilities for which a student is equipped by Communication, are journalism, liaison work, publicity and the foreign and information services.

- Journalism: The field of journalism as a career, with its many branches, is expanding and the adventure and fascination connected with it are increasing. Although most journalists start working for daily newspapers, journalism is not restricted to these media. The radio, for example, offers challenging career prospects. In addition, with the coming of television and the possibilities which will be opened up by it, our country is on the eve of tremendous development in the field of communication. Because of the high demands made upon television journalists, not one of them can be employed untrained; they must be thoroughly trained and equipped for their task. However, television does not imply the end of newspapers, journals or the radio. Nevertheless these media will be obliged to run their communication along even better and more effective lines. This will demand thoroughly trained personnel. Although a matriculant may be employed by an enterprise as apprentice journalist to receive in-service training, university training today has become virtually essential, since it provides an important academic background and contributes to the enrichment of knowledge about people and affairs. Normally a person in possession of a degree or diploma will enjoy preference when it comes to promotion.

- Liaison: In South Africa liaison is still in its infancy and the possibilities are virtually unlimited. In a dynamic society in which competition is increasing daily, establishing a public image is indispensable to a company or other large concern. Virtually no large organization can afford to do without liaison officers. Everybody realises to an increasing extent the importance of sound public relations. Even those organizations which sell their services to other organizations employ liaison officers. Other employers are, for example, local authorities, government and statutory bodies, international organizations, universities and other educational institutions, welfare organizations, newspapers, the SABC, insurance companies, and so forth. An increasing number of women are employed in this field and the enterprising person with imagination and willingness to work hard, will find a rewarding career in the sphere of liaison.

Also see p. 223 and p. 287.

Also consult Tertiary Training.

- Advertising: The advertising industry is one of which the potential, particularly in South Africa, has by no means been developed to the full. As the economy expands, this industry will grow. The nature of this work is really dynamic and the publicity officer or advertising agent must regularly keep pace with new trends and developments in his field. For a person interested in the skilful and creative handling of languages, there is tremendous scope as a writer of advertisements. However, advertising is not restricted to this. The advertising agent is to an increasing extent becoming a key figure in publicising a concern. For the person who has the necessary training and appropriate characteristics, there is scope to open up his own undertaking in time and to expand it into a lucrative advertising agency. This profession is also highly suitable for women.

- Foreign and information service: Publicising a country, its people and aims - at home and abroad - demands much from the information officer and the foreign officer. A person interested in this field will gain the necessary background knowledge from Communication, particularly a foreign press attaché of the Department of Information. (Also see p. 42.)

Communication can be combined to advantage for some occupations with other subjects, for example, with Industrial Psychology for the personnel officer; with Drama and Theatrical Art for the person who chooses the stage, television, cinema or microphone as a career; with Library Science for a career in librarianship, with Psychology or Sociology for a research post in, for example, the service of the HSRC.

Also consult Tertiary Training.

DENTISTRY

Universities: Pretoria, Stellenbosch, Witwatersrand

Degrees

Bachelor of Dental Science: B.Ch.D. (UP, US) or B.D.S. (Wits)

Bachelor of Science in Oral Biology: B.Sc. (Oral Biology) (Wits)

Honours degree

Bachelor of Dental Science Honours: B.Ch.D. (Hons.) (UP)

Master's degrees

Master of Dental Science: M.Ch.D. (UP, US) or M.D.S. (Wits)

Master of Dental Sciences: M.Dent. (UP)

Master of Science in Dental Sciences: M.Sc. in Dental Sciences (US)

Master of Dentistry: M.Dent. (Wits)

Doctor's degrees

Doctor of Dental Science: D.Ch.D. (UP, US)

Doctor of Philosophy (Odontology): Ph.D. (Odont.) (US)

Doctor of Philosophy in Dentistry: Ph.D. (Dent.) (Wits)

Doctor of Science in Dentistry: D.Sc. (Dent.) (Wits)

Diplomas

Diploma in Oral Hygiene: Dip. O.H. (UP, US, Wits)

Post-graduate Diplomas

Diploma in Dental Public Health (UP)

Diploma in Dentistry: Dip. Dent. Gen. (UP)

Diploma in Maxillo-facial and Oral Surgery: Dip. M. Fos. (Wits)

Diploma in Oral Pathology: Dip. Oral Path. (Wits)

Diploma in Orthodontics: Dip. Orth. (Wits)

Diploma in Periodontics and Oral Medicine: Dip. P.O.M. (Wits)

Diploma in Prosthodontics: Dip. Pros. (Wits)

Higher Diploma in Dentistry: H. Dip. Dent. (Wits)

DEGREES

The dental degrees of the universities may be registered with the South African Medical and Dental Council.

All dental students must be registered with the Council for a period of four years prior to application for admission to the Practitioners' Register. Students should apply for registration at the beginning of their second year of study.

Bachelor of Dental Science: B.Ch.D. or B.D.S. (Pretoria, Stellenbosch, Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements

Pretoria: See p. 164.

Stellenbosch: Passes in Mathematics and Physical Science on the Standard Grade.

Witwatersrand: A pass in Mathematics on the Higher Grade or at least 60 per cent on the Standard Grade and a pass in Biology or Physical Science on the Higher or Standard Grade.

Curriculum: 5½ years of full-time study. Students undertake practical and clinical work in the oral and dental hospital attached to the university concerned.

The first year of the curriculum consists of pre-dental subjects, viz Biology, Chemistry, Physics and Anatomy and Histology (Pretoria) or Mathematics (Stellenbosch) or Micro-anatomy (Witwatersrand). The other prescribed subjects are, inter alia, the following: Anatomy, Physiology, Pathology or Pathological Anatomy, Internal Medicine, Surgery, Anaesthetics, Pharmacology. The subjects for the last three semesters are Conservative Dentistry, Prosthetic Dentistry, Oral Pathology, Maxillo-facial and Oral Surgery, Orthodontics, Oral Medicine and Periodontics.

Bachelor of Science in Oral Biology: B.Sc. (Oral Biology) (Witwatersrand)

Admission requirements: As for the B.D.S. degree.

Curriculum: Four years of full-time study. The curriculum comprises Part I and Part II. The qualifying courses for Part I extend over three years and are the same as those prescribed for the first three years of the curriculum for the B.D.S. degree. The qualifying course for Part II is Oral Biology.

This degree is designed for students who wish to follow a career in biological research and teaching, particularly in the field of dental science.

DIPLOMAS

Diploma in Oral Hygiene (Pretoria, Stellenbosch)

Admission requirements: Standard 10 Certificate with Biology and/or Physical Science. The University of Stellenbosch gives preference to students who have also taken Mathematics.

Curriculum: Two years of full-time study (Pretoria) or three semesters of full-time study (Stellenbosch). The curriculum comprises, inter alia, Anatomy, Physiology, Oral Pathology (Pretoria) or General Pathology (Stellenbosch), Dental Materials and Remedies, Preventive and Conservative Dentistry, First Aid, Oral Hygiene.

Diploma in Oral Hygiene: Dip. O.H. (Witwatersrand)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matricu=

lation Exemption).

Curriculum: One and a half years of full-time study. The curriculum comprises Part I and Part II. Part I includes Ethics, Jurisprudence and Administration in relation to Dental Practice; Principles of Human Biology; Principles of Human Disease. Part II comprises Clinical Oral Hygiene; Principles and Practice of Oral Radiography; Public Oral Health Education and Preventive Dentistry.

Post-graduate Diplomas

Diploma in Dental Public Health (Pretoria)

Admission requirements: Candidates must have held the degree of B.Ch.D. for at least two years and must be registered by the S.A. Medical and Dental Council as a dentist.

Curriculum: One year of full-time study or two years of part-time study.

The curriculum includes, inter alia, the following examination subjects: Microbiology, Parasitology, Town Planning and Physiology, Sanitation and Hygiene, Legislation and Administration, School Hygiene.

Diploma in Dentistry: Dip.Dent.Gen. (Pretoria)

Admission requirement: The degree of B.Ch.D. or an equivalent qualification.

Curriculum: Three years of part-time study. Students must attend lectures and practical and clinical instruction at the Oral and Dental Hospital for two periods of three weeks each in each year of study.

The curriculum includes, inter alia, Anatomy, Physiology and Pathology in the first year; Conservative Dentistry, Orthodontics, Oral Surgery and Radiology in the second and third years.

Diploma in Maxillo-facial and Oral Surgery: Dip.M.Fos. (Witwatersrand)

Admission requirements: A candidate must hold the degree of B.D.S. or an equivalent qualification and must be registered by the S.A. Medical and Dental Council as a dentist.

Curriculum: Four years of full-time study or such longer period of part-time study as may be determined by the Senate. The curriculum comprises Parts I, II and III.

Diploma in Oral Pathology: Dip.Oral.Path. (Witwatersrand)

Admission requirement: As for Dip.M.Fos.

Curriculum: Four years of full-time study or such longer period of part-time study as may be determined by the Senate. The curriculum comprises Parts I and II.

Diploma in Orthodontics: Dip. Orth. (Witwatersrand)

Admission requirement: As for Dip.M.Fos.

Curriculum: Three years of full-time study or such longer period of part-time study as may be determined by the Senate. The curriculum comprises Parts I, II and III.

Diploma in Periodontics and Oral Medicine: Dip. P.O.M. (Witwatersrand)

Admission requirement: As for Dip. M.Fos.

Curriculum: Three years of full-time study or such longer period of part-time study as may be determined by the Senate. The curriculum comprises Parts I, II and III.

Diploma in Prosthodontics: Dip. Pros. (Witwatersrand)

Admission requirement: As for Dip.M.Fos.

Curriculum: As for Dip. P.O.M.

Higher Diploma in Dentistry: H.Dip.Dent. (Witwatersrand)

Admission requirement: As for Dip.M.Fos.

Curriculum: One year of full-time study or such longer period of part-time study as may be determined by the Senate. The curriculum comprises Parts I and II.

VOCATIONAL SERVICE

Most dentists in the country end up in private practices. These are perhaps the ideal working conditions, although the high cost of equipment and running expenses should be borne in mind.

There are opportunities of going into partnership and the income will vary according to the size of the practice. Dentists can also enter the service of various Government departments and other organizations at an established rate of remuneration. Examples are the education departments of the four provinces who use dental officers to visit schools; the departmental hospitals; large municipalities; the Government Departments of Health and Defence; certain major industries such as Iscor and the mines; the Administration of South-West Africa, and so forth.

Certain universities employ a small number of dentists as dental professors and lecturers. Some of them also undertake research. At present there is a great shortage of dentists in South Africa.

DIETETICS

Universities: Cape Town, Natal, Orange Free State, Potchefstroom, Pretoria, Stellenbosch

Degrees

Bachelor of Science in Dietetics: B.Sc. Diet. (Natal)

Bachelor of Science with Dietetics and Physiology as major subjects: B.Sc. (PU for CHE, US)

Bachelor of Dietetics: B.Sc. (Dietetics) (UP)

Honours degrees

Bachelor of Science in Dietetics (Honours): B.Sc. Diet. Hons. (Natal)

Honours Bachelor of Science: Hons. B.Sc. (PU for CHE)

Bachelor of Dietetics Honours: B.Sc. (Dietetics) Hons. (UP)

Honours B.Sc. (US)

Master's degrees

Master of Science in Dietetics: M.Sc. Diet. (Natal)

Master of Science: M.Sc. (PU for CHE, US)

Master of Dietetics: M.Sc. (Dietetics) (UP)

Doctor's degrees

Doctor of Philosophy: Ph.D. (Natal, US)

Doctor Scientiae: D.Sc. (PU for CHE, UP, US)

Diplomas

Diploma in Therapeutic Dietetics (UCT)

University Diploma in Dietetics (PU for CHE)

Diploma in Hospital Dietetics (UOFS, PU for CHE, US)

Post-graduate Diploma in Hospital Dietetics (UP)

DEGREES

Bachelor of Science in Dietetics: B.Sc. Diet. (Natal)

Admission requirements: As for the B.Sc. degree. See p. 132.

Curriculum: Three years of full-time study. The subjects for the first year are, inter alia, Chemistry, Biology or Zoology, Psychology or Sociology. Second and third year subjects are Dietetics, Foods and Nutrition, Home Management, Animal Science, Biochemistry, Microbiology.

(i) Bachelor of Science with Dietetics and Physiology as major subjects: B.Sc.
(Potchefstroom)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Physical Science on at least the Standard Grade.

Curriculum: Three years of full-time study. A student takes the B.Sc. degree course with Dietetics and Physiology as major subjects. Subjects for the first year include, inter alia, Chemistry I and Zoology I. Chemistry II and Microbiology IA must be taken in the second year.

Students are required to do practical work in a hospital during the university vacations.

(ii) Bachelor of Science with Dietetics and Physiology as major subjects: B.Sc.
(Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with pass marks in Mathematics and Physical Science, at least one on the Higher Grade.

Curriculum: Three years of full-time study. First-year subjects include, inter alia, Chemistry I, Zoology I and Housekeeping. Biochemistry I, Physiology I and Dietetics I are taken in the second year. Third-year subjects are Physiology II, Dietetics II and Institutional Management.

Students can obtain the following post-graduate degrees in Dietetics at the PU for CHE and Stellenbosch: Hons. B.Sc., M.Sc. and D.Sc.

Bachelor of Dietetics: B.Sc. (Dietetics) (Pretoria)

Admission requirements: As for the B.Sc. degree. See p. 164.

Curriculum: Three years of full-time study. Subjects for the first year include, inter alia, Chemistry, Physics, Food Science, Home Management and Diet Patterns. The subjects for the third year are Communication, Science of Nutrition, Therapeutic Nutrition, Statistics Special, Food Service Management and a Project: Nutrition.

Candidates must obtain certificates in First Aid and Home Nursing before completion of their study for the degree.

Candidates are required to work in the food department of a hospital for at least three weeks during a university vacation.

DIPLOMAS

Diploma in Therapeutic Dietetics (Cape Town)

Admission requirements: A B.Sc. degree with Physiology, Microbiology, Chemistry or other approved major subject or a degree in Home Economics or Dietetics.

Curriculum: One and a half years of full-time study. The following are the principal subjects: Dietetics, Nutrition, Selected Medical and Surgical topics for dietitians, Institutional Management and Catering, Cookery, Food Technology, Public Health, Social Anthropology.

University Diploma in Dietetics (Potchefstroom)

Admission requirement: The degree of B.Sc. with Dietetics and Physiology as major subjects or the degree of B.Sc. (Dietetics).

Curriculum: One year of full-time study. The curriculum comprises the following subjects: Nutrition, Science of Nutrition, Food Administration, Institutional Management, Sociology Special, Microbiology.

Diploma in Hospital Dietetics or

Post-graduate Diploma in Hospital Dietetics (Orange Free State, Potchefstroom, Pretoria, Stellenbosch)

Admission requirements: B.Sc. with Dietetics and Physiology as major subjects or B.Sc. (Dietetics) or B.Sc. in Home Economics (Dietetic field).

Curriculum: The Diploma will be awarded to those students who have satisfactorily completed 12 months' service and instruction in an approved hospital and have passed an examination.

VOCATIONAL SERVICE

Dietetics is one of the ideal courses for a girl who is orientated towards the natural sciences. Although it is related to Home Economics, the Dietician is a person who interprets the science of nutrition in terms of food for healthy as well as sick people. The ultimate aim of the Dietician is therefore the advancement of good health by means of correct nourishment. Job opportunities on the grounds of basic, or in some cases post-graduate qualifications, are, inter alia, the following:

- The hospital dietician with the following avenues of specialization:
 - . An administrative dietician responsible for the work and training of supervisors and others who prepare meals.
 - . A therapeutic dietician who plans the meals of patients according to a doctor's prescription.
 - . A clinical dietician who plans diets for patients who are not admitted to hospitals.
 - . An educational dietician for the planning of courses and for the supervision and instruction of dietetic assistants, nurses and medical and dental students.
 - . A hospital research dietician who leads and plans research projects pertaining to food and nutrition.
 - . In a smaller hospital with fewer opportunities for specialization, the dietician will function in all the above-mentioned areas.

- A dietician for the provision of professional advice to industries, orphanages, school and university hostels, nursery schools, homes for the aged, hotels and other institutions where food is prepared in large quantities.

- Dietitians as researchers in the employ of the Medical Research Council, the SABS, the CSIR, fruit and vegetable canning factories, food supply industries; the various control boards such as the Meat, Dairy and Citrus Boards, universities and so forth.
- A teaching post under the auspices of the provincial education departments or a lecturer at a training college or university with particular opportunity for research and specialization.
- A consulting dietician in private practice. (This branch is a relatively new one in South Africa.)
- A journalist who writes women's columns in periodicals and newspapers and for the radio, television and advertising companies or who acts as a travelling representative.
- Dietitians attached to the Division of National Nutrition of the Department of Health. Here she is an important member of a team responsible for guidance services on matters of health. She manages her task of guidance on nutrition by means of lectures, radio talks, films and film strips, short courses, replies to enquiries, et cetera.

A dietician consequently has the opportunity, in accordance with her training, to choose from among fields such as guidance, hospital work, large company catering, research, education or a private practice. The field which she chooses will determine the nature of her work.

Also see Home Economics, p. 253.

ENGINEERING

Universities: Cape Town, Natal, Pretoria, Stellenbosch, Witwatersrand

The Rand Afrikaans University offers training in Chemical, Civil, Mechanical and Electrical Engineering up to second-year level. Potchefstroom University also offers training in Engineering up to second-year level.

Degrees

Bachelor of Science in Engineering: B.Sc. (Eng.) or B.Sc. Eng. (UCT, Natal, US, Wits)

Bachelor of Engineering: B.Sc. (Eng.) (UP)

Bachelor of Engineering: B.Eng. (US)

Honours degrees

Bachelor of Engineering (Honours): B.Sc. (Eng.) (Hons.) (UP)

Hons. B.Sc. Eng. (Electrical Engineering) (US)

Honours Bachelor of Engineering: Hons. B. Eng. (US)

Master's degrees

Master of Science in Engineering: M.Sc. (Eng.) (UCT, Natal, Wits)

Master of Engineering: M.Sc. (Eng.) (UP)

Master of Engineering: M.Eng. (US)

Doctor's degrees

Doctor of Philosophy: Ph.D. (UCT, Natal, Wits)

Doctor of Philosophy (Engineering): Ph.D. (Engineering) (US)

Doctor of Science in Engineering: D.Sc. (Eng.) (UCT, Natal, Wits)

Doctor of Engineering: D.Sc. (Eng.) (UP)

Doctor of Engineering: D.Eng. (US, Wits)

Diplomas

Diploma in Engineering (UCT, Natal)

Diploma in Mining (UP)

Diploma in Photogrammetry (Natal)

Graduate Diploma in Engineering (Wits)

Post-graduate Diplomas in Engineering:

- Post-graduate Diplomas in Mechanical Engineering and
- Post-graduate Diplomas in Electrical Engineering (US)

Bachelor of Science in Engineering: B.Sc. (Eng.) or Bachelor of Engineering: B. Eng. or B.Sc. (Eng.) (above-mentioned universities)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Cape Town: A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade.

Natal: See p. 132.

Pretoria: See p. 164.

Stellenbosch: A pass in Mathematics on the Higher Grade or at least 60 per cent on the Standard Grade and a pass in Physical Science on the Standard Grade.

Witwatersrand: A pass in Mathematics and Physical Science on the Higher Grade or at least 60 per cent on the Standard Grade. Applicants are advised to present the aforementioned subjects on the Higher Grade.

Curriculum: Four years of full-time study except at the University of Stellenbosch, where the course is taken over five years. The University of Pretoria advises some students to do the course over five years.

At the University of Pretoria the degree course can be taken partly extra-murally and partly full-time:

- Five years if only the first academic year is taken extra-murally over two years;
or
- six years if the second academic year is also taken extra-murally over two years.

The University of Stellenbosch also offers the degree of B.Sc.Eng. in Electrical Engineering which extends over four years of full-time study.

In general engineering students study the basic sciences, Mathematics, Applied Mathematics, Physics and Chemistry during the first year and then branch off into their selected field in their second year.

All the universities which award the degree offer the following branches: Chemical Engineering, Civil Engineering, Electrical Engineering and Mechanical Engineering.

The University of Stellenbosch offers the following options in the branch of Mechanical Engineering:

- Machine Construction
- Industrial option
- Refrigeration and Air Conditioning

- Aeronautical Science
- Marine option
- Automobile.

In the branch of Electrical Engineering the University of Stellenbosch offers the following options: Heavy Current, Low-tension Current or Marine option.

The University of the Witwatersrand offers the following options in the branch of Mechanical Engineering:

- Aeronautical Engineering
- Industrial Engineering
- Mechanical Engineering.

The following branches in Engineering are offered by the universities mentioned:

- Agricultural Engineering (see p. 218) - Natal, Pretoria, Stellenbosch
- Industrial Engineering - Pretoria
- Land Surveying - Witwatersrand (See p.255.)
- Metallurgical Engineering or Metallurgy - Pretoria, Witwatersrand
- Mining Engineering - Pretoria, Witwatersrand
- Mining Geology - Witwatersrand

Students do practical work during the long vacations.

DIPLOMAS

Diploma in Engineering (Cape Town)

Admission requirements: Admission to the Diploma will, except with the special permission of the Senate, only be open to:

- (i) A graduate of the University of Cape Town, or any other recognized university;
or
- (ii) non-graduates who hold suitable professional qualifications.

A Graduate Diploma in Engineering (G.D.E.) will be awarded to successful candidates admitted under (i) and a Diploma in Engineering (D.E.) to those admitted under (ii).

Curriculum: The curriculum consists of eight courses chosen from special courses offered by the Faculty of Engineering and from other Faculties.

Each course will consist of approximately thirty hours of lectures, tutorials, seminars and laboratory work.

Diploma in Engineering (Natal)

Admission requirement: A candidate must hold the degree of B.Sc. (Eng.) or have been admitted to the status thereof.

Curriculum: At least one semester of study. A candidate may convert his candidature to that for the M.Sc. (Eng.), in which case he will be required to submit a dissertation in addition to completing the courses prescribed for the Diploma.

Diploma in Mining (Pretoria)

Admission requirements: A candidate must hold a Bachelor's degree in any branch of Engineering or a Bachelor's degree in Mining Geology or have been admitted to the status thereof.

Curriculum: A minimum of one year of full-time study. Before commencing the course a candidate must gain at least four weeks of practical experience in an approved mine underground. A further four weeks of approved practical mining experience must be gained before the award of the Diploma.

Diploma in Photogrammetry (Natal)

Admission requirements: A candidate must hold an approved degree, a professional qualification in Civil Engineering or Surveying or another acceptable qualification.

Curriculum: One year of full-time study or at least two but not more than three years of part-time study.

A candidate must complete the prescribed practical work and pass the examinations in Photogrammetry.

Graduate Diploma in Engineering (Witwatersrand)

Admission requirements: A candidate must hold the degree of B.Sc. (Eng.) or the degree of B.Sc. with Honours or have been admitted to the status thereof.

Curriculum: One year of full-time study or three years of part-time study. A candidate must complete at least nine courses.

A candidate for the M.Sc. Eng. degree who fails in the courses prescribed for the degree may be admitted as a candidate for the Diploma and his candidature shall be regarded as having commenced on the date on which he was admitted as a candidate for the M.Sc. Eng. degree.

Post-graduate Diplomas in Engineering (Stellenbosch)

Admission requirements: A student must hold an approved four-year Bachelor's degree in Engineering or other acceptable qualification and relevant experience.

Curriculum: One year of full-time study. The Post-graduate Diploma in Engineering is offered in the following branches:

- **Post-graduate Diplomas in Mechanical Engineering:** The Diploma may be awarded in one of the following options: Refrigeration and Air Conditioning, Industrial Engineering, Automobile Engineering, Aeronautical Science.
- **Post-graduate Diplomas in Electrical Engineering:** The Diploma may be awarded in one of the following options: Heavy current, Low-tension current.

There is a prescribed course for each field of study.

VOCATIONAL SERVICE

Today engineering is a vital branch of the Applied Sciences. Scientists are, for instance seeking basic knowledge. Their objective is to discover new principles or combinations of known principles in order to explain natural phenomena and for this they make use of Mathematics, Physics, Chemistry and so forth. Engineers, on the other hand, ensure that the knowledge which the scientists give to man is applied. Although engineers are also thinkers, they are, by virtue of their profession, men and women of action.

There are various branches of engineering, but they cannot be demarcated in watertight compartments, so that activities in different fields often overlap. The rapid increase in the expertise of engineers has also given rise to many subdivisions in engineering which cannot all be discussed here. There are, for example, aviation, shipping and nuclear engineering, as well as fields such as machine construction, refrigeration and air-conditioning and so on. More information on these fields may be obtained from the universities concerned or from the Federation of Societies of Professional Engineers, P.O. Box 61019, Marshalltown, 2107, Transvaal.

Agricultural Engineering: The mechanization of agriculture is developing very rapidly and the demand for agricultural engineers is continually on the increase.

In the modern agricultural industry, the engineer is responsible for agricultural machinery; engineering aspects of soil conservation; handling, storage and processing of material; design of farm structures and the lay-out of farmyards, and matters pertaining to irrigation and drainage. Most engineers usually specialize in one or more of these fields.

The major employers in this sphere are the Government Departments of Agricultural Technical Services, Bantu Administration and Development, Water Affairs; various Agricultural Co-operatives such as those for citrus and deciduous fruit, sugar and tobacco; commerce and industry dealing with agricultural products, such as the wool industry and Phoscor; concerns which manufacture agricultural implements; universities and colleges which offer tuition in this field. In the Government departments, in particular, there are remarkable opportunities for the post-graduate student who wishes to tackle interesting research projects.

Chemical Engineering: The rapid industrial growth of the Republic creates opportunities for an increasing number of engineers in the chemical industry. There are job prospects for chemical engineers wherever chemical changes are carried out. Atomic installations, the manufacture of ferrous and non-ferrous metals, oil refineries and the by-product plants attached to them, the manufacture of paint, rubber, rayon, paper, acids, fertilizers, explosives, glass, soap, cement, polish, timber, plastics, pharmaceutical products and the processing of minerals - all these are encompassed in the field of the chemical engineer, who deals mainly with the designing, operation and maintenance of installations. Some of the employers in this field are firstly, all the industries concerned, but also bodies such as Iscor, Sasol, the Atomic Energy Board, CSIR, Phoscor, SABS and the Government Departments of Health, Water Affairs and Defence.

Civil Engineering: These engineers, who form the largest group in the country, generally speaking, deal with the planning, design, layout, construction and maintenance of projects concerned with the control and adaptation of man's physical environment in the interest of his comfort and benefit. In practice such projects deal with bridges, roads, docks, airport runways, railways, tunnels, dams, canals, sewerage and drainage systems, gas and water supplies, mine headgears and other large structures. There are many specialized sub-branches of civil engineering such as those of the structural engineer, municipal engineer, road or railway engineer, water engineer, etc. Thus there are many opportunities for specialization, insight, initiative and research.

As the Government is responsible for some of the largest projects, the largest variety of career opportunities is found in the Departments of Water Affairs, Public Works, Agricultural Technical Services, Bantu Administration and Development, Transport, Community Development, and the Administrations of South-West Africa and the four provinces.

Civil engineers are also employed by the Railways, municipalities of large cities, the CSIR, construction companies and other private concerns, universities and colleges for advanced technical education. In addition, the Consulting Engineers are important as employers of in particular civil, but also of other engineers. In conjunction with this, there are the opportunities of a private consulting practice as an ultimate career for graduates. Consulting Engineers are self-employed and they or their firms receive commissions from Government, Provincial or Municipal bodies and, to a very large extent, from industrial and other undertakings to carry out the design and to supervise the construction of projects. The South African Association of Consulting Engineers is, for example, at present making use of the services of more than 1000 professional engineers and nearly 2000 engineering aides and technicians in the field of civil engineering, and a further 400 and 600 respectively in the field of electrical, mechanical, heating and ventilation engineering. In addition approximately 600 professional engineers are principals of or partners in such consulting engineering firms.

Electrical Engineering: The field of the electrical engineer is divided into two sections, viz that of power and that of electronics. The first includes the design,

manufacture and/or maintenance and control of electric generating plants, transformers and switchgear, electric motors, power cables, long-distance high voltage transmission lines, electric locomotives and electric machinery of all kinds. Electronics covers the field of "light current" apparatus using valves, transistors, relays and cathode-ray tubes and embraces telecommunications engineering, including automatic exchanges, multiple-channel transmission by carrier and micro-wave, radio, television and navigational aids such as radar, sound-track reproduction and many other electronic aids for use in industry and scientific research.

Bodies which make use of the services of an electrical engineer are for example the Railways, Escom, municipalities, Posts and Telecommunications, industries, factories, the radio, private concerns, the SABS and mines.

Lecturing posts can also be obtained at a university or college which provides technical training. Various government departments make use of the services of electrotechnical engineers and the nature of the latter's duties varies from department to department. The departments are those of Public Works, Agricultural Technical Services, Transport, Bantu Administration and Development, Mining, Community Development, Labour and the Administrations of South-West Africa and the four provinces.

Industrial Engineering: This is a comparatively new branch and the function of the industrial engineer is basically that of ensuring the maximal utilization of the production factors by planning, arrangement of equipment, scheduling of work, control over labour, production, material, quality and cost. He combines knowledge of engineering (mainly mechanical) with the principles of management and business economics.

His occupational field lies mainly in industries such as the Railways, mines, Iscor, Sasol, Phoscor, the IDC; large factories; municipalities; lecturing at a university and research.

Mechanical Engineering: This field of study includes the design, construction, marketing, installation and maintenance of mechanical equipment, such as machine tools, equipment for handling material, automatic production line machinery for factories, mining plants, road and agricultural machinery, refrigeration and air conditioning plants, boilers, pumps, air compressors, turbines, oil and gas engines, automobiles, aircraft, ships and railway locomotives. These engineers also plan new factory layouts.

The mechanical engineer therefore renders a particular service to the community which can justly be considered as the cornerstone of modern technology. The processing, handling and distribution of a product is directly dependent upon the application of the principles of mechanical engineering science.

The best career possibilities are consequently found with the Railways; factories and other large industrial undertakings such as the mines, Iscor, Sasol etc.; the CSIR; marine and aviation companies; and large municipalities. Private practice as a consulting engineer or a lecturing post at a university or technical college is also possible. The Public Service offers very attractive careers in this field in the Departments of Public Works, Bantu Administration and Development, Defence, Agricultural Technical Services, Labour, Mines, Water Affairs and the Administrations of South-West Africa and the four provinces. The very wide scope for research constitutes a definite challenge.

Metallurgical Engineering: This type of engineer has a two-fold field, to wit 1) the extraction or recovery of a metal from its original ore and complex compounds, and 2) the study of the physical properties thereof with a view to processing into useful products. The functions of the metallurgist embrace all aspects of metal and alloy technology - from the time the metalliferous minerals have been mined and made available for treatment, to the finished product used by mankind.

The metal manufacturing industry is showing tremendous progress and consequently offers opportunities to an increasing number of engineers, particularly as far as research is concerned. The following are only a few of the bodies with whom job opportunities exist: Iscor, the CSIR, the SABS, all mines engaged in the extraction of metals, the iron and steel industry, lecturing posts at universities and colleges for advanced tech=

nical education.

Also see Metallurgy, p. 152.

Mining Engineering: Although mining in this country is usually connected with gold, diamonds and coal, many other minerals such as iron, chrome, manganese, copper and asbestos ores are mined here. The mining engineer is concerned with all the different types of mining - from the stage when he and the geologists are looking for new deposits right through to the time when a new mine has been established and is producing metals or other minerals for sale. He is concerned with both the scientific and the practical side of the mineral industry from the exploration stage to the marketable product and may even find himself concerned with problems of the establishment of towns, roads, railway junctions, power and water supplies. Many mining engineers hold executive and managerial posts, particularly where supervision and safety are concerned. A qualified mining engineer can be appointed in the Department of Mines as an inspector of mines.

Also consult Tertiary Training in connection with the training of engineering technicians.

FINE ARTS

Universities: Cape Town, Natal, Orange Free State, Potchefstroom, Pretoria, Rhodes, South Africa, Stellenbosch, Witwatersrand

Degrees

Bachelor of Arts in Art: B.A. (Art) (UCT)

Bachelor of Arts in Fine Art: B.A. (Fine Art) (UCT)

Bachelor of Arts in Fine Arts: B.A.(F.A.) or B.A. (Fine Arts) (Natal, UOFS, PU for CHE, Unisa, US, Wits)

Bachelor in Fine Arts: B.A.(F.A.) (UP)

Bachelor of Arts (Education) (Art): B.A.(Ed.)(Art) (UP)

Bachelor of Fine Art: B. Fine Art (Rhodes)

Honours degrees

Bachelor of Arts in Fine Arts (Honours): B.A. Fine Arts (Hons.) (US)

Master's degrees

Master of Arts in Fine Art: M.A. (Fine Art) (UCT)

Master of Arts in Fine Arts: M.A. Fine Arts (Natal, UOFS, Unisa, Wits)

Master of Arts: M.A. (PU for CHE)

Master in Fine Arts: M.A.(F.A.) (UP, US)

Master of Fine Art: M. Fine Art (Rhodes)

Doctor's degrees

Doctor of Philosophy: Ph.D. (UCT, Wits)

Doctor Philosophiae in Fine Arts: D.Phil. (Fine Arts) (UOVS)

Doctor Philosophiae: D.Phil. (US)

Doctor of Literature and Philosophy: D.Litt. et Phil. (Unisa)

Doctor of Literature: D.Litt. (Wits)

Diplomas

Diploma in Fine Art (UCT, Rhodes, US)

Diploma in the Fine Arts (UOFS)

Diploma in Graphic Design (UCT)

Advanced Diploma in Fine Art (UCT)

University Education Diploma in Fine Arts (PU for CHE) (See EDUCATION p. 188.)

The following universities offer a four-year teacher's diploma course with Art as one of the specializations: Orange Free State, Port Elizabeth and Pretoria. See EDUCATION.

Certificates

Certificate in Fine Art (Three-year course) (UCT)

University Art Teacher's Certificate: One year after a Diploma in Fine Arts (Rhodes)

Primary Teacher's Art Certificate: One year after a Primary Teacher's Certificate (Rhodes)

The University of Natal also offers Fine Art as a major subject in the B.A. curriculum.

DEGREES

Bachelor of Arts in Art: B.A. (Art) (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). Art passed on the Standard or Higher Grade will be a recommendation.

Curriculum: Four years of full-time study. The degree course is primarily for candidates intending to become teachers of art in schools. The curriculum includes first and second year courses in a B.A. subject taught in schools.

Students who have successfully completed the work of the first three years are admitted in their fourth year to the course for the Secondary Teacher's Diploma, or that for the Post-graduate Primary Teacher's Diploma. On the completion of the fourth year both the degree and the diploma are awarded.

Bachelor of Arts in Fine Arts: B.A. (Fine Arts) or B.A.(F.A.)

or

Bachelor of Fine Art: B. Fine Art

(Cape Town, Natal, Orange Free State, Potchefstroom, Pretoria, Rhodes, South Africa, Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). Some universities require proof of practical ability in art.

Additional requirements:

Cape Town: See B.A. (Art)

Pretoria: See p. 57.

Witwatersrand: See p. 37.

Curriculum: The curriculum extends over four years of full-time study and includes art subjects as well as one or two ordinary B.A. courses. The major subjects are History of Art or Theory of Art (Rhodes) and one of the following: Painting, Sculpture, Design (Potchefstroom), Graphic Design (Rhodes), Ceramics (Natal), Information Design (Pretoria).

Cape Town, Natal and Rhodes offer a course in Photography.

Bachelor of Arts (Education) (Art): B.A.(Ed.)(Art) (Pretoria)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Art. A candidate who does not fulfil the latter requirement must give satisfactory evidence that he has the necessary practical ability in fine arts in order to attend the courses with profit.

Curriculum: Four years of full-time study. The curriculum includes three courses in each of the following subjects: History of Art, Design, Painting, Art of Drawing and Pedagogics. Candidates take H.E.D. teaching subjects in the fourth year of study.

Bachelor of Arts in Fine Arts: B.A. in Fine Arts (Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). A pass in Mathematics on the Standard Grade is required for the field Industrial Design (Metal).

Curriculum: The curriculum, which extends over four years of full-time study, comprises a selection of five fields of study, viz

- Industrial Design (Graphic Art)
- Industrial Design (Textile)
- Industrial Design (Metal)
- Industrial Design (Colour)
- Teaching Field

The first-year subjects for Industrial Design include art subjects and a course in either French or German.

The Teaching Field contains three courses in English or Afrikaans-Nederlands. Examinations are taken in English III or Afrikaans-Nederlands III and History of Art at the end of the third year. In the fourth year of study students take the one-year H.E.D. course. See p. 194.

The major subjects for the other four fields are as follows:

Industrial Design (Graphic Art)

Applied Graphic Art III, History of Art IV

Industrial Design (Textile)

Textile Design III, History of Art IV

Industrial Design (Metal)

Metal Design IV, History of Art IV, Drawing IV

Industrial Design (Colour)

Advanced Colour Science III, History of Art IV, Psychology III

Students may be required to do practical vacation work in industry.

DIPLOMAS

(i) Diploma in Fine Art (Cape Town, Rhodes)

Admission requirement: Standard 10 Certificate.

Curriculum: Three years (Cape Town) or four years (Rhodes) of full-time study. The

courses are similar in content to that for the B.A. in Fine Art.

(ii) Diploma in Fine Arts (Stellenbosch)

Admission requirement: Standard 10 Certificate.

Curriculum: Three years of full-time study. The courses are similar in content to those for the B.A. in Fine Arts, with a selection of two fields only, viz Industrial Design (Graphic Art or Textile).

Diploma in Graphic Design (Cape Town)

Admission requirement: Standard 10 Certificate or special aptitude for art.

Curriculum: Four years of full-time study, comprising courses in Basic Design, Graphic Design, Typography and Analysis of Communications Media.

Advanced Diploma in Fine Art (Cape Town)

Admission requirements: B.A. in Fine Art or B.A. (Art) or Diploma in Fine Art.

Curriculum: One year. The purpose of this course is to allow practical research to be conducted by persons who wish to pursue investigations into the practical creative aspects of Fine Art.

Diploma in the Fine Arts (Orange Free State)

This Diploma is intended for those who are interested in the Fine Arts, but do not, however, wish to take up Fine Arts as a teaching profession or practise as a free-lance artist.

The admission requirements, the curriculum and the syllabuses are the same as for the first three years of the degree B.A. (Fine Arts).

VOCATIONAL SERVICE

Academic qualifications in fine arts can be obtained in one of two ways. Firstly, History of Art can be taken as one major for a B.A. degree, or it can be taken in a meaningful combination with other subjects, as subsidiary subject at first or second-year level. Such a course offers preparation for careers in, for example, research or lecturing or in art and cultural historical museums (as curator or educational officer), at universities, the HSRC, art schools; in the press as art critic or journalist responsible for an art column; the SABC for radio and television broadcasts (one of the many programmes on art); in commercial art as liaison officer between the artist and the public and in the foreign service as cultural attaché. This subject is also extremely valuable for the spiritual and cultural development of every human.

Secondly, the student may apply himself to more practical and specialized fields by taking a B.A.(F.A.) degree. In this case History of Art can also be taken as a major together with other art subjects. The field of specialization will largely determine the career to be pursued. There are many opportunities for art historians, painters, sculptors and designers, inter alia, as free-lance professional artists, as teachers of art or lecturers, as art and museum scientists, as designers in industry (graphic, textile, metal, etc.), in advertising or press companies and government bodies, and as illustrators or typographers with publishers. The four provincial Performing Arts Councils employ artists as designers and manufacturers of various requisites.

Art is communication and new fields of labour are being opened up for academically trained creative and designing artists (men as well as women) in a changing world. The largest employers are merchants and industrialists who have become aware of the value of artists in industry. Because of the rapid industrial growth in our country, the demand for trained artists will increase steadily. Owing to the good offices of the Design Institute (SABS), bursaries are made available to promising students and com=

petitions are organized. The aim with this is not only to promote good design, but also to draw attention to the creative designing abilities of South African artists. Also consult Tertiary Training.

FOOD SCIENCE

University: Stellenbosch

Degrees

Bachelor of Science in Food Science: B.Sc. in Food Science

Honours Bachelor of Science in Food Science: Hons. B.Sc. in Food Science

Master of Science in Food Science: M.Sc. in Food Science

Doctor of Philosophy (Food Science): Ph.D. (Food Science)

Doctor of Science in Food Science: D.Sc. in Food Science

DEGREE

Bachelor of Science in Food Science: B.Sc. in Food Science

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with passes in Mathematics and Physical Science on at least the Standard Grade.

Curriculum: Four years of full-time study. The following subjects are taken in the first year: Chemistry, Physics, Mathematics, Biology. Subjects taken during the other three years are, inter alia, the following: Food Science III (major subject), Chemistry III (major subject), Food Factory Machines II, Bacteriology, Biochemistry, Business Economics.

Students are required to devote at least two months during the summer and/or winter vacations to practical work in approved food processing factories or nutritional research institutions.

VOCATIONAL SERVICE

Although the food industry is the largest and most stable industry in the world, it must constantly keep pace with the rapid growth in the world's population. Furthermore, it is one of the industries with the greatest demand for scientists and technologists, since the supply of suitable and healthy food is a necessity for existence. South Africa also urgently needs food scientists and technologists. They play a key rôle in the modern food industry and are indispensable to the industry of the future and for the development and welfare of the entire country. The many different manufactured food products which are sold today and which save the consumer so much time and trouble as regards their preparation are the achievement of food science. (South Africans spend more than R1 600 000 000 per annum on food.)

In some Government departments, the SABS, the CSIR and the various Control Boards, there is an exceptional demand for properly trained persons to undertake basic and applied research on food, to investigate problems of the industry, to conduct food analysis and to engage in quality control and inspection work in order to ensure that only products of the highest quality are marketed. There are numerous opportunities in industry itself. Fruit and vegetable factories, bakeries, millers, manufacturers of cereals, dairy and canning factories, meat and fish factories, manufacturers of sweets and cold drinks, the manufacturers and distributors of machinery for food factories, packaging material and chemicals for the food industry, et cetera, all require the services of food scientists and technologists and offer them a variety of interesting and challenging opportunities in quality control, product development, manufacturing and production, technical sales and management. The Department of Agri=

cultural Technical Services undertakes research work in connection with the preserving of foodstuffs at the Research Institute for Fruit and Food Technology in Stellenbosch, while cold storage studies on citrus and subtropical fruits are carried out at Nel= spruit.

FORESTRY

University: Stellenbosch

Degrees

Forestry

Bachelor of Science in Forestry	:	B.Sc. in Forestry
Honours Bachelor of Science in Forestry	:	B.Sc.Hons. in Forestry
Master of Science in Forestry	:	M.Sc. in Forestry
Doctor of Philosophy (Forestry)	:	Ph.D. (Forestry)
Doctor of Science in Forestry	:	D.Sc. in Forestry

Wood Technology

Bachelor of Science in Wood Technology	:	B.Sc. in Wood Technology
Honours Bachelor of Science in Wood Technology	:	B.Sc.Hons. in Wood Technology
Master of Science in Wood Technology	:	M.Sc. in Wood Technology
Doctor of Philosophy (Wood Technology)	:	Ph.D. (Wood Technology)
Doctor of Science in Wood Technology	:	D.Sc. (Wood Technology)

Parks and Recreation Administration

B. in Parks and Recreation Administration

Nature Conservation

Hons. B.Sc. in Nature Conservation
M.Sc. in Nature Conservation
Ph.D. (Nature Conservation)
D.Sc. in Nature Conservation

DEGREES

FORESTRY

Bachelor of Science in Forestry: B.Sc. in Forestry

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics and Physical Science on the Standard Grade. Prospective students are strongly advised to take Biology for the Standard 10 examination.

Curriculum: Four years of full-time study.

Subjects for the first year include Botany, Mathematics, Chemistry, Physics and Zoology.

After completion of their first year students can switch to the second year of study for the B.Sc. degree in Wood Technology.

In their third year of study students can select one of two fields, viz Silviculture or

Silviculture – Nature Conservation.

The major subjects for the degree course in both fields of study are Silviculture III and Forest Management III.

Students are required to do practical work during vacations and to undertake study tours.

WOOD TECHNOLOGY

Bachelor of Science in Wood Technology: B.Sc. in Wood Technology

Admission requirement: As for B.Sc. in Forestry.

Curriculum: Four years of full-time study.

Subjects for the first year include: Botany, Mathematics, Chemistry, Physics and Zoology.

After completion of their first year students can switch to the second year of study for the B.Sc. degree in Forestry.

Subjects for the fourth year include: Wood Technology III (major subject), Wood Chemistry, Forest Policy, Applied Industrial Psychology, Production, Wood Technology Report (major subject).

Students are required to do practical work during vacations and to undertake study tours.

PARKS AND RECREATION ADMINISTRATION

B. in Parks and Recreation Administration

Admission requirement: As for B.Sc. in Forestry.

Curriculum: Four years of full-time study. Subjects for the first year include: Botany, Chemistry, Physics, Zoology and Mathematics. The major subjects in the fourth year are Public Administration III, Open-air Recreation III, Ornamental Floriculture and Flower Production III.

NATURE CONSERVATION

Hons. B.Sc. in Nature Conservation

Admission requirements: A B.Sc. degree with Zoology, Botany or Biology as one of the major subjects.

Curriculum: Students must pursue an approved curriculum of advanced study, which has been prescribed individually for each student by the lecturer concerned, for at least one year and pass the examinations.

M.Sc. in Nature Conservation

Admission requirement: The degree of B.Sc. in Forestry or another approved Bachelor's degree or an Honours B.Sc. degree which has been approved by the Senate.

Curriculum: Students must pursue an approved curriculum of research and/or advanced study for at least two years (after obtaining the Bachelor's degree) or at least one year (after obtaining the Honours degree) which may include a period of study or research at another recognized place.

Students are required to submit a satisfactory thesis.

VOCATIONAL SERVICE

A clear distinction should be made between a Forestry Officer and a Forester. The latter does not take a degree course, but is trained for the Diploma in Forestry at the College for Foresters, Saasveld, approximately 10 km from George in the Cape Province.

A Forestry Officer, on the other hand, is someone who has obtained the four-year B.Sc. degree in Forestry from the University of Stellenbosch. His functions in the Department of Forestry are, inter alia, the management of State plantations and nurseries, indigenous forests, nature reserves, State Timber-conversion plants, research, guidance to the public and so forth.

Job opportunities for professional officers appear clearly from their functions as well as the divisions into which the Department is divided:

- The Division of Forest Management is in charge of yield regulation, nature conservation, silvicultural operations, outdoor recreation, the marketing of timber and numerous matters relating to the management of the eight forestry regions.

- The Division of Forest Utilization which, inter alia, is in charge of the saw-milling industry and the utilization and marketing of converted timber.

- The Division of Forest Research, which controls and co-ordinates research work such as, for example, that undertaken in the branches of silviculture, wood technology, forest hydrology, tree breeding, forest mensuration, forest pathology, etc.

- Other divisions of the Department are those of forestry economics, exploitation and conversion, liaison and information.

- Forestry Officers are also responsible for the lectures to students studying for the Diploma in Forestry at Saasveld.

Forestry Officers can thus attain the highest posts in the Department such as those involving management, co-ordination, guidance and assistance in the formulation of departmental policy and the planning of long-term programmes according to the demands of the economy and forestry. They are also employed by some municipalities, mines, forestry and timber companies and the CSIR.

Also consult Tertiary Training.

HOME ECONOMICS/DOMESTIC SCIENCE

Universities: Cape Town, Natal, Orange Free State, Potchefstroom, Pretoria, Stellenbosch

Degrees

Bachelor of Science in Home Economics: B.Sc. Home Econ. (Natal) or B.Sc. Home Economics (UOFS)

Bachelor of Science in Home Economics (Education): B.Sc. Home Economics (Ed.) (UOFS)

Bachelor of Science (Domestic Science): B.Sc. (Dom.Sc.) (PU for CHE)

Bachelor of Science (Domestic Science) (Education): B.Sc. (Dom.Sc.Ed.) (PU for CHE)

Bachelor of Domestic Science: B.Sc. (Dom.Sc.) (UP)

Bachelor of Science in Domestic Science (Education): B.Sc. (Dom.Sc.)(Ed.) (UP)

B.Sc. in Home Economics (Ed.) (US)

B. in Home Economics (US)

B. in Home Economics (Ed.) (US)

Honours degrees

Bachelor of Science in Home Economics (Honours): B.Sc. Home Econ. Hons. (Natal)

Honours Bachelor of Science: Hons. B.Sc. (PU for CHE)

Honours Bachelor of Domestic Science: B.Sc. (Dom. Sc.) (Hons.) (UP)

Hons. B.Sc. in Home Economics (US)

Hons. B. in Home Economics (US)

Master's degrees

Master of Science in Home Economics: M.Sc. Home Econ. (Natal)

Master of Science: M.Sc. (PU for CHE)

Master of Domestic Science: M.Sc. (Dom.Sc.) (UP)

M.Sc. in Home Economics (US)

M. in Home Economics (US)

Doctor's Degrees

Doctor of Philosophy: Ph.D. (Natal)

Doctor of Science: D.Sc. (PU for CHE)

Doctor of Philosophy (Home Economics): Ph.D. (Home Economics) (US)

Doctor of Science in Home Economics: D.Sc. in Home Economics (US)

Diplomas

Post-graduate Extension Diploma in Home Economics (US)

Higher Teacher's Diploma in Home Economics (UCT) (See EDUCATION p.184.)

The following universities offer a four-year teacher's diploma course with Home Economics as one of the specializations: Orange Free State, Potchefstroom, Pretoria, Stellenbosch, Witwatersrand. See EDUCATION.

DEGREES

Bachelor of Science in Home Economics: B.Sc. Home Econ. (Natal)

Admission requirements: As for the B.Sc. degree. See p. 132.

Curriculum: Three years of full-time study. The subjects for the first year are, inter alia, Chemistry, Biology or Zoology, Psychology or Sociology. Second and third year subjects are Clothing and Textiles, Foods and Nutrition, Home Management, Animal Science, Biochemistry, Microbiology.

Bachelor of Science in Home Economics: B.Sc. Home Economics (Orange Free State)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with pass marks in Mathematics and Physical Science on the Standard Grade.

Curriculum: Four years of full-time study. The subjects for the first year are Food Science, Clothing, Biology, Chemistry and Elementary Physics.

Fourth year subjects are Food Science, Clothing, Interior and Science of Nutrition.

Bachelor of Science in Home Economics (Education): B.Sc. Home Economics (Ed.) (Orange Free State)

Admission requirements: As for the degree of B.Sc. Home Economics.

Curriculum: Four years of full-time study. The curriculum for the first three years is similar to that of the degree B.Sc. Home Economics. Students take the H.E.D. course in their fourth year with Method of Teaching in Science of Nutrition and Clothing.

Bachelor of Science (Domestic Science): B.Sc. (Dom.Sc.) (Potchefstroom)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). The general requirements for admission to a B.Sc. degree (see p. 160) also apply in this case, provided that students have passed Physical Science on at least the Standard Grade.

Curriculum: Four years of full-time study. The subjects for the first year are as follows: Cookery I, Physiology I, Home Management I, Chemistry I, Physics.

Fourth year subjects are Cookery IV, Clothing III, Science of Nutrition II. Physiology is taken up to third-year level.

The degrees of B.Sc.Hons. and M.Sc. can be taken in Cookery.

Bachelor of Science (Domestic Science) (Education): B.Sc. (Dom.Sc.Ed.) (Potchefstroom)

Admission requirement: As for the degree of B.Sc. (Dom.Sc.).

Curriculum: Four years of full-time study. The curriculum is more or less similar to that of the degree of B.Sc.(Dom.Sc.) except that Cookery is taken only up to third-year level and the fourth year is devoted to Clothing III or Science of Nutrition II and to courses prescribed for the U.E.D. (see p. 188).

Bachelor of Domestic Science: B.Sc. (Dom.Sc.) (Pretoria)

Admission requirement: As for the B.Sc. degree. See p. 164.

Curriculum: Four years of full-time study. The curriculum provides for a selection between major fields, viz (i) Clothing and Interior
(ii) Food and Nutrition.

The course in the field of Food and Nutrition is for professional purposes equivalent to the degree of B.Sc. (Dietetics).

The prescribed curriculum for the first year of study is as follows for both fields: Chemistry, Physics, Clothing and Food Science.

A candidate must obtain the certificates in First Aid and Home Nursing of the South African Red Cross Association or a similar organization before the end of her studies.

Bachelor of Science in Domestic Science (Education): B.Sc. (Dom.Sc.)(Ed.) (Pretoria)

Admission requirement: As for the B.Sc. degree. See p. 164.

Curriculum: Four years of full-time study. The subjects for the first year of study are as for the degree of B.Sc. (Dom.Sc.). The curriculum also includes educational subjects such as Pedagogics III and Blackboard Technique and Writing.

B.Sc. in Home Economics (Ed.) (Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics and Physical Science, of which at least one must be on the Higher Grade.

Curriculum: Four years of full-time study. The subjects for the first year are Chemistry, Physics, Mathematics, Physiology, History and Appreciation of Home Economics. The curriculum also includes prescribed H.E.D. subjects (see p. 194) for example Educational Psychology, Philosophy of Education, Method of Home Economics and Needlework.

The major subject is either Food - Nutrition III or Clothing - Interior III.

B. in Home Economics (Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics and a science subject on the Standard Grade.

Curriculum: Four years of full-time study. The curriculum comprises, inter alia, the following subjects: Sociology I and II, Physiology I, Home Management I and II with either Food - Nutrition III or Clothing - Interior III as the major subject.

B. in Home Economics (Ed.) (Stellenbosch)

Admission requirement: As for the degree of B. in Home Economics.

Curriculum: Four years of full-time study. The curriculum includes more or less the same subjects as for the degree of B. in Home Economics, but also includes prescribed H.E.D. subjects. (See p. 194.)

DIPLOMA

Post-graduate Extension Diploma in Home Economics (Stellenbosch)

Admission requirement: The degree of B.Sc. in Home Economics or the B.Sc. degree with Dietetics and Physiology as major subjects.

Curriculum: One year of full-time study.

VOCATIONAL SERVICE

The domestic scientist is concerned with home-making and her aim is to create a physical and social environment in which proper human relationships can be established. Consequently it is the ideal course for the girl who is orientated towards the natural as well as the social sciences and who has a wide field of interest. Thus the training amounts to a preparation for a pleasant and promising career and at the same time it equips the future housewife with scientific knowledge. In addition, the married woman always has the opportunity of utilizing her training to the benefit of the community. The teacher of domestic science, who is herself a professional person, will also be able to render valuable service and information outside the school context. As a result of the various branches which are available, men can also enter this profession today.

The following are some of the career possibilities open to the person trained in domestic science:

- A teacher of domestic science at provincial high schools or schools under the jurisdiction of the Department of National Education; a lecturer at a training institution or university.
- A link between manufacturer and consumer in respect of domestic requirements; in the employ of an architect or a firm concerned with manufacturing clothes, food, furniture, interior decorating or fashion and designing; in the service, mainly for information, of control boards such as the Meat, Wool, Milk, Wheat, Maize, Dairy, Egg, Dry Bean and Citrus Boards.
- Journalist for women's columns in periodicals, newspapers, radio, television and advertising companies or as a travelling representative.
- A research officer employed by, for example, the CSIR, SABS and the Atomic Energy Board for research into textiles, clothing, food, etc.
- A private practice to act as fashion, interior and food consultant.

The Department of National Education employs professional officers (domestic science)

mainly with a view to guidance to the public. The work comprises lectures, demonstrations, courses, exhibitions, group discussions, radio talks, articles for newspapers and journals, personal interviews, and so forth. Experimental cookery and palatability tests are also undertaken.

As in many other fields, ambition and experience must be combined with further training and even post-graduate study in order to be able to advance to the highest posts.

Also see Dietetics, p. 236.

LANDSCAPE ARCHITECTURE

University: Pretoria

Degrees

Bachelor of Landscape Architecture: B.L.

Master of Landscape Architecture: M.L.

DEGREE

Bachelor of Landscape Architecture: B.L.

Admission requirements: See p. 164.

Curriculum: The curriculum extends over four years. A candidate must devote himself full-time to the study for the degree during the first three years, while he must be employed full-time with a landscape architect or related industry during his fourth year of study. He may undertake a study tour as part of the work for the fourth year during the university vacations of the fourth year. He must submit a report on conclusion of the study tour.

Candidates are advised to gain practical experience in the employment of a landscape architect or related industry during the university vacations of the first three years of study.

The curriculum comprises, inter alia, the following courses: Landscape Architecture IV; Public Administration II; History of Environment III; Horticulture II; Civic Design; Botany I; Soil Science; Building Technology.

VOCATIONAL SERVICE

Landscape Architecture includes planning and making recommendations in respect of regions or areas in order to render these as effective and attractive as possible. The work implies close co-operation with engineers, municipal officials, horticulturists and others. It also offers opportunities for specialization in the planning and laying out of, for example, parks and playgrounds, school and university grounds, business centres, roads and so forth.

The largest employers are the Public Service, Provincial Administrations and municipalities. Private practice offers remarkable opportunities, since many bodies which require these services do not employ an architect on a full-time basis.

LAND SURVEYING

Universities: Cape Town, Natal, Pretoria, Witwatersrand

Degrees

Bachelor of Science in Land Surveying: B.Sc. (Survey.) (UCT) or B.Sc.Sur. (Natal)

Bachelor of Land Surveying: B.Sc. (Land Surveying) (UP)

Bachelor of Science in Engineering: B.Sc. (Eng.) (Wits)

Master's degrees

Master of Science in Engineering: M.Sc. (Eng.) (UCT, Wits)

Master of Science in Land Surveying: M.Sc.Sur. (Natal)

Master of Land Surveying: M.Sc. (Land Surveying) (UP)

Doctor's degrees

Doctor of Philosophy: Ph.D. (UCT, Natal, Wits)

Doctor of Science in Engineering: D.Sc. (Eng.) (UCT, Wits)

Doctor of Science in Land Surveying: D.Sc.Sur. (Natal)

Doctor of Land Surveying: D.Sc. (Land Surveying) (UP)

Doctor of Engineering: D.Eng. (Wits)

Diploma

Diploma in Photogrammetry: Dipl. Phot. (Natal)

DEGREES

Bachelor of Science in Land Surveying: B.Sc. (Survey.) or B.Sc.Sur.

or Bachelor of Land Surveying: B.Sc. (Land Surveying)

or Bachelor of Science in Engineering: B.Sc. (Eng.)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Cape Town: A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade.

Natal: See p. 132.

Pretoria: See p. 164.

Witwatersrand: Passes in Mathematics and Physical Science on the Higher Grade or at least 60 per cent on the Standard Grade. Applicants are advised to present these subjects on the Higher Grade.

Curriculum: Four years of full-time study. The curriculum includes, inter alia, the following subjects: Land Surveying or Surveying, Town Planning, Geodesy, Mathematics, Applied Mathematics, Physics. Some of the universities include courses in Astronomy in the curriculum.

Students are required to do practical surveying under the supervision of a land surveyor during the university vacations.

The examinations for the degree in Land Surveying are recognized by the Board for the Recognition of Land Surveyors' Examinations as the theoretical qualification required in terms of the Land Survey Act, 1927 (Act No. 9 of 1927 as amended). Graduates in Land Surveying, after a period of 270 working days in employment with a registered land surveyor, and on completion of the Trial Survey required by the Survey Board, become eligible for registration as a Land Surveyor.

DIPLOMA

Diploma in Photogrammetry (Natal)

Admission requirements: An approved degree, a professional qualification in Civil Engineering or Surveying or other acceptable qualifications.

Curriculum: One year of full-time study or at least two but not more than three years of part-time study.

A candidate must complete the prescribed practical work and pass the examinations in Photogrammetry.

VOCATIONAL SERVICE

The notion that a land surveyor is someone one sees on the side of a road peering through an instrument or riding in a vehicle loaded with coloured poles is definitely no longer representative of the activities this profession entails. Although he is compelled to spend much of his time in the open, today, with the aid of aerial photographs and electronic or optical surveying techniques his work is transferred to an office, there to be completed by means of modern methods.

In the Republic, where the process of division and subdivision, the planning of new cities, the building of roads etc., will be in progress for a long time to come, the occupational prospects for land surveyors are virtually unlimited. Government departments employ land surveyors to fulfil various duties. In the Natal Provincial Administration, land surveyors in the office of the Private Towns Council are responsible for the subdivision of ground and the designing and expansion of cities. In the Department of Agricultural Credit and Land Tenure, land surveyors in the Survey Branch work in the office of the Surveyor-General and in the trigonometrical survey office's geodetic branch, topographical branch, South-West Africa branch and cartographic branch. Other Government Departments which employ land surveyors are those of Community Development, Bantu Administration and Development, Water Affairs and Transport. There are also job opportunities for land surveyors in the Railways, municipalities of large cities, Escom, the Rand Water Board, the mines, the CSIR and universities. After gaining wide experience, a land surveyor can go into private practice, usually in partnership with others.

LAW

Universities: All the universities in the Republic of South Africa

Degrees

Baccalaureus Procuratoris: B.Proc. (All the universities except US)

Bachelor of Law or Baccalaureus Juris:

B.Iur. (UOFS, UP, Unisa) or

B.Juris (UPE) or

B.Jur. (PU for CHE) or

B.Iuris (RAU)

Bachelor of Laws or Baccalaureus Legum: LL.B. (All the universities)

Master's degreee

Master of Laws or Magister Legum: LL.M. (All the universities except UOFS)

Doctor's degrees

Doctor of Laws or Doctor Legum: LL.D. (All the universities)

Doctor of Philosophy: Ph.D. (UCT, Natal, Rhodes, Wits)

Diplomas and Certificate

Natal Public Service Law Certificate: N.P.S.L.C. (Natal)

Diploma in Law for Civil Servants (UOFS)

Public Service Law Diploma (UPE)

Law Diploma for Civil Servants (PU for CHE)

Senior Law Diploma for Civil Servants (PU for CHE)

Public Service Law Examination (UP, Unisa)

Public Service Senior Law Examination (UP, Unisa)

Higher Diploma in Tax Law: H.Dip. Tax Law (Wits)

DEGREES

Baccalaureus Procuratoris: B.Proc. (All the universities except Stellenbosch.)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Pretoria: A pass in Mathematics on the Higher Grade or at least 40 per cent on the Standard Grade or a pass in a third language.

Rand Afrikaans University: A pass of at least 40 per cent in Latin on the Higher Grade or a pass in a special course in Latin at the University.

Rhodes: A pass in Latin on the Higher or Standard Grade.

Witwatersrand: Passes on the Higher Grade in two of the following subjects: Afrikaans, Bantu Languages, Biology, English, French, Geography, German, Hebrew, History, Latin, Mathematics, Physical Science, Physiology.

Curriculum: Four years of full-time study or five years of part-time study.

Candidates who passed Afrikaans on the Higher Grade are required to take either English I or English Special and those who passed English on the Higher Grade must take Afrikaans or Afrikaans en Nederlands I. The curriculum also includes, inter alia, the following subjects: Roman Law, Criminal Law, Criminal Procedure, Civil Procedure, Commercial Law or Mercantile Law, Evidence, Constitutional and Administrative Law and two or three non-legal courses, e.g. Economics, Political Science, History.

No student will be allowed to take Roman Law I unless he has passed Std 10 Latin or is exempt from this requirement by virtue of another examination.

This degree replaces the Attorneys' Diploma, the Natal Law Certificate and the Diploma in Law and grants admission to the LL.B. degree.

Bachelor of Law: B.Iur. or B.Iuris or B.Jur. or B.Juris (Orange Free State, Port Elizabeth, Potchefstroom, Pretoria, Rand Afrikaans University, South Africa)

Admission requirements: As for the B.Proc. degree.

Curriculum: Three years of full-time study or four years of part-time study.

The University of the Orange Free State offers three fields of study, viz: Academic field; Public Service field for which Latin is not compulsory; Commercial field.

Potchefstroom University for CHE also offers three curricula, viz (i) for Civil Servants; (ii) with supplementary Arts subjects; (iii) with supplementary Economic subjects.

The University of Port Elizabeth also offers three curricula.

All the curricula include the following subjects: Private Law, Commercial or Mercantile Law, Roman Law, Criminal Law, Civil Procedure.

No student will be allowed to take Roman Law I unless he has passed Standard 10 Latin or is exempt from this requirement by virtue of another examination.

Bachelor of Laws: LL.B.

Admission requirement: A Bachelor's degree, or a B.Proc. or B.Iur. degree.

Curriculum: Three years of full-time study or two years of full-time study after a Bachelor's degree which included the required Law subjects in the curriculum. Three language courses are prescribed for the LL.B. degree: English I, Afrikaans I and Latin I.

DIPLOMAS

Natal Public Service Law Certificate: N.P.S.L.C. (Natal)

Admission requirement: Standard 10 Certificate.

Curriculum: The Certificate may be taken by members of the Public Service in three years.

The Certificate has been recognized by the Public Service Commission as equivalent to the Public Service Law Examination.

Diploma in Law for Civil Servants (Orange Free State) or

Public Service Law Diploma (Port Elizabeth) or

Law Diploma for Civil Servants (Potchefstroom)

Admission requirements: A Standard 10 Certificate or a certificate of conditional exemption issued to candidates from foreign countries.

Curriculum: Three years of full-time study or four years of part-time study.

These Diplomas have been recognized by the Board for the Recognition of Examinations in Law as equivalent to or higher than the Public Service Law Examination.

Senior Law Diploma for Civil Servants (Potchefstroom)

Admission requirements: Law Diploma for Civil Servants or the degree of B.Juris for Civil Servants or a degree or diploma which has been certified by the Board for the Recognition of Examinations in Law as equivalent.

Curriculum: Two years.

The Diploma has been recognized by the Board for the Recognition of Examinations in Law as equivalent to or higher than the Public Service Senior Law Examination.

Public Service Law Examination (Pretoria, South Africa)

Admission requirements: A Standard 10 Certificate or a certificate of conditional exemption from matriculation issued to students from foreign countries.

Curriculum: Three years.

The curriculum includes, inter alia, the following courses: Civil Procedure, Roman Law (South Africa) or Roman Dutch Law (Pretoria), Interpretation of Statutes, Mercantile Law, Criminal Law.

Public Service Senior Law Examination (Pretoria, South Africa)

Admission requirement: A student must have passed the Public Service Law Examination or another equivalent examination.

Curriculum: Two years.

Higher Diploma in Tax Law: H.Dip. Tax Law (Witwatersrand)

Admission requirements: A candidate must hold the LL.B. or the B.Proc. degree or an approved academic or professional qualification or be an attorney.

Curriculum: Two years of part-time study.

VOCATIONAL SERVICE

Apart from the fields in the Public Service, the legal profession in South Africa embraces two branches, viz that of advocates and that of attorneys. Nobody can practise simultaneously as an advocate and as an attorney. However, it is possible for a person with appropriate qualifications to switch from one branch to the other.

- Advocates have two main functions: to conduct criminal and civil cases in the Supreme Court or magistrates' courts; and to give opinions on legal problems. Their professional work comes to them from attorneys who 'brief' them, for no member of the public can go direct to an advocate. Normally judges are appointed from the ranks of senior advocates. Prospective advocates do not serve articles nor have they any other professional examination to pass. They have only to obtain an LL.B. degree after having taken a first degree (B.A., B.Com., B.Proc. or B.Iur.).

- Attorneys deal with members of the public, represent and act for clients, appear in magistrates' courts, but not in the Supreme Court. Although they may concern themselves with various matters, there is a tendency among attorneys to specialize in some direction or other. Most of them practise in private or in partnership with others. By additional examinations they can also qualify as notaries and conveyancers. Thus a person need not necessarily be a good public speaker or like to appear in court in order to be a successful attorney. Many attorneys who have advanced to the top of their profession rarely appear in court.

In contrast with the advocate, a prospective attorney must, in addition to the legal qualification obtained at a university, also serve articles with a practising attorney and subsequently pass a professional practical examination. (Since 1971 B.Proc. and LL.B. are the only degrees acknowledged for admission as attorneys.) The minimum qualification for serving articles is a Matriculation Certificate or a Std 10 Certificate (Matriculation Exemption). A person who has only this qualification to begin with, must serve a period of articles for five years, whereas persons with a B.Proc. or LL.B. degree must serve articles for two years.

- In the Public Service: In the RSA, as elsewhere in the world, the constitutional authority is divided into the legislative (the Parliament), executive (the public service) and the judicial authority (the courts). The Department of Justice is responsible for exercising the judicial authority and for this purpose there are magistrates' courts, regional courts and the various divisions of the Supreme Court.

. Magistrates and Legal Assistants (Public Prosecutors): Magistrates have two main functions, viz the judicial function which is performed in court, and that of district administration which is performed in an office. The magistrate's court must prosecute as well as try, thus the magistrate is assisted by a Prosecutor (Legal Assistant). The primary functions of the Public Prosecutor are to act on behalf of the Attorney-General in all criminal cases. His complex duties provide the required background and training for subsequent appointment to the bench (as magistrate). Magistrates and Legal Assistants must have legal qualifications. The minimum requirement for a Legal Assistant is the Public Service Law Examination and this is also the minimum requirement for promotion to magistrate. Firstly, candidates may obtain a degree in Law directly after

leaving school and afterwards enter the service of the Department. Secondly, after leaving school they may be appointed to a magistrate's office where they then do general clerical work while at the same time continuing their studies part-time. Whichever method is used, the opportunities of obtaining legal qualifications are the following for a prospective magistrate:

a. Persons with or without Matriculation exemption may pass the Public Service Examination in Law and afterwards the Senior Public Service Examination in Law. (No requirement with regard to Latin.) The first is the minimum requirement for promotion to magistrate.

b. Candidates who have Matriculation exemption but who do not have Latin as a school subject, can obtain the B.Iuris degree for Civil Servants.

c. Candidates who have Matriculation exemption as well as Latin as a school subject can enrol for any degree or diploma course in Law.

As soon as candidates have the required legal qualifications they may be appointed as Legal Assistants. Able persons may subsequently be promoted to the different ranks of Magistrate, of which Chief Magistrate is the highest.

. Legal Adviser: Legal Advisers are appointed in the Attorney-General's Legal Advisers Division, from the ranks of Government advocates with duties such as the framing of laws for Parliament, the provision of legal advice to all Government departments, the checking of regulations, ordinances etc. Some are attached to the different Provincial Administrations and the Administration of South-West Africa. The holder of a bachelor's degree plus an LL.B. degree can be considered for appointment and can attain the rank of Chief Legal Adviser.

. State Advocate: The Department of Justice offers an interesting and challenging career as State Advocate to persons who have obtained an LL.B. degree. These officers must look after the interests of the State in the statutory field and are attached to the Division of the Attorney-General. There is an Attorney-General attached to each Provincial Division of the Supreme Court. The State Advocate who renders meritorious work can attain the position of Senior State Advocate, Deputy Attorney-General, Attorney-General and Chief Law Adviser.

. State Attorney: The State Attorney's Division of the Department of Justice functions like an ordinary firm of attorneys, except that its clients are Government bodies and not private individuals. The main function of the State Attorney is to protect the interests of the State by acting on behalf of all Government departments and Administrations in civil cases and on behalf of officials arraigned in their official capacity. State Attorneys may obtain their legal qualifications in the same way as attorneys in private practice. However, posts for serving articles are limited in the Department and sometimes candidates have to await their turn.

. Bantu Affairs Commissioner: This is the person who must explain government policy to the Bantu population groups, settle their legal disputes, hear complaints and give advice.

In this capacity the Bantu Affairs Commissioner is in a position of particular trust and heavy responsibilities rest on him. The minimum requirement for appointment as an Assistant Bantu Affairs Commissioner is the B.Iuris degree or the Public Service Examination in Law. The Department of Bantu Administration and Development provides ample opportunities for employees to obtain these qualifications on a part-time or full-time basis of study. For some more senior positions an LL.B. degree or the Senior Public Service Examination in Law is required. Candidates can ultimately progress to the rank of Chief Bantu Affairs Commissioner, Special Grade, while higher qualifications are recognized for salary purposes and achievement is rewarded according to merit.

. Master of the Supreme Court: The task of the Orphan-master's section of the Department of Justice or, indeed, the Master of the Supreme Court, is to guard against malpractices which aim at depriving legatees, heirs and claimants of their rightful inheritance.

The work is highly specialized, responsible and of a confidential nature. Special training courses for Orphan-masters are offered by the Department. However, legal qualifications are a requirement for advancement to higher ranks such as Assistant Master of the Supreme Court, Master and Chief Master of the Supreme Court.

. Foreign Service Officer (Diplomat) See p. 42.

For more information in connection with training, conditions of service and so forth, prospective jurists are referred to The Association of Law Societies of the Republic of South Africa, P.O. Box 1428, Pretoria, 0001; the Department of Justice or the Public Service Commission.

LIBRARIANSHIP/LIBRARY SCIENCE

Universities: Cape Town, Natal, Orange Free State, Potchefstroom, Pretoria, Rand Afrikaans University, Rhodes, South Africa, Stellenbosch, Witwatersrand

Degrees

Bachelor of Library Science: B.Bibl. (UOFS, Unisa)

Bachelor of Arts (Librarianship): B.A. (Bibl.) (PU for CHE)

Bachelor in Librarianship: B.Bibl. (UP, RAU)

Bachelor in Librarianship (Education): B.Bibl. (Education) (RAU) (See p. 191.)

B.Librarianship (US)

Bachelor of Music and Higher Diploma in Librarianship: B.Mus. and Higher Diploma in Librarianship (UCT)

Honours degrees

Honours Bachelor of Library Science: B.Bibl. (Hons.) (UOFS) or Hons.B.Bibl. (Unisa)

Honours Bachelor of Arts: Hons. B.A (PU for CHE)

Bachelor in Librarianship Honours: B.Bibl. (Hons.) (UP)

Honours Bachelor in Librarianship: B.Bibl. (Hons.) (RAU)

Hons. B.Librarianship (US)

Master's degrees

Master of Library Science: M.Bibl. (UOFS, Unisa)

Master of Arts: M.A. (PU for CHE)

Master in Librarianship: M.Bibl. (UP, RAU)

M. Librarianship (US)

Doctor's degrees

Doctor of Library Science: D.Bibl. (UOFS, Unisa)

Doctor Philosophiae: D.Phil. (PU for CHE, US)

Diplomas and Certificate

Lower Diploma in Librarianship (UCT, UOFS, UP, Rhodes, US)

Lower Diploma in Library Science (Unisa)

Lower University Diploma in Librarianship (PU for CHE)

Higher Diploma in Librarianship (UCT, UOFS, UP, Rhodes, US, Wits)

Higher Diploma in Library Science (Natal, Unisa)

University Diploma in Librarianship (PU for CHE)

University Education Diploma (School Librarianship) (PU for CHE) (See EDUCATION p. 188.)

Post-graduate Diploma in Librarianship (RAU)

Final Diploma in Librarianship (UCT)

Diploma in Specialized Education (School Librarianship) (US) and
Lower Diploma in School Librarianship (US) See EDUCATION: University of Stellenbosch p. 195 and 196.

Certificate in School Library Science (Unisa) and
Diploma in School Library Science (Unisa) See EDUCATION: University of South Africa p. 192 and 193.

The following universities offer a four-year teacher's diploma course with School Librarianship as one of the specializations: Orange Free State, Potchefstroom. See EDUCATION.

DEGREES

Bachelor of Library Science: B.Bibl.

or

Bachelor of Arts (Librarianship): B.A.Bibl.

or

Bachelor in Librarianship: B.Bibl.

or

B.Librarianship

(Orange Free State, Potchefstroom, Pretoria, RAU, Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Pretoria: See p. 57.

Rand Afrikaans: See p. 59.

Curriculum: Four years of full-time study. The curriculum comprises four courses in Library Science. The other courses are chosen from the ordinary courses for the B.A. degree.

Candidates are required to work for a prescribed period in an approved library during the period of study to gain practical experience.

Bachelor of Library Science: B.Bibl. (South Africa)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Four years. The degree is taken in one of three directions, viz:

- in Arts
- in Natural Science
- in Commerce and Administration.

The curriculum consists of four courses in Library Science taken together with an approved curriculum for either the B.A., the B.Sc. or the B.Com.

Bachelor of Music and Higher Diploma in Librarianship (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). A candidate must give evidence of a certain degree of proficiency on the piano and in general musicianship.

Curriculum: Four years of full-time study. Students specialize in Music Librarianship for the B.Mus. degree. After completion of the first three years they are admitted in the fourth year to the course for the Higher Diploma in Librarianship. Successful students are awarded both the degree and the Diploma. See also p. 272.

DIPLOMAS

Lower Diploma in Librarianship

or

Lower Diploma in Library Science

(Cape Town, Orange Free State, Pretoria, Rhodes, South Africa, Stellenbosch)

Admission requirements: Standard 10 Certificate. Some of the universities require a Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Two years of full-time study. During the first year the curriculum consists of three to five courses for the B.A. degree. The second year includes professional subjects like Cataloguing or Catalography, Classification, Library Organization and Administration, Book Selection.

Candidates are required to undertake three or four weeks' practical work in an approved library.

Lower University Diploma in Librarianship (Potchefstroom)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). Students who hold a diploma issued by the PU for CHE or another approved institution may be exempted from the first-year course of the Lower University Diploma in Librarianship.

Curriculum: Two years of full-time study.

During the first year it contains Afrikaans or Afrikaans-Nederlands I; English I or English Special; and three other first-year subjects as for the B.A. degree.

The subjects for the second year include, inter alia, Library Organization and Administration; Cataloguing and Classification; Reference Work and Bibliography.

Students are required to do practical work in a recognized library for four weeks during their period of study.

Higher Diploma in Librarianship

or

Higher Diploma in Library Science

or

University Diploma in Librarianship

(All the universities except RAU)

Admission requirement: A Bachelor's degree.

Curriculum: One year of full-time study or two years of part-time study.

Candidates are required to work for a specified period in an approved library during their period of study.

The curriculum comprises, inter alia, the following subjects: Cataloguing or Catalography, Classification, Library Organization and Administration, Book Selection and Reference Work.

Post-graduate Diploma in Librarianship (Rand Afrikaans University)

Admission requirement: A Bachelor's degree.

Curriculum: Two semesters and two summer terms. The contents of Library Science I - IV are spread over the period of study.

Reading knowledge of one modern foreign language is required and will be tested by a translation test.

Final Diploma in Librarianship

The University of Cape Town may issue a final diploma in librarianship to candidates who have completed the Higher Diploma in Librarianship, have compiled a special bibliography and have submitted evidence of two years' satisfactory library services as a full-time member of a library staff.

VOCATIONAL SERVICE

Society is dependent on knowledge for its continued existence and progress. It is therefore the task of the librarian to collect this knowledge and to make it accessible for use by means of a well-organized library. The informational function of libraries is increasing daily and this aspect is progressively accentuated in training.

Since 1930 an almost revolutionary development has taken place in the field of library science and library services in South Africa. As a result, a virtually insatiable need for trained librarians, both men and women, has arisen. The many new libraries and library services necessitate trained and even specialized labour. The shortage of trained men is relatively greater than the shortage of women.

Various types of libraries as well as the sections of a library make it possible for library officers to perform work that is suited to their aptitude or particular training. Thus a librarian can visit distant towns with his library if he has a post in the Provincial Library Service. There is also the possibility of a post as organizer of school libraries for an education department. The function of such a person is to advise school libraries. There are also opportunities for work or study abroad, for example on an exchange basis to the USA. Large libraries sometimes send librarians with degrees or diplomas overseas for specialized study. Further prospects are the different ranks which a librarian can obtain in the way of promotion, particularly with bodies such as the following: Education departments as a teacher-librarian; Government and provincial libraries, including education libraries; municipalities; the CSIR; HSRC; the Railways; Iscor; Sasol; some mines; universities (librarian or lecturing post); archives.

There is no doubt about the continued existence of these favourable circumstances and attractive posts are continually being created.

MEDICINE

Universities: Cape Town, Natal (Non-Whites only), Orange Free State, Pretoria, Stellenbosch, Witwatersrand

Degrees

Bachelor of Medicine and Bachelor of Surgery: M.B., Ch.B. or B.M., B.Ch. or M.B., B.Ch. (the above-mentioned universities)

Bachelor of Science (Medicine): B.Sc.(Med.) (UCT)

Bachelor of Science (Medical Science): B.Sc. (Med.Sci.) (Natal)

Bachelor of Medical Science: B.Med.Sc. (UOFS)

Bachelor of Science in Pathology: B.Sc. (Path.) (Wits)

Honours degrees

Bachelor of Science (Medicine)(Honours): B.Sc.(Med.)(Hons.) (UCT)

Bachelor of Medical Science (Honours): B.Med.Sc. (Hons.) (UOFS)

Bachelor of Science (Honours) in Medical Science: Hons. B.Sc. in Medical Science (US)

Master's degrees

Master of Medicine: M.Med. (UCT, Natal, UOFS, UP, US, Wits)

Master of Surgery: Ch.M. (UCT, Wits)

Master of Medical Science: M.Med.Sc. (UOFS)

Master of Pharmacological Medicine: M.Pharm.Med. (UP)

Master of Family Doctor Medical Practice: M.Prax.Med. (UP)

Master of Military Medicine: M.Mil.Med. (UP)

Master of Science in Medical Science: M.Sc. in Medical Science (US)

Master of Orthopaedic Surgery: Ch.M. (Orth.) (Wits)

Doctor's degrees

Doctor of Medicine: M.D. or D.M. (UCT, Natal, UOFS, UP, US, Wits)

Doctor of Philosophy: Ph.D. (UCT, Wits)

Doctor of Medical Science: D.Phil. (UOFS)

Doctor of Philosophy in Medicine: Ph.D.(Med.) (US, Wits)

Doctor of Philosophy in Medical Science: Ph.D. in Medical Science (US)

Doctor of Science in Medical Science: D.Sc. in Medical Science (US)

Doctor of Science (Medicine): D.Sc.(Med.) (US)

Diplomas (Post-graduate)

Diploma in Anaesthetics (Wits)

Diploma in Community Medicine (UCT)

Diploma in Industrial Health (Wits)

Diploma in Industrial Medicine (UP)

Diploma in Medical Administration (UP)

Diploma in Medical Physics (post-M.Sc. in Physics) (UP)

Diploma in Paediatrics (Wits)

Diploma in Physical Medicine (Wits)

Diploma in Psychological Medicine (UCT, Wits)

Diploma in Public Health (UP, Wits)

Diploma in Tropical Medicine and Hygiene (Wits)

Undergraduate diploma

Diploma in Orthoptics (Wits)

DEGREES

Bachelor of Medicine and Bachelor of Surgery: M.B., Ch.B. or B.M., B.Ch. or M.B., B.Ch.

Admission requirements: Matriculation Certificate or a Standard 10-Certificate (Matriculation Exemption).

Additional requirements:

Cape Town: A pass in Mathematics on the Standard Grade.

Orange Free State: A pass in Mathematics on the Standard Grade. For the time being prospective students are advised to offer Physical Science and, if possible, Biology as well for the Std 10 examination.

Pretoria: See p. 164.

Stellenbosch: A pass in Mathematics and in Physical Science on the Standard Grade.

Witwatersrand: A pass in Mathematics on the Higher Grade or at least 60 per cent on the Standard Grade.

Curriculum: Six years of full-time study plus one year of internship.

All undergraduates who propose to undertake to study for the degree must register with the South African Medical and Dental Council at the beginning of the second year of study for the degree.

The curriculum for the first year includes the following subjects: Chemistry, Physics and Biology or Botany and Zoology. Stellenbosch prescribes a course in Mathematics. In their second year students take Anatomy and Physiology.

Final year subjects are Internal Medicine, Surgery, Obstetrics and Gynaecology. Other subjects included in the curriculum are, inter alia, the following: Pathology, Microbiology, Pharmacology, Forensic Medicine, Psychiatry and Paediatrics.

After obtaining the degree, candidates are required to serve one year's internship in a recognized and approved institution before they can be registered by the South African Medical and Dental Council as medical practitioners.

Bachelor of Science (Medicine): B.Sc. (Med.) (Cape Town)

Admission requirement: As for the M.B., Ch.B. degree.

Curriculum: Three years of full-time study. The curriculum comprises eight courses, three of which must not form part of the curriculum for M.B., Ch.B.

Compulsory subjects include Zoology I or Biology, Chemistry I, Physics I, Anatomy I, Physiology I.

A candidate may be registered concurrently for the B.Sc.(Med.) and the M.B., Ch.B. degrees.

Bachelor of Science (Medical Science): B.Sc. (Med.Sci.) (Natal)

Admission requirement: As for the M.B., Ch.B. degree.

Curriculum: Four years of full-time study. The first three years of the curriculum are as for the degree of M.B., Ch.B.

Bachelor of Medical Science: B.Med.Sc. (Orange Free State)

Admission requirement: As for the B.M., B.Ch. degree.

Curriculum: Three years of full-time study. The curriculum comprises nine courses. A student who passed the courses prescribed for the first year may be admitted to B.M., B.Ch.II, after selection.

The major subjects are Anatomy III and Physiology II.

Students who passed in the B.M., B.Ch. II may be admitted to B.Med.Sc.III and must then complete the following courses to obtain the degree of B.Med.Sc.: Anatomy III, Physiology II, Chemistry II.

Bachelor of Science in Pathology: B.Sc.(Path.) (Witwatersrand)

Admission requirements: As for the M.B.,B.Ch. degree.

Curriculum: Four years of full-time study. Students take two of the following courses in the third and fourth year of study: Chemical Pathology, Haematology, Microbiology, Immunology, Oral Pathology, Pathology.

A student who passed the courses prescribed for the first three years of study for the M.B.,B.Ch. degree or the B.D.S. (Dentistry) degree may be admitted to the fourth year of study for this degree.

Master of Medicine: M.Med.

Admission requirements: The degree of M.B., Ch.B. must have been held for at least two years. Candidates must have been registered as medical practitioners for at least one year.

Curriculum: 3, 4 or 5 years according to the requirements of the department concerned.

Universities: The degree is offered as follows in the various branches by the universities mentioned:

Anaesthetics - UCT, UN, UOFS, UP, US
Cardio-Thoracic Surgery - UOFS
Community Medicine - UCT
Comprehensive Medicine - US
Dermatology - UCT, UN, UOFS, UP, US
Forensic Medicine - UP
Geriatrics - UP
Haematology - UOFS
Internal Medicine - UOFS, UP, US
Medical Administration - UP
Medicine - UCT, UN
Neurology - UP
Neurosurgery - UCT, UOFS, UP
Nuclear Medicine - UCT
Obstetrics and Gynaecology - UCT, UN, UOFS, UP, US
Oncochemotherapy - UP
Ophthalmology - UCT, UN, UOFS, UP, US
Orthopaedics - UCT, UOFS, UP, US
Otorhinolaryngology - UCT, UN, UOFS, UP, US
Paediatrics - UCT, UN, UOFS, UP, US
Pathology - UN, UP, Wits
Pathology (Anatomical) - UCT, UOFS, US
Pathology (Chemical) - UCT, UOFS, US
Pathology (Clinical) - UCT, UOFS, US
Pathology (Forensic) - UCT
Pathology (Haematological) - UCT
Pathology (Microbiology) - UCT, UOFS, US
Physical Medicine - UP
Plastic and Reconstructive Surgery - UCT, US
Plastic Surgery - UOFS, UP
Preventive Medicine - UP

Psychiatry - UP, US
Radiology - UN
Radiodiagnosis/Diagnostic Radiology - UCT, UN, UOFS, UP, US, Wits
Radiotherapy/Therapeutic Radiology - UCT, UN, UOFS, UP, US, Wits
Surgery - UCT, UN, UOFS, UP, US
Thoracic Surgery - UCT, UP, US
Urology - UCT, UOFS, UP, US

UNDERGRADUATE DIPLOMA

Diploma in Orthoptics: Dip. Orthopt. (Witwatersrand)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). The students must be physically fit.

Curriculum: Two years of full-time study. The curriculum includes five courses. They are, inter alia, Anatomy for Orthoptists, Optics and Elementary Orthoptics, Ophthalmology for Orthoptists.

VOCATIONAL SERVICE

A doctor may work as a general practitioner on his own or in partnership with one or more colleagues in a private practice. In this case his work will mainly consist in diagnosing diseases and treating patients. However, most general practitioners also perform smaller operations. Often a general practitioner may find it necessary to refer a patient to a specialist for diagnosis, operation or treatment.

As a specialist in some field or other, the doctor possibly has more responsibility, but then his hours of work are normally fixed and he does no visiting of patients at home. The fields of specialization offer a wide choice to the doctor. During his period of training as a specialist, the doctor works in a hospital as a clinical assistant.

The wide field of national health in general and the particular work of the specialized state institutions, hospitals and state-controlled laboratories, offer the doctor and the medical researcher extremely interesting and promising opportunities of a career in Government service. Government medical officers work in the Departments of Labour, National Education and Health. In the latter Department activities are divided into different sections, viz psychiatry, district surgeons, pathological and laboratory services, tuberculosis service, public health administration and hospitalization in Bantu homelands. The Department of Mines has posts for Medical Members serving on the Pneumoconiosis Board. Many doctors and specialists are also employed by the Provincial departments of hospital services.

In South Africa there is room for many more doctors and specialists. Furthermore, medical science, including the care of the diseased, is faced in the seventies with a challenge which tests skill and ingenuity as never before. For every young man and woman in medicine who is prepared to undertake post-graduate study and research there are wonderful opportunities in this occupation.

Also consult Tertiary Training for the various paramedical fields.

MILITARY SCIENCE

University: Stellenbosch

Degrees

Bachelor of Military Science: B.Mil.

Honours Bachelor of Military Science: Hons.B.Mil.

Master of Military Science: M.Mil.

DEGREES

Bachelor of Military Science: B.Mil.

Admission requirements: Students must

- (i) hold a Matriculation or a Standard 10 Certificate (Matriculation Exemption);
- (ii) for the B.Mil. field Arts have passed Mathematics on the Standard Grade, and for the B.Mil. field Science, Mathematics and Physical Science on the Standard Grade; and
- (iii) have been accepted by the military selection board for officer training.

Curriculum: Three years of full-time study. The B.Mil. degree can be followed in one of the following fields:

- Arts
- Science
- Commercial subjects.

All the courses are followed at the Military Academy at Saldanha. The Military Academy is the seat of the Faculty of Military Science.

The B.Mil. subjects are the same as those offered by the University. The syllabuses have been adapted to meet the requirements of the South African Defence Force and Aeronautics, Naval Navigation, Military Law, Military History and Military Geography have been added.

VOCATIONAL SERVICE

A career as an officer in the Permanent Force (Army, Navy and Air Force) is attractive, interesting and varied. Among other things, the functions of the officers' corps include organization, administration, planning as well as training of the Citizen Force and the Commandos. The large number of posts for officers for which provision is made, offers extremely attractive prospects to any young man. Because of the many fringe benefits to personnel, it is further evident that the Permanent Force caters well for the material, physical and spiritual welfare of its members.

After successful completion of the training course, the candidate officers are appointed with the rank of lieutenant. Provided that they pass the subsequent required promotion courses, they can normally be promoted to the highest ranks. In addition the B.Mil. degree is quite acceptable in civilian life and it can lead to post-graduate study at any South African university.

Also see Tertiary Training in connection with direct officer training.

MUSIC

Universities: Cape Town, Natal, Orange Free State, Port Elizabeth, Potchefstroom, Pretoria, Rhodes, South Africa, Stellenbosch, Witwatersrand.

Degrees

Bachelor of Music: B.Mus. (UCT, Natal, UOFS, PU for CHE, UP, Rhodes, US, Wits)

Baccalaureus Musicae: B.Mus. (UPE)

Bachelor of Arts (Education)(Music): B.A.(Ed.)(Music) (UP)

B.Mus. (Ed.) Specialization: Teaching of an Instrument or Singing (US)

B.Mus. (Ed.) Specialization: School Music (US)

Bachelor of Musicology: B.Mus. (Unisa)

Bachelor of Arts (Music): B.A.(Music) (UOFS)

DEGREES

Bachelor of Military Science: B.Mil.

Admission requirements: Students must

- (i) hold a Matriculation or a Standard 10 Certificate (Matriculation Exemption);
- (ii) for the B.Mil. field Arts have passed Mathematics on the Standard Grade, and for the B.Mil. field Science, Mathematics and Physical Science on the Standard Grade; and
- (iii) have been accepted by the military selection board for officer training.

Curriculum: Three years of full-time study. The B.Mil. degree can be followed in one of the following fields:

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Universities: Cape Town, Natal, Orange Free State, Port Elizabeth, Potchefstroom, Pretoria, Rhodes, South Africa, Stellenbosch, Witwatersrand.

Degrees

Bachelor of Music: B.Mus. (UCT, Natal, UOFS, PU for CHE, UP, Rhodes, US, Wits)

Baccalaureus Musicae: B.Mus. (UPE)

Bachelor of Arts (Education)(Music): B.A.(Ed.)(Music) (UP)

B.Mus. (Ed.) Specialization: Teaching of an Instrument or Singing (US)

B.Mus. (Ed.) Specialization: School Music (US)

Bachelor of Musicology: B.Mus. (Unisa)

Bachelor of Arts (Music): B.A.(Music) (UOFS)

Bachelor's degree course in Primary Education with specialization in School Music (US) See EDUCATION p. 195.

Honours degrees

Honours Bachelor of Music: B.Mus. (Hons.) (UOFS) B.Mus.(Hons.) (UP) or Hons. B.Mus. (PU for CHE, US)

Honours Bachelor of Musicology: Hons. B.Mus. (Unisa)

Baccalaureus Artium Honores (Mus.): B.A. Hons. (Mus.) (UPE)

Honours Bachelor of Arts in Musicology: B.A.(Hons.)(Musicology) (UOFS)

Master's degrees

Master of Music: M.Mus. (UCT, Natal, UOFS, PU for CHE, UP, Rhodes, US, Wits)

Magister Musicae: M.Mus. (UPE)

Magister Artium in Music: M.A. in Music (UPE)

Master of Musicology: M.Mus. (Unisa)

Master of Arts in Musicology: M.A.(Musicology) (UOFS)

Doctor's degrees

Doctor of Music: D.Mus. (UCT, Natal, UOFS, PU for CHE, UP, Rhodes, US, Wits)

Doctor Musicae: D.Mus. (UPE)

Doctor of Musicology: D.Mus. (Unisa)

Doctor of Philosophy: Ph.D. (Natal, Rhodes)

Doctor Philosophiae in Musicology: D.Phil. (Musicology) (UOFS)

Doctor Philosophiae: D.Phil. (UPE)

Doctor Litterarum: D.Litt. (UPE)

Diplomas

Cape Town

Teacher's Licentiate Diploma in Music

Performer's Diploma in Music

Performer's Diploma in Orchestral Playing

Teacher's Diploma in Opera

Performer's Diploma in Opera

Diploma in Ballet

Primary Teacher's Certificate: Special Endorsement in Music. See EDUCATION p.185.

Natal

Performer's Diploma

Orange Free State

Artist's Diploma in Music

Diploma in Church Music

Performer's Licentiate in Music

UOFS Teacher's Diploma in Music

UOFS Teacher's Licentiate in Music

Port Elizabeth

Diploma in Musical Education
Diploma in Orchestral Playing
Soloist's Diploma in Music

Potchefstroom

Diploma for Church Organists
Lower University Diploma in Musical Performance
Potchefstroom University Teacher's Licentiate in Music See EDUCATION p. 188.

Pretoria

Diploma in Music (Church Music)
Diploma in Music (Individual Teaching)
Certificate in Church Music

Rhodes

Licentiate Diploma in Music: R.U.L.M.
Primary Music Teacher's Certificate: P.M.T.C.
and
University Diploma for Teachers of Music: U.D.T.M. See EDUCATION p. 192.

Stellenbosch

Diploma for Church Organists
Higher Education Diploma (Secondary - Music): H.E.D. (Secondary - Music)
Performer's Licentiate in Music
Performer's Higher Licentiate in Music
Teachers' Licentiate in Music
and
Diploma in Specialized Education (School Music): See EDUCATION p. 196.

Witwatersrand

Diploma in Music: Dip. Mus.
Licentiate in Music: L.M.
Higher Diploma in Music: H.Dip.Mus.
Performer's Diploma in Music: P.Dip.Mus.

The following universities offer a four-year teachers' diploma course with Music as one of the specializations: Port Elizabeth, Potchefstroom, Pretoria. See EDUCATION.

DEGREES

Bachelor of Music: B.Mus. or

Baccalaureus Musicae: B.Mus.

(All the above-mentioned universities except the University of South Africa.)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Cape Town: A candidate must give evidence of a certain degree of proficiency on the pianoforte and in general musicianship.

Orange Free State: A pass in Music with at least 60 per cent or a standard in practical music equivalent to the Advanced Examination of the University of South Africa.

Port Elizabeth: A candidate must satisfy both the Chairman of the Subject Committee for Music and the Director of the Conservatoire that he has

(i) attained a standard in practical music equivalent to that of the Certificate Examination Grade VII of the University of South Africa, or (ii) obtained a pass of 60 per cent in Music on the Standard Grade, or (iii) a pass of 50 per cent in Music on the Higher Grade.

Potchefstroom: A candidate must satisfy the lecturers concerned in a practical test of his proficiency in the performing art and of his musicality and general knowledge of music, and he must have obtained a standard equivalent to the Advanced Certificate of the University of South Africa.

Pretoria: A candidate must satisfy the lecturers concerned in a practical test that his proficiency in the performing art as well as his musicality and general knowledge of music justifies admission.

Stellenbosch: A pass in Music of at least 50 per cent on the Higher Grade or at least 60 per cent on the Standard Grade.

Witwatersrand: A pass in Music on the Higher Grade. See also p. 37.

Curriculum: Four years of full-time study. Each of the universities has one or more curricula, one of which the student must select:

Cape Town: Students choose one of the following specializations: Musicology, School Music, Performance, Composition, Music Librarianship.

Students who have successfully completed the first three years of the specialized School Music course are admitted in the fourth year to the course for the Secondary Teacher's Diploma or that for the Post-Graduate Primary Teacher's Diploma. On completion both the degree and diploma are awarded.

Students specializing in Music Librarianship are admitted to the course for the Higher Diploma in Librarianship (see p. 263) after completion of the first three years. Successful students are awarded both the degree and the diploma.

Natal: A candidate must obtain credit for the two Common Courses viz Music III and Practical Study III, and the Specialist Courses in one of the five specialist fields offered viz: Music Education; Composition; Performance (i) Instrumental or (ii) Vocal; Musicology; Ethnomusicology.

Ethnomusicology includes, inter alia, Social Anthropology I, II and III.

Orange Free State: Candidates select one of four fields for the third and fourth years of study, viz: Musicology, Theory of Music, School Music and the Practical field.

Port Elizabeth: Candidates select one of two curricula: Academic or Music Education.

Potchefstroom: Students complete one of the following four curricula. The major subjects are given in each case:

- A. History of Music IV, History of Art III
- B. History of Music IV, Practical Music IV, Practical Music Study IV
- C. Harmony IV, Counterpoint IV, Practical Music IV, Practical Music Study IV,

Orchestration II, Composition II

D. History of Music IV or Harmony IV and Counterpoint IV, Practical Music Study IV, Musical Education III, Practical Music IV.

Pretoria: Candidates select one of four fields at the beginning of their third year of study: Musicology, Composition, Performing Art, Church Music.

Rhodes: Candidates have to complete the 21 prescribed courses. The major subjects are History of Music IV, Theory of Music IV and Ensemble IV.

Stellenbosch: Candidates select one of five fields at the beginning of their third year of study: Education (B.Mus.(Ed.)), Practical field, Musicology, Church Music, Composition.

Witwatersrand: Candidates have to complete the 21 prescribed courses of the curriculum. Fourth-year subjects are Conducting II (half-course); Counterpoint, Harmony and Composition IV; History of Music IV; Practical Music Study IV.

Bachelor of Arts (Education)(Music) : B.A.Ed.(Music) (Pretoria)

Admission requirements: As for the degree B.Mus. (Pretoria).

Curriculum: Four years of full-time study. The major subjects are History of Music III, Practical Music Study III, School Music III and Pedagogics. Students take teaching subjects in the fourth year of study.

Bachelor of Musicology: B.Mus. (South Africa)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). A student must have reached a standard in practical music equivalent to that of Grade VII of the Music Certificate Examination of the University of South Africa or that required for Music at the Matriculation or equivalent examination.

Curriculum: Four years. The curriculum consists of 12 courses. History of Music IV and Harmony and Counterpoint IV are the major subjects.

Bachelor of Arts (Music): B.A. (Music) (Orange Free State)

Admission requirement: As for B.Mus. (UOFS).

Curriculum: Three years of full-time study. Students pursue the B.A. curriculum with Music as one of the major subjects.

Natal, Rhodes and Stellenbosch offer Music as a major subject for the B.A. degree.

Port Elizabeth, Potchefstroom, Pretoria, South Africa and the Witwatersrand offer History of Music as a major subject for the B.A. degree.

Cape Town offers first and second qualifying B.A. courses in Music.

DIPLOMAS

Teacher's Licentiate Diploma in Music

or the

Teacher's Diploma in Opera (Cape Town)

Admission requirement: At least a Standard 10 Certificate.

Curriculum: The curriculum of each of the diplomas extends over four years. Students who give evidence of exceptional proficiency, and who have, before entering upon the course, completed work accepted by the Senate as equivalent may be exempted from the first

year of the curriculum concerned.

Performer's Diploma in Music

Performer's Diploma in Orchestral Music

Performer's Diploma in Opera

Diploma in Ballet (Cape Town)

Admission requirement for above-mentioned diplomas: Standard 10 Certificate.

Curriculum: The curriculum of each of the diplomas extends over three years. Students who give evidence of exceptional proficiency, and who have, before entering upon the course, completed work accepted by the Senate as equivalent may be exempted from the first year of the curriculum concerned.

Performer's Diploma (Natal)

A one-year post-graduate course for either instrument or voice.

Diploma in Church Music (Orange Free State) or

Diploma in Music (Church Music) (Pretoria) or

Diploma for Church Organists (Stellenbosch)

Admission requirements: Standard 10 Certificate. Candidates must give evidence of their proficiency in playing the organ as well as of sufficient musicality and general knowledge of music.

Curriculum: Three years of full-time study, but two years at the University of Stellenbosch.

The curriculum includes, inter alia, Harmony and Counterpoint, Choir or Hymnology (Pretoria), History of Music, Organ.

Diploma for Church Organists (Potchefstroom)

Admission requirements: Standard 10 Certificate and the Certificate for the Intermediate Organ Examination of the University of South Africa or an equivalent standard, and the Certificate for the Advanced Examination for the piano of the University of South Africa or an equivalent standard.

Curriculum: Three years of full-time study. A student may take the Diploma for Church Organists concurrently with the course for the B.Mus. degree.

Artist's Diploma in Music (Orange Free State)

Admission requirements: The B.Mus. degree or the Education Diploma in Music or the UOFS Performer's Licentiate in Music or another adequate qualification.

A student must give evidence of his/her ability as a performer through an entrance examination in the practical major subject.

Curriculum: A student who holds the B.Mus. degree or the UOFS Performer's Licentiate in Music may be admitted to the examination after one year of further study, while a student who holds the Education Diploma in Music will be admitted after two years.

UOFS Teacher's Diploma in Music (Orange Free State)

Admission requirements: Standard 10 Certificate with a pass in Music of at least 60 per cent or a standard in practical music equivalent to the Advanced Examination of the University of South Africa.

Curriculum: Four years of full-time study. The curriculum is similar to that for the B.Mus. degree.

UOFS Teacher's Licentiate in Music

Admission requirements: As for the UOFS Teacher's Diploma in Music.

Curriculum: Three years of full-time study. The major subjects are Practical Music Study III and Historical and Systematic Music Study III.

Performer's Licentiate in Music (Orange Free State)

Admission requirement: The UOFS Teacher's Licentiate in Music.

Curriculum: One year.

Diploma in Musical Education (Port Elizabeth)

Admission requirements: Standard 10 Certificate. A candidate must satisfy the Chairman of the Subject Committee for Music and the Director of the Conservatoire that he has attained a standard in a practical major subject equivalent to that of the Certificate Examination Grade VII of the University of South Africa.

Curriculum: Three years of full-time study. The curriculum includes Academic Subjects such as History of Music, Counterpoint, School Music and Practical Subjects such as Main Instrument and Method of the Main Instrument.

Diploma in Orchestral Playing (Port Elizabeth)

Admission requirements: The degree of B.Mus. or the Diploma in Musical Education.

A candidate must satisfy the Director of the Conservatoire that he has attained a sufficient standard in an approved orchestral instrument to attend the course with profit.

Curriculum: One year of full-time study.

Soloist's Diploma in Music (Port Elizabeth)

Admission requirements: The degree of B.Mus. or the Diploma in Musical Education.

A candidate must satisfy the Director of the Conservatoire that he has attained a sufficient standard in an approved musical instrument in order to attend the course with profit.

Curriculum: Two years of full-time study.

Lower University Diploma in Musical Performance (Potchefstroom)

Admission requirement: Standard 10 Certificate.

Curriculum: One year.

The examination includes the recital of a complete concert programme.

Diploma in Music (Individual Education) (Pretoria)

Admission requirements: Standard 10 Certificate. A candidate must satisfy the lecturers concerned in a practical test that his proficiency in the performing art as well as his musicality and general knowledge of music justifies admission.

Curriculum: Three years of full-time study. The curriculum includes, inter alia, Harmony, Counterpoint, Practical Music Study, School Music and History of Music.

Rhodes University Licentiate Diploma in Music: R.U.L.M.

Admission requirements: Standard 10 Certificate, or the Board of the Faculty must be satisfied as to the candidate's suitability to take the course. The latter is considered only on the grounds of mature age and/or exceptional ability.

Curriculum: Three years of full-time study.

The Diploma may be awarded as a diploma for performers or for teachers, or for choir-masters, or for church organists.

Higher Education Diploma (Secondary - Music): H.E.D.(Secondary - Music) (Stellenbosch)

Admission requirements: Standard 10 Certificate with either a pass in Music of at least 50 per cent on the Higher Grade or at least 60 per cent on the Standard Grade; or a pass in the practical major subject in the Advanced Examination (University of South Africa) and a standard in Harmony equivalent to that of the Higher division (University of South Africa); or a pass in an admission examination, equivalent to the aforementioned examination, in the practical major subject and in Harmony.

Curriculum: Four years of full-time study. The Diploma may be obtained in the following specialized fields:

- Teaching of an Instrument or Singing
- School Music.

Performer's Licentiate in Music (Stellenbosch)

Admission requirements: Standard 10 Certificate. Students must give evidence in an entrance examination of sufficient ability as performers. The minimum standard required is equivalent to the Grade VIII Examination of the University of South Africa.

Students must also give evidence in an entrance examination of sufficient knowledge of Harmony, or must have obtained a pass mark in Music of at least 60 per cent in the Std 10 examination, or have passed an examination in Harmony equivalent to the Grade V Examination of the University of South Africa.

Curriculum: Three years.

Performer's Higher Licentiate in Music (Stellenbosch)

Admission requirements: The degree of B.Mus. or the B.A. degree with Music as one of the major subjects, or the Teachers' Diploma in Music, or the Teachers' Licentiate in Music, or the Performer's Licentiate in Music, or another qualification which the Senate regards as adequate.

Students must give evidence in an entrance examination of sufficient ability as performers.

Curriculum: One year.

Diploma in Music: Dip. Mus. (Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study. The third year of study includes, inter alia, the following courses: Class Teaching and Music Methodology III, General Music Knowledge III, Performance III.

Licentiate in Music: L.M. (Witwatersrand)

Admission requirements: As for the Diploma in Music above.

Curriculum: Three years of full-time study. Third year courses include, inter alia, Class Teaching and Music Methodology I, Ensemble II, Performance III.

Higher Diploma in Music: H.Dip.Mus. (Witwatersrand)

Admission requirements: Diploma in Music or a teacher's diploma or licentiate in music and at least four years' experience in education, or a B.Mus. degree.

Curriculum: One year of full-time study.

Performer's Diploma in Music: P.Dip.Mus. (Witwatersrand)

Admission requirements: Diploma in Music or a Licentiate in Music or a B.Mus. degree or a teacher's or performer's diploma or licentiate in music from a recognized institute and four years' experience in education or in public performances.

Curriculum: One year of full-time study or two years of part-time study.

VOCATIONAL SERVICE

As in many other fields, the development of the RSA causes a great demand for persons trained in music as a profession. There is a wide choice of fields of specialization for the student who began intensive training in music at an early age, who has a love for it, interest in it and the particular musical perception and aptitude as well as musical talent needed, and who is prepared to devote much time to practising.

The most important of the avenues for which a university degree or diploma qualifies a man or woman, is teaching in a studio or a school (primary and secondary), broadcasting, the provincial councils for the performing arts, the press, churches and certain library services.

On the strength of experience, reputation and post-graduate qualifications, competent musicians are continually singled out for various responsible positions, for example at training colleges, colleges for advanced technical education, universities, conservatoires, symphony orchestras, etc.

For a person who is not employed by an official institution, there is the opportunity of giving private lessons in almost any place, and to practise his profession during periods suitable to him. A member of an orchestra, for example, may also be a teacher of music.

NURSING

Universities: Cape Town, Natal, Orange Free State, Port Elizabeth, Potchefstroom, Pretoria, Rand Afrikaans University, Stellenbosch, Witwatersrand.

Degrees

Bachelor of Science (Nursing): B.Sc. (Nurs.) (UCT)

Bachelor of Social Science (qualified as a nurse): B.Soc.Sc. (Natal)

Bachelor of Social Science Nursing: B.Soc.Sc. (Nursing) (UOFS)

Bachelor of Arts and Science (Nursing): B.Art. et Scien. (Nursing) (PU for CHE)

Bachelor of Nursing: B.Cur. (UPE, RAU, UP) or B.Nursing (US)

Bachelor of Nursing Education and Nursing Administration: B.Cur. (I. et A.) (UPE)

Bachelor of Nursing (Instruction and Administration): B.Cur. (I. et A.) (UP)

Bachelor of Science in Nursing: B.Sc. (Nursing) (Wits)

Honours degrees

Bachelor of Social Science (Honours): B.Soc.Sc.Hons. (Natal)

Honours Bachelor of Social Science Nursing: B.Soc.Sc.(Hons.)(Nursing) (UOFS)

Honours Bachelor of Nursing: Hons.B.Nursing (US)

Master's degrees

Master of Social Science: M.Soc.Sc. (Natal)

Master of Social Science Nursing: M.Soc.Sc. (Nursing) (UOFS)

Master of Arts: M.A. (PU for CHE)

Master of Nursing: M.Cur. (UP) or M. Nursing (US)

Master of Science in Nursing: M.Sc. (Nursing) (Wits)

Doctor's degrees

Doctor of Philosophy: Ph.D. (Natal, Wits)

Doctor of Social Science: D.Soc.Sc. (Natal)

Doctor of Social Science Nursing: D.Soc.Sc. (Nursing) (UOFS)

Doctor Philosophiae: D.Phil. (PU for CHE)

Doctor of Nursing: D.Cur. (UP)

Diplomas and Certificate

Diploma in Nursing (General, Midwifery, Psychiatry) (UOFS)

Post-Basic Diploma in Nursing (with specialization in Nursing Administration or Nursing Education or Public Nursing, School Nursing and Professional Nursing) (UOFS)

University Diploma in Nursing (PU for CHE)

University Education Diploma (Nursing): U.E.D. (Nursing) (PU for CHE)

Diploma in Nursing Education (UPE, UP, US, Wits)

Diploma in Nursing Administration (UPE, UP, Wits)

Certificate in Oncochemotherapy (Nursing) (UP)

Diploma in Chiropody (UOFS)

DEGREES

Bachelor of Science (Nursing): B.Sc. (Nurs.) (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics on the Standard Grade. It is recommended that Physical Science, Physics or Chemistry or Biology be a subject for the Standard 10 examination.

Every candidate must submit a certificate of medical fitness and be at least 17 years of age.

Successful applicants will assume full-time duty as student nurses at the Groote Schuur Hospital for a probationary period of two months commencing in January. At the end of the probationary period the final selection will be made for admission.

Curriculum: Four years. On successful completion of the course, the student may be registered with the S.A. Nursing Council as a General Nurse.

The curriculum includes the following courses: Physics, Biology, Chemistry Special, Anatomy, Physiology, Pharmacology, Human Behaviour, English Special or Afrikaans Special,

Public Health, Nursing I, II, III and IV.

Practical nursing experience is carried out in co-operation with nurses and other staff of the Groote Schuur Hospital.

Bachelor of Social Science (qualified as a nurse): B.Soc. Sc. or

Bachelor of Social Science Nursing: B.Soc.Sc. (Nursing) or

Bachelor of Arts and Science (Nursing): B.Art. et Scien. (Nursing) or

Bachelor of Nursing: B.Cur. or B.Nursing or

Bachelor of Science in Nursing: B.Sc. (Nursing)

(All the above-mentioned universities except Cape Town.)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) and proof of enrolment as a student nurse at a training hospital approved by the South African Nursing Council.

Additional requirements:

Natal: The Department of Hospital Services requires a good pass in a natural science subject.

Port Elizabeth: Mathematics or Physical Science will be a strong recommendation.

Pretoria: See p. 164.

Witwatersrand: A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade.

Curriculum: Three years (Orange Free State); four years (Natal, Potchefstroom, Rand Afrikaans University, Stellenbosch, Witwatersrand); four and a half years (Port Elizabeth, Pretoria).

The major subjects are Nursing and Psychology or Sociology. Practical training is undertaken at the training hospital where the candidate has enrolled as a student nurse.

Bachelor of Nursing Education and Nursing Administration: B.Cur. (I. et A.) or

Bachelor of Nursing (Instruction and Administration): B.Cur. (I. et A.)

(Port Elizabeth, Pretoria)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) and proof of registration as a nurse/male nurse with the S.A. Nursing Council.

Additional requirements:

Port Elizabeth: Female students who wish to take the optional subject Preventive and Promotive Health Care II must also be registered as a midwife.

Curriculum: Three years of full-time study or at least four years of part-time study. The curriculum includes, inter alia, the following courses: Nursing Education III, Nursing Administration III, Sociology III or Psychology III (Pretoria) or Preventive and Promotive Health Care II (Port Elizabeth).

DIPLOMAS AND CERTIFICATE

Diploma in Nursing (General, Midwifery, Psychiatry) (Orange Free State)

Admission requirements: Standard 10 Certificate and proof of enrolment as a student

nurse at a training hospital approved by the S.A. Nursing Council.

Curriculum: 4 years of full-time study. Candidates are enrolled as student nurses at an approved hospital where all practical training is undertaken for the duration of the course.

Post-Basic Diploma in Nursing (with specialization in Nursing Administration or Nursing Education or Public Nursing, School Nursing and Professional Nursing)

(Orange Free State)

Admission requirements: Standard 10 Certificate and proof of registration as a general nurse/general nurse (male) or a psychiatric nurse (in the case of specialization in Public Nursing, School Nursing and Professional Nursing registration as general nurse and midwife is required) and proof of two years' appropriate experience or five years in the case of Nursing Administration.

Curriculum: At least one year of full-time study.

University Diploma in Nursing (Potchefstroom)

Admission requirement: Standard 10 Certificate.

Curriculum: Four years of full-time training. The curriculum includes, inter alia, the following courses: Nursing IV, Applied Psychology, Applied Pharmacology, Applied Sociology, Applied Physiology.

University Education Diploma (Nursing): U.E.D. (Nursing) (Potchefstroom)

Admission requirements: A degree in Nursing which includes a separate course in Anatomy.

Curriculum: At least one academic year.

Diploma in Nursing Education (Port Elizabeth, Pretoria, Stellenbosch, Witwatersrand)

Admission requirements:

Port Elizabeth: Standard 10 Certificate and proof of registration as a nurse/male nurse with the S.A. Nursing Council. A candidate who wishes to take Midwifery or Psychiatric Nursing as a teaching subject must be registered as a midwife or a psychiatric nurse.

Pretoria: Standard 10 Certificate and proof of registration as a general nurse/male nurse or a psychiatric nurse/male nurse. A candidate who wishes to take Midwifery must be registered as a midwife.

Stellenbosch: Standard 10 Certificate; a certificate of registration with the S.A. Nursing Council as a general nurse; and two years' experience as a registered nurse, of which one year must be practical nursing experience in the clinical sections of a training hospital for nurses.

Witwatersrand: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). The candidate must be registered by the S.A. Nursing Council as a general nurse and midwife or a general nurse (male) or psychiatric nurse who has been engaged in the practice of nursing for two years, of which period one year must have been in an approved training institution for nurses: Provided that a graduate who holds a Bachelor's degree in Nursing will be required to have been engaged in the practice of nursing for one year in a training institution.

Curriculum: One and a half years of full-time study. At the Universities of Port Elizabeth and Pretoria the curriculum extends over one year for candidates who hold a Bachelor's degree in Nursing.

Diploma in Nursing Administration (Port Elizabeth)

Admission requirements: A Standard 10 Certificate and proof of registration as a general nurse/male nurse with the S.A. Nursing Council. Female candidates must also be registered as midwives.

Curriculum: One and a half years of full-time study. Candidates who are also registered as tutors or as public health nurses may complete the course in one year and will be exempted from certain subjects according to the qualification they hold.

Diploma in Nursing Administration (Pretoria, Witwatersrand)

Admission requirements: As for the Diploma in Nursing Education.

Curriculum: One year of full-time study.

Certificate in Oncochemotherapy (Nursing) (Pretoria)

Admission requirements: Proof of registration as a general nurse/male nurse and the degree of B.Cur. or B.Cur. (I. et A.) or the Dip.Cur. or the Diploma in Nursing Education.

Curriculum: One semester. During this period candidates must be on the nursing staff of the Department of Cancer-Chemotherapy of the H.F. Verwoerd Hospital.

Diploma in Chiropody (Orange Free State)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) and a degree or diploma in Nursing and proof of registration as a general nurse/male nurse.

Curriculum: The Diploma may be issued to candidates who have satisfactorily completed 18 months' (three semesters') service in a hospital approved by the University and passed in the examinations set by the University. The curriculum includes, inter alia, Chiropody I and II, Orthopaedic conditions of the feet, Surgical conditions of the feet.

VOCATIONAL SERVICE

The young prospective nurse who presents herself for training and employment generally cherishes a fine ideal. This ideal is achieved when she has successfully completed her training. As a student she has the opportunity of becoming acquainted with all aspects of the occupation; when she becomes a registered nurse, the acquired knowledge is fully utilized and extended so that she renders a service to her fellow human beings which is in keeping with the nature of all women.

Although the basic needs of patients have remained unchanged, nursing has today become a highly specialized occupation as a result of the phenomenal scientific progress in the field of medicine. The duties and responsibilities of the registered nurse require an extremely high level of training and skill. However, as a result of her comprehensive but intensive training, which also involves the moulding of personality, the nurse acquires the ability to make decisions, to display sound judgement and to think scientifically. She is consequently able to satisfy the stringent demands which a dynamic society imposes upon her as a nurse and an individual.

Wherever the nurse works - in hospitals, private nursing homes, industrial concerns, clinics, schools, consulting rooms, in the country - there she is concerned with the welfare and health of the individual and of the community in general. These duties do not end with the easing of pain or the particular physical illness of the patient. She must also be able to listen and to attempt to understand the troubled mind; to inspire the patient who has lost hope and to lead him to acceptance and resignation if there is no hope of recovery. She must thus have an intense desire to assist and serve her fellow men. This requires intelligence, patience, tact, unselfishness and a sympathe=

tic attitude, but she must still be emotionally stable and able to act firmly if necessary.

There is no doubt about the employment possibilities for nurses. The service which qualified nurses have to render is still expanding as a result of an increase in the number of hospitals and the growth of the population. There are consequently adequate opportunities for promotion. In addition, the nurse has a choice between one or more of several basic and post-basic fields in which she can qualify and realise her potential. Nurses generally work in hospitals but there are many other fields of employment. Provincial and other hospitals, education departments, Government departments such as those of Health and Defence, municipalities, medical practitioners and specialists, industrial organizations, etc., all employ nurses. It is nevertheless better and more economical to nurse people at home than to admit them to hospital and for this reason the demand for private nurses will still increase.

Further information on training and aspects such as salaries, conditions of service, promotion, etc. can be obtained on request from: The Secretary, S.A. Nursing Association, P.O. Box 1280, Pretoria, 0001.

Also consult Tertiary Training.

OCCUPATIONAL THERAPY

Universities: Cape Town, Stellenbosch, Witwatersrand

Degrees

Bachelor of Science (Occupational Therapy): B.Sc. (Occ. Ther.) (UCT)

Bachelor in Occupational Therapy: B.Occupational Therapy (US)

Bachelor of Science in Occupational Therapy: B.Sc. (O.T.) (Wits)

Master's degree

Master of Science in Occupational Therapy: M.Sc.(O.T.) (Wits)

Doctor's degree

Doctor of Philosophy: Ph.D. (Wits)

Diplomas

Teachers' Diploma in Occupational Therapy (UP, US)

Diploma for Therapists (Special Education): D.T.S.E. (Unisa) See EDUCATION p. 194.

DEGREES

Bachelor of Science (Occupational Therapy): B.Sc. (Occ. Ther.) or

Bachelor of Occupational Therapy: B.Occupational Therapy or

Bachelor of Science in Occupational Therapy: B.Sc. (O.T.)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) and a medical certificate.

Additional requirements:

Cape Town: A pass in Mathematics on the Standard Grade.

Witwatersrand: A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade.

Curriculum: Four years of full-time study.

Enrolment at the University of Stellenbosch is limited and students are selected during September of the preceding year. Applications for admission to the course should reach the Registrar before 30 June.

Besides Occupational Therapy, the curriculum includes, inter alia, the following subjects: Physics, Sociology, Psychiatry, Psychology, Anatomy and Physiology.

The University of Stellenbosch prescribes compulsory practical vacation work during the short vacations.

DIPLOMAS

Teachers' Diploma in Occupational Therapy (Pretoria)

Admission requirements: A qualification in Occupational Therapy which is registered with the S.A. Medical and Dental Council and recognized by the College for Occupational Therapy as sufficient basic training for admission, and at least two years' experience as a registered occupational therapist in an approved hospital.

Curriculum: One year of full-time study.

Teachers' Diploma in Occupational Therapy (Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption); a qualification in Occupational Therapy which is registered with the S.A. Medical and Dental Council; and at least two years' experience as an occupational therapist in an approved hospital.

Curriculum: Two years of full-time study.

VOCATIONAL SERVICE

Occupational Therapy is one of the paramedical occupations which can be practised by women as well as men. They are instructed to treat and/or train physically and mentally handicapped persons; to prevent incapacity; to promote adaptation to incapacity, and to improve or preserve function. The treatment is therefore directed towards the patient's life outside the hospital and towards his future; the recovery of his independence, creative ability and particularly his ability to work. As a member of a medical team, under the guidance of a doctor and with the co-operation of other team members, the occupational therapist endeavours to rehabilitate the patient mentally and physically.

Qualified occupational therapists have a wide choice of work and they may choose from a large variety of hospitals, institutions and schools for the physically and/or mentally handicapped. There are posts available in general, psychiatric, orthopaedic and children's hospitals, rehabilitation centres, special schools and institutions, divisions for plastic surgery and private nursing homes. Up to the present not much use has been made in South Africa of private practices, although they also offer numerous interesting possibilities.

Apart from the universities, occupational therapists are trained by the Pretoria College for Occupational Therapy. All the courses comply with the same basic requirements. All occupational therapists must register with the South African Medical and Dental Council. South African degrees and diplomas in occupational therapy are internationally acknowledged and consequently occupational therapists may work in any country.

Also consult Tertiary Training in connection with the course at the Pretoria College for Occupational Therapy.

PHARMACY

Universities: Potchefstroom, Rhodes

Degrees

Bachelor of Science (Pharmacy): B.Sc. (Pharm.) (PU for CHE)

Bachelor of Pharmacy: B.Pharm. (Rhodes)

Honours degrees

Honours Bachelor of Science (Pharmacy): Hons. B.Sc. (Pharm.) (PU for CHE)

Bachelor of Science with Honours: B.Sc. (Hons.) (Rhodes)

Master's degrees

Master of Science (Pharmacy): M.Sc. (Pharm.) (PU for CHE)

Master of Science: M.Sc. (Rhodes)

Doctor's degrees

Doctor of Science (Pharmacy): D.Sc. (Pharm.) (PU for CHE)

Doctor of Philosophy: Ph.D. (Rhodes)

Doctor of Science: D.Sc. (Rhodes)

Diploma

University Diploma in Pharmacology (PU for CHE)

DEGREE

Bachelor of Science (Pharmacy): B.Sc. (Pharm.)

or

Bachelor of Pharmacy: B.Pharm.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Potchefstroom: The general requirements for admission to a B.Sc. degree (see p. 160) also apply in this case, provided that students must have passed Physical Science on the Standard Grade at least.

Rhodes: See p. 137.

Curriculum: Four years of full-time study.

Before admission to the second year of study, a student must submit proof of his registration as a pharmacy student with the S.A. Pharmacy Board.

The degree will be awarded after the final examinations have been passed, but a student may only be registered as a pharmacist by the S.A. Pharmacy Board after the completion of his/her apprenticeship as determined by the S.A. Pharmacy Board.

The subjects for the first year are as follows: Chemistry, Physics, Zoology, Botany. Students at Rhodes University take Biological Science instead of Zoology and Botany and Mathematics as well.

The major subjects for the degree are Pharmacology, Pharmaceutical Chemistry, and

Pharmaceutics.

DIPLOMA

University Diploma in Pharmacology (Potchefstroom)

Admission requirements: B.Sc. (Pharm.) degree or the degree of M.B., Ch.B. or an equivalent qualification.

Curriculum: One year comprising a study in advanced Pharmacology.

VOCATIONAL SERVICE

The profession of pharmacist, which can be practised by men and women, is a very old profession and one that has always been held in great respect since the pharmacist is much more than a person who sells cosmetics, bric-a-brac and pills. A pharmacist is a skilled person with professional training and his expert knowledge is an indispensable addition to the work of doctors and hospitals. In fact, the pharmaceutical profession today forms the co-ordinating link between manufacturer and doctor, doctor and patient, patient and community, and in this way an important part of the health service to the nation is controlled. The occupation is not restricted to the well-known retail chemist who mainly prepares medicine according to the doctor's prescription, and who sells patent medicines or other remedies as well as various kinds of articles.

Other branches of the occupation are, for example:

- The medical representative who visits medical practitioners and pharmacies to introduce and sell new medicines.
- The pharmacist employed by a wholesaler or manufacturer of medicines with a view to research into pharmaceutical products, manufacturing and testing of medicines, design of apparatus, control of production and packaging, management of purchases, sales, advertising etc.
- The hospital pharmacist attached to a hospital and responsible for pharmaceutical and related services.
- The railway pharmacist in the employ of the Railways.
- A lecturer at a training centre.
- Pharmacists in the service of the Department of Health where their services are mainly used in two fields, viz hospital dispensing services and drugs control.

Post-graduate training remains important, particularly to provide for the needs of the pharmaceutical industry and training centres. The agreement between the South African Pharmacy Board and the British Pharmaceutical Association creates opportunities for South Africans to study and gain experience overseas.

Also consult Tertiary Training for the equivalent training of pharmacists at the colleges for advanced technical education.

PHYSICAL EDUCATION

Universities: Orange Free State, Potchefstroom, Pretoria, Rhodes, Stellenbosch

Degrees

Bachelor of Arts (Physical Education): B.A. (Phys.Ed.) (UOFS, Rhodes)

Bachelor of Science with Physical Education: B.Sc. (PU for CHE)

Bachelor of Arts in Physical Education: B.A.(Phys.Ed.) (UP)

Bachelor of Arts (Education) (Physical Education): B.A.(Ed.)(Phys.Ed.) (UP)

B.A. degree and the B.Sc. degree (with Physical Education as one of the major subjects) (US)

Honours degrees

Honours Bachelor of Arts (Physical Education): B.A.(Hons.)(Phys.Ed.) (UOFS)
Honours Bachelor of Science: Honns. B.Sc. (PU for CHE)
Bachelor of Arts (Honours) in Physical Education: B.A.(Phys.Ed.)(Hons.) (UP)
Bachelor of Arts with Honours: B.A.(Hons.) (Rhodes)
Hons.B. in Physical Education (US)

Master's degrees

Master of Arts (Physical Education): M.A.(Phys.Ed.) (UOFS)
Master of Science: M.Sc. (PU for CHE)
Master of Arts in Physical Education: M.A.(Phys.Ed.) (UP)
Master of Arts: M.A. (Rhodes)
M. in Physical Education (US)

Doctor's degrees

Doctor of Science: D.Sc. (PU for CHE)
Doctor Philosophiae: D.Phil. (UP)
Doctor of Philosophy: Ph.D. (Rhodes)
Ph.D. (in Physical Education) (US)

B.degree course in Primary Teaching with specialization in Physical Education (US)
(See EDUCATION p. 195).

Diplomas

Diploma in Physical Education: Dip.Phys.Ed. (Rhodes)

The following universities offer a four-year teacher's diploma course with Physical Education as one of the specializations: Orange Free State, Port Elizabeth, Pretoria, Rand Afrikaans, Stellenbosch and the Witwatersrand. See EDUCATION.

DEGREES

Bachelor of Arts with Physical Education: B.A.(Phys.Ed.) or B.A. (Orange Free State, Pretoria, Rhodes, Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). A medical certificate is required.

Additional requirements:

Pretoria: See p. 57.

Rhodes: See p. 32.

Curriculum: Three years of full-time study. Students follow the curriculum for the ordinary B.A. degree with Physical Education as one of the two required major subjects.

Candidates intending to become teachers may on completion of the degree course take the one-year teacher's diploma course.

The University of Pretoria also includes in the curriculum two courses in Bio-Ergonomics and one course in Hygiene.

Bachelor of Science with Physical Education: B.Sc. (Potchefstroom)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 160.

A student must ascertain beforehand whether he is medically fit for the course.

Curriculum: Three years of full-time study. Students pursue the curriculum for the ordinary B.Sc. degree with Physical Education as one of the two major subjects. One of the following subjects may be taken as the second major subject: Physiology, Mathematics, Zoology, Statistical Theory, Botany. Students must take at least one course in Physiology.

Bachelor of Arts (Education)(Physical Education): B.A.(Ed.)(Phys.Ed.) (Pretoria)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with Afrikaans and English as subjects passed.

Curriculum: Four years of full-time study. Students take two courses in Bio-Ergonomics, one in Hygiene and three in Pedagogics. The major subjects are Physical Education and a subject selected from approved school subjects. The fourth year of study includes educational subjects such as School Organization and Administration, Subject Teaching Method and School Practice.

B.Sc. with Physical Education: B.Sc. (Stellenbosch)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with passes in Mathematics and Physical Science, one of which must be on the Higher Grade. A medical report must be submitted.

Curriculum: Three years of full-time study. Students follow the curriculum for the ordinary B.Sc. degree with Physical Education as one of the two required major subjects.

After obtaining the degree a candidate may study for one of the following diplomas or degrees: Higher Education Diploma (see p. 194), B.Sc.(Hons.) or M.Sc.

DIPLOMA

Diploma in Physical Education: Dip.Phys.Ed. (Rhodes)

Admission requirements: A Bachelor's degree or a recognized teacher's certificate.

A candidate must produce a medical certificate.

Curriculum: One year of full-time study. A candidate must pursue a course of study in the theory and practice of gymnastics, games and sports, and in the teaching of these subjects.

VOCATIONAL SERVICE

A degree (B.A. or B.Sc.) with Physical Education as one major subject offers job opportunities in the teaching profession; as recreation officers in industries, mines and municipalities; as instructors in the Defence Force, Police and the Department of Prisons; as organizers of Physical Education in the education departments for White, Bantu and Coloured schools. In combination with Journalism, there are abundant opportunities with, for example, magazines, dailies and the SABC. More and more job opportunities are offered by the Department of Sport and Recreation. One of the posts which can be held, is that of liaison officer, whose task comprises co-ordinating sport activities on a country-wide basis, and promoting participation in sport.

However, large numbers of men and women in South Africa, particularly in the urban areas, do not take part in organized sport, although they are in need of physical de-

velopment and recreation. In this case, a private gymnasium offers a wonderful opportunity for qualified persons who also have the necessary knowledge, initiative and organizing ability.

PHYSIOTHERAPY

Universities: Cape Town, Orange Free State, Stellenbosch, Witwatersrand

Degrees

Bachelor of Science (Physiotherapy): B.Sc. (Phys.) (UCT)

Bachelor of Physiotherapy: B.Sc. (Phys.) (UOFS)

Bachelor of Science in Physiotherapy: B.Sc. in Physiotherapy (US)

Bachelor of Science in Physiotherapy: B.Sc. (Physiotherapy) (Wits)

Master's degree

Master of Science in Physiotherapy: M.Sc. (Physiotherapy) (Wits)

Doctor's degree

Doctor of Philosophy: Ph.D. (Wits)

Diplomas and Certificate

Certificate in Teaching Physiotherapy (UCT)

Diploma in Physiotherapy Education (UP, Wits)

Diploma for Therapists (Special Education): D.T.S.E. (Unisa) See EDUCATION p. 194.

DEGREES

Bachelor of Science (Physiotherapy): B.Sc. (Phys.) or

Bachelor of Physiotherapy: B.Sc. (Phys.) or

Bachelor of Science in Physiotherapy: B.Sc. in Physiotherapy or B.Sc. (Physiotherapy)

(All the above-mentioned universities)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Cape Town: A pass in Mathematics on the Standard Grade, and a medical certificate.

Orange Free State: A pass in Mathematics on the Standard Grade. For the time being prospective students are advised to offer Physical Science and, if possible, Biology as well for the Std 10 examination.

Stellenbosch: Passes in Mathematics and Physical Science on the Standard Grade.

Witwatersrand: A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade, and a medical certificate.

Curriculum: Four years of full-time study. Enrolment at the University of Stellenbosch is limited and students are selected during September of the preceding year. Applications for admission to the course should reach the Registrar before 30 June.

The following subjects are prescribed for the first year: Physics, Biology or Zoology

(Stellenbosch), Chemistry and Psychology (except Cape Town). Physiotherapy is the major subject. Other subjects are, inter alia, Anatomy, Physiology, Clinical Application of Physiotherapy.

DIPLOMA AND CERTIFICATE

Certificate in Teaching Physiotherapy or

Diploma in Physiotherapy Education (Cape Town, Pretoria, Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption); a qualification in Physiotherapy which is accepted for registration with the S.A. Medical and Dental Council; and at least two years' approved experience in the practice of Physiotherapy.

Curriculum: Four academic terms (Cape Town) or one year of full-time study (Pretoria) or two years of part-time study (Witwatersrand).

VOCATIONAL SERVICE

Physiotherapy, like occupational therapy, forms a very important part of the paramedical services. It is a service which is supplementary to medical practice. The primary function of a physiotherapist is to enable a patient to help himself. With this aim in view, various methods are applied and sick or injured persons, persons with retarded or weakened muscular action, etc. are treated according to the doctor's instructions. The work is sometimes tiring but never boring.

Most physiotherapists work in hospitals or physiotherapy clinics where apparatus and facilities are available to undertake the five main forms of treatment, viz massage and mechanotherapy, electrotherapy, phototherapy, hydrotherapy and ultrasonic therapy.

Physiotherapists can work in sections for adults or children; sections for medical, orthopaedic and surgical cases; sections for heart, maternity or accident cases in intensive care units or centres for those with cerebral palsy. In addition to these, there are favourable opportunities for them in some Government departments, industries, mines, private medical clinics and in private practice.

At present there is a great shortage of physiotherapists, and lecturers in this field are particularly scarce. Thus promotion for able persons (women as well as men) is very fast. Registration as a physiotherapist with the South African Medical and Dental Council is compulsory.

Also consult Tertiary Training in connection with the course offered by the Pretoria College of Physiotherapy.

QUANTITY SURVEYING

Universities: Cape Town, Natal, Orange Free State, Port Elizabeth, Pretoria, Witwatersrand

Degrees

Bachelor of Science in Quantity Surveying: B.Sc. (Q.S.) (UCT, UOFS, Wits)

Bachelor in Quantity Surveying: B.Q.S. (Natal) or B.Sc.(Q.S.) (UP)

Bachelor of Quantity Surveying: B.Q.S. (UPE)

Master's degrees

Master of Science in Quantity Surveying: M.Sc.(Q.S.) (UOFS, Wits)
Master in Quantity Surveying: M.Q.S. (Natal) or M.Sc.(Q.S.) (UP)
Master of Quantity Surveying: M.Q.S. (UPE)

Doctor's degrees

Doctor of Science in Quantity Surveying: D.Sc.(Q.S.) (Wits)
Doctor in Quantity Surveying: D.Sc.(Q.S.) (UP)
Doctor of Quantity Surveying: D.Q.S. (UPE)
Doctor of Philosophy: Ph.D. (Natal, Wits)

DEGREES

Bachelor of Science in Quantity Surveying: B.Sc.(Q.S.)

or

Bachelor in Quantity Surveying: B.Q.S. or B.Sc.(Q.S.)

or

Bachelor of Quantity Surveying: B.Q.S.

(Cape Town, Natal, Orange Free State, Port Elizabeth, Pretoria)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Cape Town: A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade, and a pass in a science subject (preferably Physical Science or Physics) on the Standard Grade.

Natal: See p. 132.

Orange Free State: See p. 156.

Port Elizabeth: A pass in Mathematics of at least 40 per cent on the Standard Grade.

Pretoria: See p. 164.

Curriculum: The curriculum extends over a period of five years, comprising two years of full-time study and three years of part-time study. A candidate must be in the employment of a registered quantity surveyor or employed in the office of a local or other government quantity surveying office from the commencement of the third year until he has completed the requirements of the degree.

The curriculum includes, inter alia, the following courses: Quantity Surveying V or Quantities V; Professional Practice; Analysis of Prices; Building Costs; Theory of Structures; Economics.

Bachelor of Science in Quantity Surveying: B.Sc.(Q.S.) (Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass on the Higher Grade or at least 60 per cent on the Standard Grade in Mathematics and in one of the following subjects: Biology, Physical Science, Physiology.

Curriculum: Four years of full-time study. The curriculum comprises Parts I, II and III. At the end of each year of study in Parts I and II a student must spend the next succeeding long vacation working in the office of a registered quantity surveyor, or a

quantity surveying office of a Government department, provincial administration, or local authority.

The curriculum includes, inter alia, the following subjects: Building Science, Theory and Practice of Quantity Surveying, Mathematics, Economics, Cost Evaluation and Control.

VOCATIONAL SERVICE

The Quantity Surveyor's field covers all aspects of building costs and he is often referred to as the technical accountant of the building industry. He works in close relationship with the architect, engineer and building contractor. In addition, he is a professional adviser, for example, in the case of a lawsuit in connection with a building contract, the appraisal of properties with a view to insurance, or advice to estate developers and investors in real estate.

The Public Service offers the Quantity Surveyor the opportunity of being active in practically any branch of quantity surveying. Persons employed by the Departments of Bantu Administration and Development, Community Development and Public Works are stationed in Pretoria. Quantity Surveyors of the Provincial Administrations are stationed at the different administrative head-offices. Opportunities for quantity surveyors are virtually unlimited in the private sector, while ample job opportunities also exist with municipalities; the Railways; the CSIR, and universities. In the course of time a quantity surveyor may embark upon an undertaking of his own and today this is most rewarding.

The profession is not limited to men only. Women are equally welcome and there is reason to believe that persons with the appropriate aptitude and interest may be very successful in this career.

RADIOGRAPHY

Universities: Orange Free State, Pretoria

Diplomas

Diploma in Diagnostic Radiography (UOFS)
Diploma in Therapeutic Radiography (UOFS)
Diploma in Radiographic Diagnosis (UP)
Diploma in Radiographic Therapy (UP)
Diploma in Radiation Protection for Sisters (UP)

DIPLOMAS

Diplomas in Diagnostic Radiography and Therapeutic Radiography (Orange Free State)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics on the Standard Grade. For the time being prospective students will still be advised to offer Physical Science and, if possible, Biology as well for the Std 10 examination.

Applications for admission to the course should be addressed to: The Medical Superintendent, National Hospital, Bloemfontein.

Curriculum: Two years of full-time study for the Diploma in Diagnostic Radiography. The Diploma in Therapeutic Radiography will be awarded after further study of one year after obtaining the Diploma in Diagnostic Radiography.

The courses are offered in co-operation with the National Hospital.

Diagnostic Radiography includes the following courses: Biophysics I and II; Anatomy, Physiology and Radiographic Anatomy; Radiographic Photography; Radiography Technique I and II; Pathology (Special).

Therapeutic Radiography includes the following courses: Radiation Therapy II; Biophysics III.

Diploma in Radiographic Diagnosis (Pretoria)

Admission requirements: Standard 10 Certificate with a pass in Mathematics and preferably, in addition, Physics or Physical Science.

With a view to selection for the course each candidate must take a preliminary course in nursing at the H.F. Verwoerd Hospital for five weeks before she can be admitted to the diploma course.

Curriculum: Two years of full-time study. During this period each candidate must be attached to the Department of Radiodiagnosis of the H.F. Verwoerd Hospital as a student radiographer.

The curriculum consists of two parts: Part I extends over one year and comprises courses in the following subjects: Medical Physics, Photography, Anatomy, Physiology, Radiographic Diagnosis I. Part II extends over one year and is devoted to courses in the following subjects: Radiographic Diagnosis II, Radio isotopes and Radiation Protection, Apparatus Construction.

A candidate who has obtained the Diploma in Radiographic Diagnosis, may after further study of one academic year, obtain the Diploma in Radiographic Therapy.

Diploma in Radiographic Therapy (Pretoria)

Admission requirements: Standard 10 Certificate with a pass in Mathematics and preferably, in addition, Physics or Physical Science.

With a view to selection for the course each candidate must take a preliminary course in nursing at the H.F. Verwoerd Hospital for five weeks before she can be admitted to the diploma course.

Curriculum: Two years of full-time study. During this period the candidate must be attached to the Department of Radiotherapy of the H.F. Verwoerd Hospital as a student radiographer.

The subjects are as for the Diploma in Radiographic Diagnosis except that Radiographic Therapy I and II are taken instead of Radiographic Diagnosis I and II.

Diploma in Radiation Protection for Sisters (Pretoria)

Admission requirements: Standard 10 Certificate and the status of a Sister in a general hospital.

Curriculum: One year of full-time study. During this period each candidate must be attached to the departments of Radiodiagnosis and Radiotherapy of the H.F. Verwoerd Hospital as a sister-student radiographer.

VOCATIONAL SERVICE

Radiography embraces the two branches of radiographic diagnosis (examination of a patient with the aid of X-ray apparatus) and radiotherapy (X-ray treatment of outwardly invisible ailments). Both these fields are interesting and they include a variety of duties which must be carried out in co-operation with doctors and hospital officials but mainly under the supervision and according to the prescription of a radiologist. (The radiologist is a qualified medical practitioner who has also specialized in radiotherapy and/or radiographic diagnosis.)

The occupation is normally practised by women. There is, however, a need for qualified men as well and favourable prospects exist. Misconceptions concerning X-rays, their use and attendant dangers have in the past caused hesitation in the minds of persons interested in this occupation. Today, however, adequate precautionary measures are taken to protect the radiographer against possible radiation, and the occupation is thus absolutely safe.

Radiographers are employed by all the hospitals in the country and the doubly qualified radiographer (in radiographic diagnosis as well as radiotherapy), in particular, should experience no difficulty in obtaining a suitable post. Many radiographers are also appointed in the private practices of radiologists. The South African qualification is recognized internationally and the double qualification, in particular, paves the way for experience abroad in diagnostic and therapeutic work.

Also consult Tertiary Training.

SOCIAL SCIENCE/SOCIAL WORK

Universities: All the universities in the Republic of South Africa

Degrees

Bachelor of Social Science: B.Soc.Sc. (UCT, Natal, UOFS, Rhodes)

Bachelor of Social Science in Social Work: B.Soc.Sc.(S.W.) (UCT, UOFS)

Bachelor of Social Science (Social Work): B.Soc.Sc.(Soc.Work) (Rhodes)

Baccalaureus Artium in Social Work: B.A.(S.W.) (UPE)

Bachelor of Arts in Social Work: B.A.(S.W.) (PU for CHE, UP, RAU) or B.A.(Social Work) (Wits)

B.A. in Social Work (US)

Bachelor of Arts in Social Science: B.A.(S.S.) (Unisa)

Honours degrees

Bachelor of Social Science Honours: B.Soc.Sc.(Hons.) (UCT, UOFS) or B.Soc.Sc.Hons. (Natal)

Bachelor of Social Science with Honours: B.Soc.Sc.(Hons.) (Rhodes)

Bachelor of Social Science in Social Work (Honours): B.Soc.Sc.(S.W.)(Hons.) (UCT, UOFS)

Baccalaureus Artium Honores: B.A. Hons. (UPE)

Bachelor of Arts Honours in Social Work: B.A.(S.W.)(Hons.) (UP)

Honours B.A. in Social Work (US)

Honours B.A. in Social Work (Medical Social Work field) (US)

Honours Bachelor of Arts in Social Science: Hons.B.A.(S.S.) (Unisa)

Master's degrees

Master of Social Science: M.Soc.Sc. (UCT, Natal, UOFS, Rhodes)

Master of Public Administration: M.Pub.Ad. (UCT)

Master of Social Science in Social Work: M.Soc.Sc.(S.W.) (UOFS)

Magister Artium: M.A. (UPE, PU for CHE)

Master of Arts in Social Work: M.A.(S.W.) (UP, RAU) or M.A.(Social Work) (Wits)

M.A. in Social Work (US)

M.A. in Social Work (Medical Social Work field) (US)

Master of Arts in Social Science: M.A.(S.S.) (Unisa)

Doctor's degrees

Doctor of Philosophy: Ph.D. (UCT, Natal, Rhodes, Wits)
Doctor of Social Science: D.Soc.Sc. (UCT, Natal, UOFS, Rhodes)
Doctor of Social Science in Social Work: D.Soc.Sc.(S.W.) (UOFS)
Doctor Philosophiae: D.Phil. (UPE, PU for CHE, UP, US, Unisa)
Doctor of Literature and Philosophy: D.Litt. et Phil. (RAU)

Diplomas

Diploma in Social Science (Social Work): Dip.Soc.Sc.(S.W.) (UCT)
Diploma in Social Work (UOFS, UPE, PU for CHE, Rhodes, US, Unisa)
Advanced Diploma in Psychiatric Social Work (UCT)
Postgraduate Diploma in Social Work (Natal)
Advanced Diploma in Social Work (UOFS, UPE)
Diploma in Social Studies (Rhodes)

DEGREES

Bachelor of Social Science: B.Soc.Sc. (Cape Town, Natal, Rhodes)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study. The curriculum includes nine or ten courses depending on the university.

Students select their courses from subjects like Sociology, Economic History, Social Anthropology, History, Economics, Psychology and Mathematics.

At the University of Cape Town students are required to take three courses in Sociology.

At the University of Natal students who wish to qualify as social workers major in Social Work and either Psychology or Sociology.

Bachelor of Social Science: B.Soc.Sc. (Orange Free State)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study. The curriculum consists of at least eleven courses. Two of the following subjects must be major subjects: Sociology, Industrial Sociology, Psychology, Criminology.

Bachelor of Social Science in Social Work: B.Soc.Sc.(S.W.) (Cape Town)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study.

The curriculum includes nine courses comprising the following: Sociology III, Social Work III, Psychology II and a course in English or Afrikaans or a Bantu Language or Public Administration I.

Students are required to do the prescribed practical work.

Bachelor of Social Science in Social Work: B.Soc.Sc.(S.W.) or

Baccalaureus Artium in Social Work: B.A.(S.W.) or

Bachelor of Arts in Social Work: B.A.(S.W.) or

Bachelor of Social Science (Social Work): B.Soc.Sc.(Soc.Work) or

B.A. in Social Work or

Bachelor of Arts in Social Science: B.A.(S.S.)

(Orange Free State, Port Elizabeth, Pretoria, Rhodes, Stellenbosch, South Africa)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study or four years of part-time study (Pretoria).

The curriculum usually includes 10 or eleven courses comprising three courses in Social Work and three courses in Sociology or Psychology. Other courses are selected from subjects for the ordinary B.A. degree. Some universities include Criminology in the curriculum.

A student is usually required to do practical social work with an organization employing a trained social worker.

Bachelor of Arts (Social Work): B.A.(S.W.) or

Bachelor of Arts in Social Work: B.A.(S.W.) or

B.A. (Social Work)

(Potchefstroom, Rand Afrikaans, Witwatersrand)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Four years of full-time study.

The curriculum, which consists of twelve or thirteen courses, comprises Social Work IV, Sociology III and/or Psychology III, together with other courses selected from subjects for the ordinary B.A. degree.

The University of the Witwatersrand also requires a dissertation on an approved topic in the fourth year of study.

DIPLOMAS

Diploma in Social Science (Social Work): Dip.Soc.Sc.(S.W.) (Cape Town) or

Diploma in Social Work (Orange Free State, Port Elizabeth, Potchefstroom, Rhodes, Stellenbosch)

Admission requirement: Standard 10 Certificate.

Curriculum: Three years of full-time study.

The curriculum is the same as that laid down for the degree of B.Soc.Sc.(S.W.) or B.A.(S.W.) according to the university offering the Diploma course.

Diploma in Social Work (South Africa)

Admission requirement: A degree with passes in at least Sociology I or Psychology I.

A student who has passed Sociology II and III and/or Psychology II and III will not be required to take another course(s) instead.

Curriculum: Two years.

Advanced Diploma in Psychiatric Social Work (Cape Town)

Admission requirement: An Honours degree in Psychiatric Social Work or its recognized equivalent.

Curriculum: The course lasts for a minimum of a half-year and consists of prescribed field and clinical practice.

Post-graduate Diploma in Social Work (Natal)

Admission requirement: The degree of B.Soc.Sc.

Curriculum: One year of full-time study or two years of part-time study.

The Diploma is equivalent to an Honours degree in Social Work.

Advanced Diploma in Social Work (Orange Free State)

Admission requirement: A recognized University Diploma in Social Work.

Curriculum: One year of full-time study.

The curriculum is the same as that laid down for the degree of B.Soc.Sc.(Hons.) in Social Work.

Advanced Diploma in Social Work (Port Elizabeth)

Admission requirement: A recognized degree or diploma in Social Work or equivalent qualifications.

Curriculum: One year. The curriculum comprises four of the five Honours papers for Social Work.

Diploma in Social Studies (Rhodes)

Admission requirement: Standard 10 Certificate.

Curriculum: Two years of full-time study. The curriculum includes, inter alia, courses in Sociology, Psychology and Social Work.

It offers only general training in Social Science.

VOCATIONAL SERVICE

Social work deals with the effective social functioning of man within, and outside the family context in groups and in the community. In addition to handling the usual problems which arise in the individual and family context, such as, for instance, marital problems, adoptions, drug addiction and other personal problems, the social worker is also faced by the challenge to assist in finding solutions to problems in respect of personal and social adaptation which threaten nations, and more particularly the youth of today. The aim of the social worker is therefore to assist people from all spheres and groups of society to help themselves, to enable them once again to play a meaningful part in society by including them in the normal social and economic service set-up. Three primary methods are applied to cope with the work, viz case studies, social group work and community work. Apart from particular personality traits, the social worker must have professional training (degree or diploma) which will equip him for the demands of this specialized profession.

At present the Public Service is the largest single employer of men and women who have qualified in the social sciences. The activities comprise such a broad field that provision has been made for a large number of high professional posts. The Departments which are concerned with welfare and related services, are those of Social Welfare and Pensions, Bantu Administration and Development and Coloured Relations and Rehoboth Affairs. Other bodies which render social services or where social work is secondary to the main aim are, for example, The South African National Council on Alcoholism and Drug Dependence, the Christelike Maatskaplike Raad, hospitals, municipalities, prisons, the Railways, the Defence Force, Posts and Telecommunications, child welfare associations, marriage bureaux, the mines, Iscor, Sasol and other large industrial concerns. Important posts in personnel management are at present held by social workers, whereas persons with the necessary qualifications and experience may obtain posts as lecturers at universities. The subject Social Work is not restricted to the profession of social work. As a subject for practically any B.A. field of study, it is of particular value to ministers, nurses, teachers, psychologists, sociologists, and so on.

Also see Sociology, p. 49 and other Social Sciences under B.A.

SPEECH AND DRAMA

Universities: Cape Town, Natal, Orange Free State, Potchefstroom, Pretoria, Rhodes, Stellenbosch, Witwatersrand

The University of the Witwatersrand also offers the degree of B.A. with two qualifying courses in History of Drama.

Degrees

Bachelor of Arts with two courses in Drama: B.A. (UCT)

Bachelor of Arts with Speech and Drama as a major subject: B.A. (Natal)

Bachelor of Arts (Dramatic Art and Theatrical Art): B.A. (Dramatic Art and Theatrical Art) (UOFS)

Bachelor of Arts with Speech and Interpretation or Theatrical Art as major subjects: B.A. (PU for CHE)

Bachelor of Arts in Drama: B.A. (Drama) (UP)

Bachelor of Drama: B.Dram. (US)

Bachelor of Arts in Dramatic Art: B.A. (Dramatic Art) (Wits)

Honours degrees

Bachelor of Arts Honours: B.A.Hons. or Hons.B.A. (Natal, PU for CHE)

Honours Bachelor of Arts (Dramatic Art and Theatrical Art): B.A.(Hons.)(Dramatic Art and Theatrical Art) (UOFS)

Bachelor of Arts Honours in Drama: B.A.(Drama)(Hons.) (UP)

Honours Bachelor of Drama: Hons. B.Dram. (US)

Master's degrees

Master of Arts: M.A. (Natal, PU for CHE)

Master of Arts (Dramatic Art and Theatrical Art): M.A. (Dramatic Art and Theatrical Art) (UOFS)

Master of Arts in Drama: M.A.(Drama) (UP)

Master of Drama: M.Dram. (US)

Doctor's degrees

Doctor of Philosophy: Ph.D. (Natal)
Doctor of Literature: D.Litt. (UOFS, PU for CHE, UP)
Doctor Philosophiae: D.Phil. (UP, US)

Diplomas

Performer's Diploma in Speech and Drama (UCT)
Specialist Teacher's Diploma in Speech and Drama (UCT)
Specialist Actor's Diploma in Speech and Drama (UCT)
Special Endorsement for Holders of Primary Teachers' Certificates (UCT)
Diploma in Play Production (Natal)
Diploma in Dramatic Art and Theatrical Art (UOFS)
University Diploma in Speech and Drama (PU for CHE)
University Diploma in Theatrical Art (PU for CHE)
Diploma for Stage Managers (US)
Diploma in Specialized Education (Speech and Drama) (US) (See EDUCATION p. 196.)

The University of the Orange Free State offers the Higher Education Diploma (Non-graduate) with Drama and Theatrical Art as a specialization. (See EDUCATION p.186.)

DEGREES

Bachelor of Arts with two courses in Drama: B.A. (Cape Town)

All B.A. students wishing to enter Drama I must first have completed at least one course in English.

Students intending to take Drama I and II are required to attend classes in the Speech and Drama Department during their first year.

See Chapter 2, University of Cape Town, for further particulars regarding the B.A. degree course.

Bachelor of Arts with Speech and Drama: B.A.

The University of Natal and Rhodes University offer the degree of B.A. with three qualifying courses in Speech and Drama.

See Chapter 2, University of Natal and Rhodes University, for further particulars regarding the B.A. degree courses at these universities.

Bachelor of Arts (Dramatic Art and Theatrical Art): B.A.(Dramatic Art and Theatrical Art) (Orange Free State)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study. The curriculum consists of eleven courses. Dramatic Art and Theatrical Art I, II and III are equivalent to six courses. The major subjects are Afrikaans en Nederlands III or English III or Communication III and Dramatic Art and Theatrical Art III.

Bachelor of Arts with Speech and Interpretation or Theatrical Art: B.A. (Potchefstroom)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Ma-

triculation Exemption).

Curriculum: Three years of full-time study. Students take the B.A. degree course with either Speech and Interpretation or Theatrical Art as one of the major subjects.

Students who take Theatrical Art as a major subject must take Speech and Interpretation as the second major subject and also two courses in Drama.

The other recommended major subject to be taken with Speech and Interpretation is a language.

Students in the Department of Speech and Drama are required to undergo practical training with one of the Performing Arts Councils, preferably PACT, for at least two weeks during their second and third years of study.

Students must also do practical Radio Work with the SABC in Johannesburg on twelve Saturdays per annum in their second and third years.

See Chapter 2, Potchefstroom University for CHE, for further particulars regarding the B.A. degree course.

Bachelor of Arts in Drama: B.A. (Drama) (Pretoria)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 57.

Curriculum: Three years of full-time study. The curriculum consists of eleven courses which are composed as follows: Dramatic Art I, II and III; Theatrical Art I, II and III; Speech I, II and III; and two courses selected from a group of B.A. subjects.

Bachelor of Drama: B.Dram. (Stellenbosch)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years of full-time study. The two major subjects are Drama III (Afrikaans and English) and Afrikaans-Nederlands III or English III. Other courses are two courses in a language or a B.A. subject and a first-year course in a language or a B.A. subject.

In their second and third years Drama students partake in stage work, interpret rôles in the department's theatrical productions and assist in productions in the theatre of the University.

Bachelor of Arts in Dramatic Art: B.A. (Dramatic Art) (Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 37.

Curriculum: Four years of full-time study. The curriculum includes, inter alia, the following subjects: Three courses in an approved language, two courses in a subject or subjects selected from a group of B.A. subjects, Dramatic Theory and Criticism III, History of Drama II, Theatre Art and Craft II.

DIPLOMAS

Performer's Diploma in Speech and Drama (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with an aggregate of at least 50 per cent. Candidates who hold a Standard 10 Certificate may, with the permission of the Head of the Department, be accepted.

A student must have shown marked talent as a performer. An audition with a member of

the Speech and Drama Department is necessary.

Curriculum: Three years of full-time study. A Unilingual (English Medium) curriculum as well as a Bilingual curriculum are offered.

It is possible for a candidate to complete a B.A. degree together with the Diploma course in a minimum period of four years.

Specialist Teacher's Diploma in Speech and Drama (Cape Town)

Admission requirements: A B.A. degree including at least two courses in Drama or a B.A. degree including three courses in English and a qualification in Speech and Drama or practical experience and studies.

Curriculum: One year of full-time study.

Specialist Actor's Diploma in Speech and Drama (Cape Town)

Admission requirements: A B.A. degree including at least two courses in Drama or a B.A. degree including three courses in English and an audition with a member of the Speech and Drama Department.

Curriculum: One year.

Special Endorsement for Holders of Primary Teachers' Certificates (Cape Town)

Admission requirements: Primary Teachers' Certificate and a Standard 10 Certificate.

Curriculum: Special one-year course. A Unilingual as well as a Bilingual curriculum is offered.

Diploma in Play Production (Natal)

Admission requirement: A Bachelor's degree including Speech and Drama as a major subject.

Curriculum: One year of full-time study or two years of part-time study.

Diploma in Dramatic Art and Theatrical Art (Orange Free State)

Admission requirement: Standard 10 Certificate.

Curriculum: Three years of full-time study. The major subjects are Dramatic Art and Theatrical Art and Afrikaans en Nederlands or English or Communication. The courses are the same as those for the degree.

University Diploma in Speech and Drama (Potchefstroom)

Admission requirement: Standard 10 Certificate.

Curriculum: Three years of full-time study. The major subjects are Speech and Interpretation and Theatrical Art. Other courses are, inter alia, Dramatic Art I and II, Afrikaans or Afrikaans-Nederlands I or English I or English IB. The Diploma can be obtained either in Afrikaans or in Afrikaans and English.

University Diploma in Theatrical Art (Potchefstroom)

Admission requirements: An approved Bachelor's degree with Theatrical Art as a major subject or the University Diploma in Speech and Drama or an equivalent qualification.

Curriculum: One academic year. The curriculum comprises the study of advanced Theatrical Art.

Diploma for Stage Managers (Stellenbosch)

Admission requirement: Standard 10 Certificate.

Curriculum: Two years of full-time study.

The curriculum includes the following courses: Afrikaans I, Special English, Stage Management I and II, Classical Culture I.

VOCATIONAL SERVICE

Dramatic Art as a subject is purely literary, that is a theoretical course which, just like other courses, requires interest but no particular talent for acting. Speech and Theatrical Art are theoretical-practical courses for which students should, in addition to interest, possess a suitable voice and a high degree of acting talent. (Many students have slumbering talents and should not be discouraged in advance.)

Generally speaking, it is the aim of these fields of study to equip language teachers (provided they satisfy the correct subject combination requirements), actors, journalists, radio announcers and radio and television actors for their task. The theatre, for instance, offers various fields such as those of actor, director, designer, stage director, etc. In this regard, the Performing Arts Councils of the four provinces offer particular opportunities. At the SABC trained persons receive further training in the art of radio work and announcing, after which they can, for example, act as announcers, programme organizers and producers, depending on their training, personality, voice, creative ability, powers of organization and general competence. Interested and talented persons are given the opportunity of taking part in radio and television dramas.

Some of these fields require specialization and universities make adequate provision for this.

SPEECH THERAPY AND AUDIOLOGY/LOGOPAEDICS

Universities: Cape Town, Natal, Pretoria, Witwatersrand

Degrees

Bachelor of Science (Logopaedics): B.Sc. (Logopaedics) (UCT)

Bachelor of Arts in Logopedics: B.A.(Log.) (UP)

Bachelor of Arts in Speech and Hearing Therapy: B.A.(Sp. & H.Therapy) (Wits)

Master's degrees

Master of Arts in Logopedics: M.A.(Log.) (UP)

Master of Arts: M.A. (Wits)

Doctor's degrees

Doctor of Philosophy: D.Phil. (UP)

Doctor of Philosophy: Ph.D. (Wits)

Doctor of Literature: D.Litt. (Wits)

Diplomas

Diploma in Speech Therapy (Logopaedics) (Natal)

Diploma for Therapists (Special Education): D.T.S.E. (Unisa) See EDUCATION p. 194.

DEGREES

Bachelor of Science (Logopaedics): B.Sc. (Logopaedics) (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass in Mathematics. It is recommended that Biology be a subject for the Std 10 examination.

Curriculum: Four years of full-time study. The curriculum includes the following courses: Anatomy I, Chemistry I, Phonetics and Linguistics II, Psychology III, Audiology II, Speech Pathology and Therapy IV. A report based on guided research on an approved topic is required in the fourth year. Students are required to undertake practical work.

Bachelor of Arts in Logopedics: B.A.(Log.)

or

Bachelor of Arts in Speech and Hearing Therapy: B.A.(Sp. & H. Therapy)

(Pretoria, Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Additional requirements:

Pretoria: See p. 57.

Witwatersrand: See p. 37. A pass in Mathematics on the Higher Grade or at least 50 per cent on the Standard Grade.

Curriculum: Four years of full-time study. The curriculum includes the following courses: Afrikaans en Nederlands I or English I; Neurology of Speech, Voice and Hearing Organs; Pathology of Speech, Voice and Hearing Organs; Speech Science II (Phonetics and Linguistics); Audiology II or III; Psychology III; Speech Pathology IV.

Students are required to do practical work in their second, third and fourth years of study.

DIPLOMA

Diploma in Speech Therapy (Logopaedics) (Natal)

Admission requirements: A Bachelor's degree with Speech and Drama as a major subject or equivalent qualifications.

Curriculum: Two years of full-time study or three years of part-time study.

The curriculum includes the following courses: Anatomy and Physiology, Speech Pathology and Therapeutics II, Neurology.

A candidate will be required to complete Psychology I, II and III and Sociology I or Social Anthropology I before entering upon, or during the work for the Diploma.

VOCATIONAL SERVICE

There is a growing awareness of the importance of this profession, which can be practised by both men and women. In contrast with Speech (as found in Speech Training and Drama fields of study), in which an attempt is made to improve the standard of normal speech, speech therapy is applied to persons with voice, speech and hearing disturbances or deviations. Deficiencies in communication which are treated by the Speech Therapist are, for example, speech defects which arise as a result of hearing defects, problems with certain sounds, stuttering, reading difficulties, the cleft palate and brain damage which has a deleterious effect on speech, voice aberrations (e.g. hoarseness),

deviations which originate as a result of psychological problems, et cetera.

The qualified speech therapist will have no difficulty in obtaining a post in accordance with his or her aptitude and interest and the occupation may, for example, be pursued through

- entering the service of a provincial education department or the Department of National Education (in some cases a teacher's qualification and/or teaching experience may be required);

- serving in hospitals or hospital clinics, in co-operation with ear, nose and throat specialists, neurologists, pediatricians, plastic surgeons and psychiatrists;

- an appointment in a speech, voice and hearing clinic at a university;

- a clinic of one's own and private practice;

- an appointment as audiologist in the S.A. Defence Force where, for example, the hearing of pilots is tested.

One may derive much personal satisfaction from speech therapy as a career. Helping someone to regain his place in the community is an experience which brings great happiness; assisting him or her to communicate normally is indeed worth the trouble.

THEOLOGY/DIVINITY

Universities: Natal, Potchefstroom, Pretoria, Rhodes, South Africa, Stellenbosch

The Universities of the Orange Free State and Port Elizabeth and the Rand Afrikaans University also offer curricula for the B.A. Admission degree.

Degrees

Bachelor of Arts: B.A. (Natal)

Bachelor of Arts (Honours): B.A.Hons. (Natal)

Bachelor of Theology: Th.B. (Rhodes) or B.Theol. (Unisa)

Honours Bachelor of Theology: Hons.B.Theol. (Unisa)

Post-graduate Degrees

Potchefstroom

Bachelor of Theology: Th.B.

Master of Theology: Th.M.

Doctor of Theology: Th.D.

Pretoria

Bachelor of Divinity: B.D.

Doctor of Divinity: D.D.

Rhodes

Bachelor of Divinity: B.D.

Doctor of Philosophy: Ph.D.

Doctor of Divinity: D.D.

South Africa

Bachelor of Divinity: B.D.

Master of Divinity: M.Div.

Doctor of Divinity: D.D.

Stellenbosch

Bachelor of Theology: B.Th.

Master of Theology: M.Th.

Doctor of Theology: D.Th.

Diplomas and Certificate

Diploma in Biblical Studies (PU for CHE)
Diploma in Theology (post-graduate) (UP)
Certificate in Religious Knowledge (Rhodes)
Diploma in Theology: Dip. Theol. (Rhodes)
Lower Diploma in Theology (Unisa)

DEGREES

Bachelor of Arts: B.A.

The University of Natal offers both Biblical Studies and Theology as major subjects in which two qualifying courses may be taken. A candidate who has completed two qualifying courses in either of these two subjects for his B.A. degree may take an Honours course in Divinity.

See Chapter 2: University of Natal, for further particulars concerning the B.A. degree course.

Bachelor of Theology: Th.B. (Rhodes)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Four years of full-time study. The curriculum includes the following subjects: Biblical Studies, Systematic Theology, Ecclesiastical History, Pastoral Work, Hellenistic Greek or Hebrew or Philosophy or History.

This degree may be taken in two further years of study after the B.A. degree.

Bachelor of Theology: B.Theol. (South Africa)

Admission requirement: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption).

Curriculum: Three years. The curriculum comprises eleven or twelve courses, as follows: Biblical Studies III and either Systematic Theology III or General Church History III are the major subjects. Two courses must be taken in one of the latter two subjects not selected as a major subject. One course must be selected from English I, Practical English, Afrikaans en Nederlands, Practical Afrikaans, and two courses from Classical Hebrew I, Greek I or Hellenistic Greek I, Latin I.

The twelfth course can be Pastoral Theology, Science of Religion or a third course in either Systematic Theology or General Church History.

Honours Bachelor of Theology: Hons.B.Theol. (South Africa)

This degree does not admit a candidate to the studies for a Master's or a Doctor's degree.

POST-GRADUATE DEGREES

Bachelor of Theology: Th.B. (Potchefstroom)

Admission requirements: A B.A. degree. The following courses must be completed: Hebrew II, Greek II (including New Testament Greek), Latin I, Philosophy II.

A student may not include one or more courses in the subject Biblical Studies in his curriculum for the B.A. degree.

A student must give proof of a satisfactory reading knowledge of German.

Curriculum: Four years of full-time study.

Bachelor of Divinity: B.D. (Pretoria)

Admission requirements: A Bachelor's degree and a pass in Afrikaans I; Latin I or IB or Latin Special; Greek II (including New Testament Greek) or Hellenistic Greek II; and Hebrew II.

Division A - Dutch Reformed Church of Africa (Ned. Hervormde Kerk van Afrika) requires a Bachelor's degree and credit for Philosophy I; Latin I or IB; Greek III and Hebrew II or Greek II and Hebrew III.

Curriculum: Three years of full-time study.

Post-graduate course (Pretoria)

This one-year course is compulsory for a candidate who wishes to be trained as a minister of the Dutch Reformed Church (Ned. Geref. Kerk).

Bachelor of Divinity: B.D. (Rhodes)

Admission requirements: A Bachelor's degree in another faculty, preferably a B.A. degree with Systematic Theology II, Biblical Studies II and III, Ecclesiastical History II.

Curriculum: Two years of full-time study if the candidate has a B.A. degree with the above-mentioned subjects, otherwise three years.

Bachelor of Divinity: B.D. (South Africa)

Admission requirements: A B.A. or another Bachelor's degree, and

- a pass in Latin I, Classical Hebrew II and either Greek II or Hellenistic Greek II or
- a pass in such special examinations in these subjects as may be determined by the Senate:

Provided that a student may take a maximum of two of the language courses concurrently with specific parts of the B.D. curriculum.

A reading knowledge of German is desirable.

Curriculum: Three years.

Bachelor of Theology: B.Th. (Stellenbosch)

Admission requirements: A Bachelor's degree obtained in another faculty than the Faculty of Theology. The following subjects must have been passed: Afrikaans-Nederlands I or Afrikaans I, Hebrew II and either Greek IIA or Greek IIB or an approved two-year course in Hebrew and in Greek.

The subjects Bible Studies and Church Assistance must not form part of the minimum ten courses required for the B.A. degree.

Intending ministers of the gospel of the Dutch Reformed Church must, before being admitted to the B.Th. course, pass an Admission examination of the Admission Examination Commission of the Dutch Reformed Church.

In view of service in one of the undermentioned divisions of the Dutch Reformed Church, students are strongly advised to include the following subjects as indicated in each division:

- (i) Mother-church: Psychology, Sociology and Philosophy
- (ii) Coloured missions: Sociology and Social Work
- (iii) Bantu missions: Anthropology, English, a Bantu language and Social Work.

Curriculum: Three years of full-time study. The curriculum includes six subjects, all of which are major subjects.

Licentiate in Theology (Stellenbosch)

Students who have obtained the B.Th. degree may be admitted to the fourth year course to obtain the Licentiate in Theology.

The curriculum consists of a dissertation and continued study in the six subjects which were taken for the B.Th. degree.

DIPLOMAS AND CERTIFICATE

Diploma in Biblical Studies (Potchefstroom)

Admission requirement: A degree and/or a recognized teacher's diploma.

Curriculum: Two years of part-time study. Classes are held on approximately 10 Saturdays each year.

Diploma in Theology (Pretoria)

Admission requirement: B.A. degree; as for the B.D. degree, except that Latin is not a requirement.

Curriculum: Three years of full-time study. The curriculum is the same as for the B.D. degree, with one or two alterations.

Certificate in Religious Knowledge (Rhodes)

Admission requirements: Mature non-matriculants who only have two years at their disposal to attend the University.

Curriculum: Two years of full-time study. The Certificate is designed to provide an elementary training for prospective ministers, missionaries and teachers.

The following courses are included in the curriculum: Biblical Studies I and II, Ecclesiastical History I and II, Systematic Theology I, English or Afrikaans, Sociology I or Anthropology I or Psychology I or Philosophy I or Social Work I.

Diploma in Theology: Dip. Theol. (Rhodes)

Admission requirements: Mature non-matriculants sent to the University for training by their ecclesiastical authorities.

Curriculum: Three years of full-time study. The curriculum includes the same courses as for the Certificate in Religious Knowledge for the first two years. In the third year students take Biblical Studies III and Systematic Theology II. Pastoral Work I or another approved subject is taken in the first year.

Lower Diploma in Theology (South Africa)

Admission requirement: Standard 10 Certificate or equivalent certificate.

Curriculum: Two years.

The curriculum consists of the following courses: Biblical Studies I and II, Systematic Theology I and II, General Church History I, Pastoral Theology, Science of Religion and one of: General Church History II, Hellenistic Greek I, Classical Hebrew I.

VOCATIONAL SERVICE

Even more than in the case of most of the other fields of study, intending students should obtain clarity beforehand about questions centering around a study of Theology. As South Africa is a country in which there is religious tolerance and the many denominations are allowed to pursue and to expand their activities virtually without any restrictions, and because they differ so much from one another as regards their organization, training and conditions of service of clergymen, etc., it is impossible to give comprehensive details about all of them. It is therefore recommended that interested persons should of their own account obtain the required information from authoritative sources in their particular church organizations.

Owing to the rapid increase in the population it is evident that this is a field which offers challenging possibilities. The girl as well, particularly the one interested in missionary work, need not fear unemployment.

TOWN AND REGIONAL PLANNING

Universities: Cape Town, Natal, Potchefstroom, Pretoria, Stellenbosch, Witwatersrand

Degrees

Bachelor of Arts and Science (Planning): B. Art. et Scien. (Planning) (PU for CHE)

Bachelor of Town and Regional Planning: B.Sc.(T. and R.) (UP)

Bachelor of Science in Town and Regional Planning: B.Sc.(T.R.P.) (Wits)

Master's degrees

Master of City and Regional Planning: M.C.R.P. (UCT)

Master of City Planning and Urban Design: M.C.P.U.D. (UCT)

Master of Science in Town and Regional Planning: M.Sc. T.P. (Natal)

Master of Arts and Science (Planning): M.Art et Scien. (Planning) (PU for CHE)

Master of Town and Regional Planning: M.Sc. (T. and R.) (UP)

Master of Town and Regional Planning: M. of Town and Regional Planning (US)

Master of Science in Town and Regional Planning: M.Sc. (T.R.P.) (Wits)

Doctor's degrees

Doctor of Philosophy: Ph.D. (UCT, Natal, Wits)

Doctor of Town and Regional Planning: D.Sc. (T. and R.) (UP)

Doctor Philosophiae: D.Phil. (PU for CHE, US)

Doctor of Town and Regional Planning: D.T.R.P. (Wits)

Doctor of Science in Town and Regional Planning: D.Sc. (T.R.P.) (Wits)

Diplomas

Diploma of City and Regional Planning: Dip. C.R.P. (UCT)

Diploma of City Planning and Urban Design: Dip. C.P.U.D. (UCT)

Diploma in Town and Regional Planning: Dipl. T.P. (Will commence at Natal University as soon as arrangements can be made.)

DEGREES

Bachelor of Arts and Science (Planning): B.Art. et Scien. (Planning) (Potchefstroom)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate

(Matriculation Exemption) with a pass in Mathematics on the Higher Grade or at least a C symbol on the Standard Grade.

Curriculum: A minimum period of four years of full-time study.

A candidate must pass in at least eighteen courses. The two major subjects are Town Planning IV and Regional Planning IV. The other courses are, inter alia, the following: S.A. Administrative and Planning Legislation; Methods for Regional Analysis; Geography III or Economics III or Sociology III; Statistical Methods; Engineering in relation to Planning.

In the final year of study a candidate must also submit a satisfactory essay on an approved subject.

Bachelor of Town and Regional Planning: B.Sc. (T. and R.) (Pretoria)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 164.

Curriculum: Four years of full-time study. A candidate must pass in eighteen courses and submit an essay in the fourth year of study. The curriculum includes, inter alia, the following courses: Town Planning IV, Regional Planning IV, Engineering for Planners, Planning Law, Economics III or Sociology III, Mathematics I, Geography I.

Bachelor of Science in Town and Regional Planning: B.Sc. (T.R.P.) (Witwatersrand)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) with a pass on the Higher Grade or at least 60 per cent on the Standard Grade in Mathematics and in one of the following subjects: Biology, Physical Science, Physiology.

Curriculum: Four years of full-time study. Students are required to perform practical work during university vacations and to participate in prescribed visits and tours. The curriculum includes, inter alia, the following courses: Town and Regional Planning Practice IV, Town and Regional Planning Theory IV, Town and Regional Planning Law, Geography for Planners, Economics I, Sociology I, Geography I, Mathematics I.

Candidates must submit a dissertation in the fourth year of study.

Master of City and Regional Planning: M.C.R.P. (Cape Town)

Admission requirement: A recognized degree from an approved institution.

Curriculum: Two years of full-time study.

Master of City Planning and Urban Design: M.C.P.U.D. (Cape Town)

Admission requirement: A degree in Architecture from any recognized institution approved by the Senate.

Curriculum: Two years of full-time study.

Master of Science in Town and Regional Planning: M.Sc.T.P. (Natal)

Admission requirements: A degree in Architecture, Civil Engineering or Land Surveying, or a degree with an approved standard in Economics, Geography or Sociology.

Curriculum: Three years of part-time study.

Master of Town and Regional Planning (Stellenbosch)

Admission requirements: A candidate must hold one of the following qualifications:

- B.A. degree with at least one of the following as a major subject:
Geography A, Economics, Sociology, Business Economics

- B.Sc. degree with at least one of the following as a major subject: Geography B, Geology, Mathematics
- B.Sc. degree in Agriculture (Agricultural Economics)
- B.Com.
- B.Econ.
- B.Admin.
- B. Eng. (Civil Engineering)
- B.Sc. in Forestry
- A Bachelor's degree in Architecture
- A Bachelor's degree in Surveying.

Curriculum: Two years of full-time study or three years of part-time study.

DIPLOMAS

Diploma of City and Regional Planning: Dip. C.R.P. (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) or any other satisfactory Standard 10 Certificate; and a diploma or professional qualification approved by the Senate.

Curriculum: Two years of full-time study.

Diploma of City Planning and Urban Design: Dip. C.P.U.D. (Cape Town)

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption) or any other satisfactory Standard 10 Certificate; and a diploma or professional qualification in Architecture approved by the Senate.

Curriculum: Two years of full-time study.

Diploma in Town and Regional Planning: Dipl. T.P. (Natal)

Admission requirements: A professional qualification in Architecture, Civil Engineering or Land Surveying.

Curriculum: Three years of part-time study.

VOCATIONAL SERVICE

Town and Regional Planning is one of the professions which in recent times has gained in importance. In South Africa also there has lately been a strong demand for qualified planners, owing to the fact, inter alia, that many of the cities and larger towns have reached the stage where urban innovation, i.e. the replacement of old and unsuitable buildings and inadequate road systems by modern ones, have become essential. Furthermore, the concentration of population at growth points necessitates thorough planning for the future which will comprise comprehensive surveys of sources, the evaluation thereof and research into the best utilization of these sources in the entire occupational pattern. The planner serves to a large extent as a link between architect and engineer, between economist and sociologist and between public interests and industry.

The majority of planners are at present employed by the larger municipalities, whereas about one third of them are attached to the Government Departments of Planning and the Environment, Community Development and Bantu Administration and Development. The rest of them are either employed by the four Provincial Administrations or have private practices. Additional training in planning is of exceptional value to the civil engineer, architect or land surveyor and may lead to senior posts, particularly in the Public Service. Post-graduate study will also be required for appointment to a post

as lecturer at a university. There are academic posts at some colleges for advanced technical education as well.

VETERINARY SCIENCE

University: Pretoria

Degrees

Bachelor of Veterinary Science: B.V.Sc.

Master of Veterinary Medicine: M.Med.Vet.

Doctor of Veterinary Science: D.V.Sc.

Diplomas

Diploma in Veterinary Public Health

Diploma in Veterinary Medicine: Dip. Med.Vet.

DEGREES

Bachelor of Veterinary Science: B.V.Sc.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 164.

Curriculum: Five years of full-time study. As only a limited number of first-year students are allowed to continue with the second year of study, students are selected after passing the first-year examinations. Those who are not selected are allowed to enrol for another course of study for which they have satisfied the admission requirements.

The first year of study can be taken at any South African university. The subjects for the first year are Chemistry, Zoology, Physics, Botany or Mathematics OR Chemistry, Biological Science, Physics, Mathematics. Subjects taken during the other four years are, inter alia, the following: Anatomy, Pathology, Physiology and Physiological Chemistry, Bacterial Diseases, Poultry Diseases.

A candidate must have mastered both official languages sufficiently to be able to follow the lectures in Afrikaans as well as in English. A candidate may choose in which official language he wishes to write the examinations.

Students are required to undertake practical work during university vacations, and to submit proof thereof to the Registrar before the end of the final year.

DIPLOMAS

Diploma in Veterinary Public Health

Admission requirements: A candidate must have held the degree of B.V.Sc. or an equivalent degree for at least one year and must be registered with the South African Veterinary Board as a Veterinary Surgeon.

Curriculum: One academic year for full-time candidates and two academic years for part-time candidates. The curriculum comprises Parts I and II. Part I consists of five examination subjects such as Microbiology; Town Planning and Physiology; Parasitology. Part II includes, inter alia, Legislation and Administration; Sanitation and Hygiene; Veterinary Public Health.

Diploma in Veterinary Medicine: Dip. Med. Vet.

Admission requirement: The degree of B.V.Sc. or an equivalent degree.

as lecturer at a university. There are academic posts at some colleges for advanced technical education as well.

VETERINARY SCIENCE

University: Pretoria

Degrees

Bachelor of Veterinary Science: B.V.Sc.

Master of Veterinary Medicine: M.Med.Vet.

Doctor of Veterinary Science: D.V.Sc.

Diplomas

Diploma in Veterinary Public Health

Diploma in Veterinary Medicine: Dip. Med.Vet.

DEGREES

Bachelor of Veterinary Science: B.V.Sc.

Admission requirements: Matriculation Certificate or a Standard 10 Certificate (Matriculation Exemption). See also p. 164.

Curriculum: Five years of full-time study. As only a limited number of first-year students are allowed to continue with the second year of study, students are selected after passing the first-year examinations. Those who are not selected are allowed to enrol for another course of study for which they have satisfied the admission requirements.

The first year of study can be taken at any South African university. The subjects for the first year are Chemistry, Zoology, Physics, Botany or Mathematics OR Chemistry, Biological Science, Physics, Mathematics. Subjects taken during the other four years are, inter alia, the following: Anatomy, Pathology, Physiology and Physiological Chemistry, Bacterial Diseases, Poultry Diseases.

A candidate must have mastered both official languages sufficiently to be able to follow the lectures in Afrikaans as well as in English. A candidate may choose in which official language he wishes to write the examinations.

Students are required to undertake practical work during university vacations, and to submit proof thereof to the Registrar before the end of the final year.

DIPLOMAS

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Admission requirements: A candidate must have held the degree of B.V.Sc. or an equivalent degree for at least one year and must be registered with the South African Veterinary Board as a Veterinary Surgeon.

Curriculum: One academic year for full-time candidates and two academic years for part-time candidates. The curriculum comprises Parts I and II. Part I consists of five examination subjects such as Microbiology; Town Planning and Physiology; Parasitology. Part II includes, inter alia, Legislation and Administration; Sanitation and Hygiene; Veterinary Public Health.

Diploma in Veterinary Medicine: Dip. Med. Vet.

Admission requirement: The degree of B.V.Sc. or an equivalent degree.

Curriculum: One year of full-time study. The curriculum comprises three subjects which have to be selected from a number of subjects e.g. Anatomy, Histology, Physiology and Physiological Chemistry, Virology and Virus Diseases, Radiology.

VOCATIONAL SERVICE

The qualified veterinary surgeon usually experiences no difficulty in obtaining a satisfactory position in one of the many branches of the profession. On the contrary, there is a need for veterinary surgeons with private practices, particularly in the rural areas.

Since veterinary science is concerned with the prevention and treatment of animal diseases, job opportunities for the veterinary surgeon arise mainly from his interest in the following branches:

- Government veterinary surgeons in the employ of the Department of Agricultural Technical Services. Basically they are concerned with:
 - . Research on a large and intensive scale in the research institute at Onderstepoort. Here there are opportunities to specialize in one of more than ten sections. Activities also include the manufacture and distribution of vaccines.
 - . Field service and guidance, which includes visits to farmers, assistance to Government departments, routine laboratory duties etc. A Government veterinary surgeon is also assisted by a number of cattle inspectors at outposts in his area.
- The private practitioner, sometimes also in partnership with other veterinary surgeons, with his own consulting rooms. Some of them also specialize and then treat only one kind of animal.
- Veterinary surgeons in the service of municipalities to watch over public health.
- Veterinary surgeons in the employ of Agricultural Co-operatives for the benefit and convenience of members.
- Veterinary surgeons in the employ of private concerns such as manufacturers of cattle remedies, and animal produce, owners of large cattle stud-farms, poultry farms etc.
- There is also the possibility of a lecturing post at the University of Pretoria.

A N D E R S T U D I E R I G T I N G S E N B E R O E P S D I E N S

LET WEL: In hierdie hoofstuk word by elke studierigting al die grade, diplomas en sertifikate genoem wat behaal kan word, maar by die meeste van die studierigtings word net die eerste grade en die diplomas en sertifikate behandel, aangesien sodanige eerste graad, diploma of sertifikaat die kandidaat gewoonlik reeds in staat stel om tot 'n beroep toe te tree. Nadat kandidate die eerste graad behaal het, kan hulle self van die betrokke universiteit of universiteite die nodige inligting oor regulasies aangaande nagraadse studie verkry. Gewoonlik sal die regulasies dieselfde wees as dié wat van toepassing is in die Fakulteite van Lettere en Wysbegeerte, Natuurwetenskappe en Handel.

Die onderstaande tabel dui aan watter van die studierigtings wat bespreek word, deur die onderskeie universiteite aangebied word.

TABEL

STUDIERIGTINGS DEUR UNIVERSITEITE AANGEBIED

Studierigtings	UK	NATAL	UOVS	UPE	PU vir CHO	UP	RAU	RHODES	US	UNISA	WITS
Arbeidsterapie	x								x		x
Argitektuur	x	x	x	x		x					x
Beeldende Kunste	x	x	x		x	x		x	x	x	x
Biblioteekkunde	x	x	x		x	x	x	x	x	x	x
Bosbou									x		
Boukunde	x	x	x	x		x					x
Bourekenkunde	x	x	x	x		x					x
Dieetkunde	x	x	x		x	x			x		
Farmasie/Aptekerswese					x			x			
Fisioterapie	x		x						x		x
Geneeskunde	x	x	x			x			x		x
Huishoudkunde	x	x	x		x	x			x		
Ingenieurswese	x	x				x			x		x
Kommunikasiekunde/Joernalistiek			x		x		x	x		x	
Krygskunde									x		
Landbou		x	x			x			x		
Landmeetkunde	x	x				x					x
Landskapargitektuur						x					
Liggaamlike Opvoedkunde/Opvoeding			x		x	x		x	x		
Musiek	x	x	x	x	x	x		x	x	x	x
Radiografie			x			x					
Regseleerdheid	x	x	x	x	x	x	x	x	x	x	x
Sosiale Wetenskappe/Maatskaplike Werk	x	x	x	x	x	x	x	x	x	x	x
Spraakheelkunde en Oudiologie/Logopedie	x	x				x					x
Spraakleer en Drama	x	x	x		x	x		x	x		x
Stads- en Streekbeplanning	x	x			x	x			x		x
Tandheelkunde						x			x		x
Teologie		x			x	x		x	x	x	
Veeartsenykunde						x					
Verpleegkunde	x	x	x	x	x	x	x		x		x
Voedselwetenskap									x		

ARBEIDSTERAPIE

Universiteite: Kaapstad, Stellenbosch, Witwatersrand

Grade

Baccalaureus Scientiae (Arbeidsterapie): B.Sc. (Arbeidsterapie) (UK)

Baccalaureus in Arbeidsterapie: B.Arbeidsterapie (US)

Baccalaureus Scientiae in Arbeidsterapie: B.Sc. (Arbeidsterapie) (Wits)

Magistergraad

Magister Scientiae in Arbeidsterapie: M.Sc. (Arbeidsterapie) (Wits)

Doktorsgraad

Doktor in Wysbegeerte: Ph.D. (Wits)

Diplomas

Onderwysdiploma in Arbeidsterapie (UP, US)

Diploma vir Terapeute (Buitengewone Onderwys): D.T.B.O. (Unisa) Kyk OPVOEDKUNDE p. 212.

GRADE

Baccalaureus Scientiae (Arbeidsterapie): B.Sc. (Arbeidsterapie) of

Baccalaureus in Arbeidsterapie: B.Arbeidsterapie of

Baccalaureus Scientiae in Arbeidsterapie: B.Sc. (Arbeidsterapie)

(Al die bogenoemde universiteite)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) en 'n mediese sertifikaat.

Addisionele vereistes:

Kaapstad: 'n Slaagsyfer in Wiskunde op die Standaardgraad.

Witwatersrand: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad.

Leergang: Vier jaar voltydse studie. Inskrywing aan die Universiteit van Stellenbosch is beperk en studente word gedurende September van die voorafgaande jaar gekeur. Aansoeke om toelating tot die kursus moet die Registrateur voor 30 Junie bereik.

Benewens Arbeidsterapie behels die leergang onder andere die volgende vakke: Fisika, Sosiologie, Psigiatrie, Sielkunde, Anatomie en Fisiologie.

Verpligte praktiese vakansiewerk gedurende die kort vakansies word deur die Universiteit van Stellenbosch voorgeskryf.

DIPLOMAS

Onderwysdiploma in Arbeidsterapie (Pretoria)

Toelatingsvereistes: 'n Kwalifikasie in Arbeidsterapie wat by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad registreerbaar is en deur die Kollege vir Arbeidsterapie as genoegsame basiese opleiding vir toelating erken word, en minstens twee jaar ervaring in 'n goedgekeurde hospitaal as 'n geregistreerde arbeidsterapeut.

Leergang: Een jaar voltydse studie.

Onderwysdiploma in Arbeidsterapie (Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling); 'n kwalifikasie in Arbeidsterapie wat by die S.A. Geneeskundige en Tandheeskundige Raad registreerbaar is, en minstens twee jaar ondervinding in 'n goedgekeurde hospitaal as 'n geregistreerde arbeidsterapeut.

Leergang: Twee jaar voltydse studie.

BEROEPSDIENS

Arbeidsterapie is een van die paramediese beroepe wat deur dames sowel as mans beoefen kan word. Hulle word opgelei om liggaamlik en geestelik gestremde persone te behandel en/of op te lei; om onvermoë te voorkom; aanpassing by onvermoë te bevorder en om funksie te verhoog of te behou. Die behandeling is dus gerig op die pasiënt se lewende buite die hospitaal en op sy toekoms; op die herwinning van sy onafhanklikheid, skepende vermoë en veral sy werkvermoë. As lid van die mediese span strewende die arbeidsterapeut daarna om onder leiding van 'n geneesheer en in samewerking met ander spanlede die pasiënt geestelik en fisies te rehabiliteer.

Gekwalifiseerde arbeidsterapeute het 'n wye werkkeuse en hulle kan ook kies uit 'n groot verskeidenheid van hospitale, inrigtings en skole vir liggaamlik en/of geestelik gestremdes. Daar is poste beskikbaar in algemene, psigiatriese, ortopediese en kinderhospitale, rehabilitasiesentra, spesiale skole en inrigtings, plastiese chirurgiese afdelings en private verpleeginrigtings. In Suid-Afrika word nog nie veel van private praktyke gebruik gemaak nie, hoewel dit ook talryke interessante moontlikhede bied.

Arbeidsterapeute word, afgesien van die universiteite, ook opgelei deur die Pretoriase Kollege vir Arbeidsterapie. Al die kursusse voldoen aan dieselfde basiese vereistes. Alle arbeidsterapeute moet registreer by die Suid-Afrikaanse Geneeskundige en Tandheeskundige Raad. Suid-Afrikaanse arbeidsterapiegrade en -diplomas word internasionaal erken en arbeidsterapeute kan gevolglik in enige land gaan werk.

Raadpleeg ook Tersiëre Opleiding vir die kursus van die Pretoriase Kollege vir Arbeidsterapie.

ARGITEKTUUR

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Port Elizabeth, Pretoria, Witwatersrand

Grade

Baccalaureus in Argitektuur: B.Arch. (UK, Natal, UOVS, UPE, UP, Wits)

Magistergraad

Magister in Argitektuur: M.Arch. (UK, Natal, UOVS, UPE, UP, Wits)

Doktorsgrade

Doktor in Argitektuur: D.Arch. (Natal, UOVS, UPE, UP, Wits)

Doktor in die Natuurwetenskappe in Argitektuur: D.Sc.(Arch.) (Wits)

Doktor in die Wysbegeerte: Ph.D. (Natal, Wits)

GRAAD

Baccalaureus in Argitektuur: B.Arch.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Kaapstad: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad, en 'n slaagsyfer in 'n wetenskapvak (liefs Natuur- en Skeikunde of Fisika) op die Standaardgraad.

Natal: Kyk p. 132.

Oranje-Vrystaat: Kyk p. 156.

Port Elizabeth: 'n Slaagsyfer in Wiskunde van minstens 40 persent op die Standaardgraad.

Pretoria: Kyk p. 164.

Witwatersrand: 'n Slaagsyfer op die Hoër Graad of minstens 60 persent op die Standaardgraad in Wiskunde en in een van die volgende vakke: Biologie, Natuur- en Skeikunde, Fisiologie.

Leergang: Vyf jaar voltydse studie en een jaar praktiese ondervinding onder die toesig van die universiteit. Studente moet 'n verslag indien na voltooiing van dié praktiese opleiding.

Die leergang behels onder andere die volgende kursusse: Ontwerp V of Argitektoniese Ontwerp V (Natal) of Ateljeewerk V (Kaapstad) of Teorie en Praktyk van Argitektuur V (Witwatersrand); Bouegnologie; Boukonstruksie; Beroepspraktyk; Struktuurleer; Stedelike Ontwerp of Omgewingstudies.

'n Skripsie of verhandeling word gewoonlik vereis.

BEROEPSDIENS

Die argitek sorg vir die ontwerp, beplanning en verfraaiing van geboue met die oog op bruikbaarheid, duursaamheid, skoonheid en gerief. Sy sukses hang ten nouste saam met 'n aangebore aanleg en belangstelling in sowel praktiese as artistieke werk.

Onder die heersende toestande in Suid-Afrika is die vooruitsigte van die jong argitek baie gunstig. Hy begin gewoonlik werk by 'n gevestigde firma totdat hy oor voldoende kapitaal en ervaring beskik om in vennootskap met ander argitekke te tree of om 'n eie praktyk te open.

In die Staatsdiens word argitekke in diens geneem deur die Departement van Bantoe-administrasie en -ontwikkeling, Gemeenskapsbou en Openbare Werke, asook deur die Administrasies van die vier Provinsies en Suidwes-Afrika. Goeie geleenthede bestaan ook in groot munisipaliteite en organisasies soos Yskor, die Spoorweë, Evkom, mynmaatskappye en so meer. Met nagraadse opleiding kan 'n aanstelling as dosent aan 'n universiteit bekom word. Baie argitekke werk as stadsbeplanners aan die uitleg van nuwe dorpe en stede of die herskepping van sentrums in bestaande dorpe en stede.

Diegene wat 'n beroep van argitektuur wil maak in die hoop om ryk te word sonder om veel werk te verrig, is egter tot teleurstelling gedoem. Die groter finansiële belonings kom gewoonlik eers later in die lewe, en die nuweling moet dus voorbereid wees op baie jare se harde werk. Die argitek se grootste beloning spruit uit die bereiking en verwesenliking van sy persoonlike ideale. Daar is egter wel heelwat ryk argitekke in die wêreld.

Daar is ook baie vroue-argitekke. Die bekwaamhede wat deur argitektuur vereis word, is geensins tot mans beperk nie. As 'n dame tot die beroep aangetrokke voel, is daar hoegenaamd geen rede waarom sy nie 'n suksesvolle argitek kan wees nie.

Kyk ook Landskapargitektuur, p. 363.

Raadpleeg ook Tersiêre Opleiding.

BEELDENDE KUNSTE

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Potchefstroom, Pretoria, Rhodes, Stellenbosch, Suid-Afrika, Witwatersrand

Grade

Baccalaureus Artium in Kuns: B.A. (Kuns) (UK)

Baccalaureus Artium in Beeldende Kunste: B.A. (Beeldende Kunste) of B.A.(B.K.) (UK, Natal, US, Unisa, Wits)

Baccalaureus Artium (Beeldende Kunste): B.A.(B.K.) (UOVS, PU vir CHO)

Baccalaureus in Beeldende Kunste: B.A.(B.K.) (UP)

Baccalaureus in Lettere en Wysbegeerte (Educationis)(Kuns): B.A.(Ed.)(Kuns) (UP)

Baccalaureus in Beeldende Kunste: B.Beeldende Kunste (Rhodes)

Honneursgrade

Honneurs-Baccalaureus Artium in Beeldende Kunste: B.A. Beeldende Kunste (Hons.) (US)

Magistergrade

Magister Artium in Beeldende Kunste: M.A.Beeldende Kunste of M.A.(B.K.) (UK, Natal, US, Unisa, Wits)

Magister Artium (Beeldende Kunste): M.A.(B.K.) (UOVS)

Magister Artium: M.A. (PU vir CHO)

Magister in Beeldende Kunste: M.A.(B.K.) (UP) of M.Beeldende Kunste (Rhodes)

Doktorsgrade

Doktor in die Wysbegeerte: Ph.D. (UK, Wits)

Doctor Philosophiae in die Beeldende Kunste: D.Phil.(B.K.) (UOVS)

Doctor Philosophiae: D.Phil. (US)

Doctor Litterarum et Philosophiae: D.Litt. et Phil. (Unisa)

Doctor Litterarum: D.Litt. (Wits)

Diplomas

Diploma in Beeldende Kunste (UK, Rhodes, US)

Diploma in die Beeldende Kunste (UOVS)

Diploma in Grafiese Ontwerp (UK)

Gevordere Diploma in Beeldende Kunste (UK)

Universiteitsonderwysdiploma in Beeldende Kunste: U.O.D.B.K. (PU vir CHO) (Kyk OPVOEDKUNDE p. 204.)

Die volgende universiteite bied 'n vierjarige onderwysersdiplomakursus aan met Kuns as een van die spesialiteitsrigtings: Oranje-Vrystaat, Port Elizabeth en Pretoria. Kyk OPVOEDKUNDE.

Sertifikate

Sertifikaat in Beeldende Kunste (Driejarige Kursus) (UK)

Universiteitssertifikaat vir Kunsonderwysers: Een jaar na 'n Diploma in Beeldende Kunste (Rhodes)

Primêre Onderwysersertifikaat in Kuns: Een jaar na 'n Primêre Onderwysersertifikaat (Rhodes)

Die Universiteit van Natal bied ook Beeldende Kunste aan as 'n hoofvak in die B.A.-leergang.

GRADE

Baccalaureus Artium in Kuns: B.A. (Kuns) (Kaapstad)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). 'n Slaagsyfer in Kuns op die Hoër of Standaardgraad sal 'n aanbeveling wees.

Leergang: Vier jaar voltydse studie. Die graadkursus is hoofsaaklik vir kandidate wat van voorneme is om kunsonderwysers/esse te word. Die leergang bevat eerste- en tweede-jaarkursusse in 'n B.A.-vak wat op skool gegee word.

Studente wat die werk van die eerste drie jaar suksesvol voltooi het, word in hul vierde jaar tot die kursus vir die Sekondêre Onderwysersdiploma of dié vir die Nagraadse Primêre Onderwysersdiploma toegelaat. Na voltooiing van die vierde jaar word beide die graad en die diploma toegeken.

Baccalaureus Artium in Beeldende Kunste: B.A. (Beeldende Kunste) of B.A.(B.K.)

of

Baccalaureus Artium (Beeldende Kunste): B.A. Beeldende Kunste

of

Baccalaureus in Beeldende Kunste: B.A.(B.K.) of B.Beeldende Kunste

(Kaapstad, Natal, Oranje-Vrystaat, Potchefstroom, Pretoria, Rhodes, Suid-Afrika, Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Sommige universiteite vereis dat kandidate bewys moet lewer van praktiese kunsaanleg.

Addisionele vereistes:

Kaapstad: Kyk B.A. (Kuns)

Pretoria: Kyk p. 57.

Witwatersrand: Kyk p.37.

Leergang: Die leergang strek oor vier jaar voltydse studie en behels kunsvakke asook een of twee gewone B.A.-kursusse. Die hoofvakke is Kunsgeskiedenis of Kunsteorie (Rhodes) en een van die volgende kursusse: Skilderkuns, Beeldende Kuns (UOVS), Beeldhoukuns, Grafiese Ontwerp (Rhodes), Ontwerpkuns (Potchefstroom), Keramiek (Natal), Inligtingsontwerp (Pretoria).

Kaapstad, Natal en Rhodes bied ook 'n kursus in Fotografie aan.

Baccalaureus in Lettere en Wysbegeerte (Educationis)(Kuns): B.A.(Ed.)(Kuns) (Pretoria)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Kuns. 'n Kandidaat wat nie aan laasgenoemde vereiste voldoen nie, moet vooraf bevredigende bewys lewer dat hy die nodige praktiese aanleg vir beeldende kuns besit om die kursusse met voordeel te kan volg.

Leergang: Vier jaar voltydse studie. Die leergang behels drie kursusse in elk van die volgende vakke: Kunsgeskiedenis, Ontwerpkuns, Skilderkuns, Tekenkuns en Pedagogiek. In die vierde studiejaar volg kandidate H.O.D.-onderwysvakke.

B.A. in Beeldende Kunste (Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling). 'n Slaagsyfer in Wiskunde op die Standaardgraad is 'n vereiste vir die rigting Nywerheidsontwerp (Metaal).

Leergang: Die leergang, wat oor vier jaar voltydse studie strek, behels 'n keuse van vyf rigtings, naamlik

- Nywerheidsontwerp (Grafiek)
- Nywerheidsontwerp (Tekstiel)
- Nywerheidsontwerp (Metaal)
- Nywerheidsontwerp (Kleur)
- Onderwysrigting.

Die eerstejaarsvakke vir Nywerheidsontwerp bestaan uit kunsvakke en 'n kursus in Frans of Duits.

Die Onderwysrigting bevat drie kursusse in Engels of Afrikaans-Nederlands. Aan die einde van die derde jaar word eksamens in Engels III of Afrikaans-Nederlands III en Kunstgeskiedenis III afgelê. In die vierde studiejaar volg studente die eenjarige kursus wat lei tot die Hoër Onderwysdiploma. (Kyk p. 208.)

Die hoofvakke vir die ander vier rigtings is soos volg:

Nywerheidsontwerp (Grafiek)

Toegepaste Grafiek III, Kunstgeskiedenis IV, Fotografie III

Nywerheidsontwerp (Tekstiel)

Tekstielontwerp III, Kunstgeskiedenis IV

Nywerheidsontwerp (Metaal)

Metaalvormgewing IV, Kunstgeskiedenis IV, Tekene IV

Nywerheidsontwerp (Kleur)

Gevorderde Kleurkunde III, Kunstgeskiedenis IV, Sielkunde III

Daar kan van studente vereis word om praktiese vakansiewerk in die nywerheid te verrig.

DIPLOMAS

(i) Diploma in Beeldende Kunste (Kaapstad, Rhodes)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Drie jaar (Kaapstad) of vier jaar (Rhodes) voltydse studie. Die kursusse bevat dieselfde inhoud as dié vir die B.A. in Beeldende Kunste.

(ii) Diploma in Beeldende Kunste (Stellenbosch)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Drie jaar voltydse studie. Die kursusse is min of meer dieselfde soos vir die B.A. in Beeldende Kunste, met 'n keuse van net twee rigtings, naamlik Nywerheidsontwerp (Grafiek of Tekstiel).

Diploma in Grafiese Ontwerp (Kaapstad)

Toelatingsvereiste: Standaard 10-sertifikaat of bewys van praktiese aanleg in kuns.

Leergang: Vier jaar voltydse studie wat die volgende kursusse behels: Basiese Ontwerp, Grafiese Ontwerp, Tipografie en Ontleding van Kommunikasie-media.

Gevorderde Diploma in Beeldende Kunste (Kaapstad)

Toelatingsvereiste: B.A. in Beeldende Kunste of 'n B.A. in Kuns of 'n Diploma in Beeldende Kunste.

Leergang: Een jaar. Hierdie kursus maak voorsiening vir praktiese navorsing deur persone wat ondersoek wil instel na die praktiese skeppende aspekte van die Beeldende Kunste.

Diploma in die Beeldende Kunste (Oranje-Vrystaat)

Hierdie diploma is bedoel vir belangstellendes in die Beeldende Kunste wat egter nie van plan is om die Beeldende Kunste as 'n professie in die onderwys of as vrye kunstenaar te beoefen nie.

Die toelatingsvereistes, die leergang en die leerplanne is dieselfde as dié vir die eerste drie jaar van die B.A.(B.K.)-graad.

BEROEPSDIENS

Akademie kwalifikasies in beeldende kunste kan langs een van twee weë verwerf word. Eerstens kan Kunstgeskiedenis as een hoofvak vir die B.A.-graad geneem of sinvol op een- of tweejarige basis as byvak met ander vakke gekombineer word. So 'n kursus bied voorbereiding vir beroepe byvoorbeeld in navorsing of dosering aan universiteite, die RGN, kunsskole of in kuns- en kultuurhistoriese musea (as kurator of opvoedkundige beampte); in die perswese as kunskritikus of joernalis wat 'n kunsrubriek behartig; die SAUK vir radio- en televisieuitsendings (een van die talle kunsprogramme); in die kunshandel as skakelbeampte tussen kunstenaar en publiek en in die diplomatieke diens as kulturele attaché. Maar ook vir die geestelike en kulturele ontwikkeling van elke mens is hierdie vak uiters waardevol.

Tweedens kan die student hom wend tot die meer praktiese en gespesialiseerde rigtings deur 'n B.A.(B.K.)-graad te neem. Ook in dié geval kan Kunstgeskiedenis as hoofvak saam met ander kunsvakke geneem word. Die spesialiseringsrigting sal in 'n hoë mate die beroep wat gevolg sal kan word, bepaal. Daar is talle geleenthede vir kunshistorici, skilders, beeldhouers en ontwerpers, onder andere as vryskut beroepskunstenaars, as kunsonderwysers of dosente, as kuns- en museumwetenskaplikes, as ontwerpers in die nywerheid (grafiek, tekstiel, metaal e.a.), by reklame- of persmaatskappye en regeeringsinstansies, en as illustreerders of tipograwe by uitgewers. Die Rade vir Uitvoerende Kunste van die vier provinsies neem kunstenaars in diens as ontwerpers en vervaardigers van verskeie rekwisiete.

Kuns is kommunikasie en nuwe arbeidsvelde vir akademies opgeleide beeldende en ontwerp-kunstenaars (mans sowel as dames), het in 'n veranderende wêreld ontstaan. Die grootste werkgewers is die handelaars en nyweraars wat van die waarde van kunstenaars in die nywerheid bewus geword het. Weens die snelle nywerheids groei hier te lande sal die vraag na opgeleide kunstenaars steeds toeneem. Deur bemiddeling van die Ontwerp-instituut (SABS) word beurse aan belowende studente beskikbaar gestel en kompetisies uitgeskryf. Die doel hiermee is nie alleen om goeie ontwerp te bevorder nie maar ook om die aandag op Suid-Afrikaanse kunstenaars se skeppende ontwerpvermoë te vestig.

Raadpleeg ook Tersiêre Opleiding.

BIBLIOTEEKKUNDE

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Potchefstroom, Pretoria, Randse Afrikaanse Universiteit, Rhodes, Stellenbosch, Suid-Afrika, Witwatersrand

Grade

Baccalaureus Bibliothecologiae: B.Bibl. (UOVS, Unisa)
Baccalaureus Artium (Biblioteekkunde): B.A. (Bibl.) (PU vir CHO)
Baccalaureus in Biblioteekkunde: B.Bibl. (UP)
Baccalaureus in die Biblioteekkunde: B.Bibl. (RAU)
Baccalaureus in die Biblioteekkunde (Opvoedkunde): B.Bibl.(Opv.) (RAU) (Kyk p.206.)
B.Biblioteekkunde (US)
Baccalaureus Musicae en die Hoër Diploma in Biblioteekkunde: B.Mus. en die Hoër Diploma in Biblioteekkunde (UK)

Honneursgrade

Honneurs-Baccalaureus Bibliothecologiae: B.Bibl.(Hons.) (UOVS) of Hons.-B.Bibl. (Unisa)
Honneurs Baccalaureus Artium: Hons. B.A. (PU vir CHO)
Baccalaureus Honores in Biblioteekkunde: B.Bibl. (Hons.) (UP)
Honneurs Baccalaureus in die Biblioteekkunde: B.Bibl.(Hons.) (RAU)
Hons.-B.Biblioteekkunde (US)

Magistergrade

Magister Bibliothecologiae: M.Bibl. (UOVS, Unisa)
Magister Artium: M.A. (PU vir CHO)
Magister in Biblioteekkunde: M.Bibl. (UP)
Magister in die Biblioteekkunde: M.Bibl. (RAU)
M.Biblioteekkunde (US)

Doktorsgrade

Doctor Bibliothecologiae: D.Bibl. (UOVS, Unisa)
Doctor Philosophiae: D.Phil. (PU vir CHO, US)

Diplomas en Sertifikaat

Laer Diploma in Biblioteekkunde (UK, UOVS, UP, Rhodes, US, Unisa)
Laer Universiteitsdiploma in Biblioteekkunde: L.U.D.B. (PU vir CHO)
Hoër Diploma in Biblioteekkunde (UK, Natal, UOVS, UP, Rhodes, US, Unisa, Wits)
Universiteitsdiploma in Biblioteekkunde: U.D.B. (PU vir CHO)
Universiteitsonderwysdiploma (Skoolbiblioteekkunde): U.O.D. (Skoolbibl.) (PU vir CHO) (Kyk OPVOEDKUNDE p.204.)
Nagraadse Diploma in Biblioteekkunde (RAU)
Finale Diploma in Biblioteekkunde (UK)
Diploma in Spesialiseringsonderwys (Skoolbiblioteekwese) (US) en
Laer Diploma in Skoolbiblioteekkunde (US)
Kyk OPVOEDKUNDE: Universiteit van Stellenbosch, p.209.
Sertifikaat in Skoolbiblioteekkunde (Unisa) en
Diploma in Skoolbiblioteekkunde (Unisa)
Kyk OPVOEDKUNDE: Universiteit van Suid-Afrika p.210 en 211.

Die volgende universiteite bied 'n vierjarige onderwysersdiplomakursus aan met Skool=

biblioteekkunde as een van die spesialiteitsrigtings: Oranje-Vrystaat, Potchefstroom.
Kyk OPVOEDKUNDE.

GRADE

Baccalaureus Bibliothecologiae: B.Bibl.

of

Baccalaureus Artium (Biblioteekkunde): B.A.Bibl.

of

Baccalaureus in Biblioteekkunde: B.Bibl.

of

B.Biblioteekkunde

(Oranje-Vrystaat, Potchefstroom, Pretoria, RAU, Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Pretoria: Kyk p. 57.

Randse Afrikaanse Universiteit: Kyk p. 59.

Leergang: Vier jaar voltydse studie. Die leergang behels vier kursusse in Biblioteekkunde. Die ander kursusse word uit die gewone B.A.-graadvakke gekies.

Kandidate moet gedurende hul studiejare vir 'n voorgeskrewe tydperk in goedgekeurde biblioteke werk om praktiese ondervinding op te doen.

Baccalaureus Bibliothecologiae: B.Bibl. (Suid-Afrika)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Vier jaar. Die graad word in een van drie rigtings geneem, naamlik:

- Die Lettere-rigting;
- die Natuurwetenskaplike rigting;
- die Handel- en Administrasie-rigting.

Die leergang bestaan uit vier kursusse in Biblioteekkunde wat saam met 'n goedgekeurde leergang vir ðf die B.A., ðf die B.Sc. ðf die B.Com. gevolg word.

Baccalaureus Musicae en die Hoër Diploma in Biblioteekkunde (Kaapstad)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kandidate moet bewys lewer van 'n sekere standaard van vaardigheid op die klavier en in algemene musikaliteit.

Leergang: Vier jaar voltydse studie. Studente wat in Musiekbiblioteekkunde vir die B.Mus.-graad spesialiseer, word na voltooiing van die eerste drie jaar toegelaat tot die kursus vir die Hoër Diploma in Biblioteekkunde in die vierde jaar. Die graad en die diploma word aan die suksesvolle studente toegeken. Kyk ook p. 368.

DIPLOMAS

Laer Diploma in Biblioteekkunde (Kaapstad, Oranje-Vrystaat, Pretoria, Rhodes, Stellenbosch, Suid-Afrika)

Toelatingsvereiste: Standaard 10-sertifikaat. Sommige universiteite vereis 'n Matrikulasievystelling.

lasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Twee jaar voltydse studie. In die eerste jaar bevat die leergang drie tot vyf gewone B.A.-graadkursusse.

Die tweede jaar behels professionele vakke soos Katalogisering of Katalografie, Klassifikasie, Biblioteekorganisasie en -administrasie, Boekkeuring.

Kandidate moet vir drie of vier weke praktiese werk in 'n goedgekeurde biblioteek doen.

Laer Universiteitsdiploma in Biblioteekkunde (Potchefstroom)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). 'n Student wat in besit is van 'n diploma uitgereik deur die PU vir CHO of 'n ander goedgekeurde inrigting kan van die eerstejaarskursus van die Laer Universiteitsdiploma in Biblioteekkunde vrygestel word.

Leergang: Twee jaar voltydse studie.

In die eerste jaar bevat dit Afrikaans of Afrikaans-Nederlands I; Engels I of Engels Spesiaal; en drie ander eerstejaarsvakke soos vir die B.A.-graad.

Die vakke vir die tweede jaar sluit onder andere in Biblioteekorganisasie en -administrasie; Katalogisering en Klassifikasie; Naslaanwerk en Bibliografie.

'n Student moet gedurende sy studietydperk minstens vier weke lank praktiese werk in 'n erkende biblioteek verrig.

Hoër Diploma in Biblioteekkunde

of

Universiteitsdiploma in Biblioteekkunde

(Al die universiteite behalwe RAU)

Toelatingsvereiste: 'n Baccalaureusgraad.

Leergang: Een jaar voltydse of twee jaar deeltydse studie.

'n Kandidaat moet gedurende sy studietydperk vir 'n voorgeskrewe tydperk in 'n goedgekeurde biblioteek werk.

Die leergang behels onder andere die volgende vakke: Katalogisering of Katalografie, Klassifisering, Biblioteekorganisasie en -administrasie, Boekkeuring en Naslaanwerk.

Nagraadse Diploma in Biblioteekkunde (Randse Afrikaanse Universiteit)

Toelatingsvereiste: 'n Baccalaureusgraad.

Leergang: Twee semesters en twee somertermyne. Die inhoud van Biblioteekkunde I-IV word oor die studietydperk verdeel.

'n Lees kennis van een moderne vreemde taal word vereis en deur 'n vertaaltoets getoets.

Finale Diploma in Biblioteekkunde

Die Universiteit van Kaapstad kan 'n Finale Diploma in Biblioteekkunde uitreik aan kandidate wat die Hoër Diploma in Biblioteekkunde voltooi het, 'n spesiale bibliografie saamgestel het en bewys gelewer het van twee jaar se bevredigende biblioteekdienste as 'n voltydse lid van 'n biblioteekpersoneel.

BEROEPSDIENS

Die samelewing is vir sy voortbestaan en vooruitgang van kennis afhanklik. Daarom is

dit die taak van die bibliotekaris om hierdie kennis byeen te bring en deur middel van 'n goed georganiseerde biblioteek vir gebruik toeganklik te maak. Die inligtingsfunksie van biblioteke neem daaglik meer toe en hierdie aspek word in die opleiding al hoe meer geaksentueer.

Sedert 1930 het 'n byna rewolusionêre ontwikkeling op die gebied van die biblioteekkunde en biblioteekdienste in Suid-Afrika plaasgevind. 'n Bykans onversadigbare behoefte aan opgeleide bibliotekarisse, mans sowel as dames, het gevolglik ontstaan. Die talle nuwe biblioteke en biblioteekdienste noodsaak opgeleide en selfs gespesialiseerde arbeid. Die tekort aan opgeleide mans is relatief groter as die tekort aan dames.

Verskeie soorte biblioteke asook die afdelings in 'n biblioteek maak dit vir biblioteekbeamptes moontlik om werk te verrig wat aanpas by hul aanleg of besondere opleiding. So kan die bibliotekaris as't ware met sy biblioteek afgeleë dorpe besoek indien hy 'n betrekking beklee in die Provinsiale Biblioteekdiens. Daar is byvoorbeeld ook die moontlikheid van 'n pos as organiseerder van skoolbiblioteke vir 'n Onderwysdepartement wat skoolbiblioteke van raad moet dien. Die geleentheid bestaan selfs vir werk of studie in die buiteland, byvoorbeeld op 'n uitruilbasis na die VSA. Groot biblioteke stuur soms self bibliotekarisse met grade of diplomas oorsee vir gespesialiseerde studie. Verdere vooruitsigte is die verskillende range wat 'n bibliotekaris kan beklee op die weg van bevordering, veral by instansies soos die volgende: Onderwysdepartemente as onderwyserbibliotekaris; Staats- en provinsiale biblioteke waaronder onderwysbiblioteke; munisipaliteite; die WNNR; RGN; Spoorweë; Yskor; Sasol; sommige myne, universiteite (bibliotekaris of doseerpos); argiewe.

Aan die voortbestaan van hierdie gunstige omstandighede word nie getwyfel nie en voortdurend word daar aantreklike poste geskep.

BOSBOU

Universiteit: Stellenbosch

Grade

Bosbou

Baccalaureus in die Natuurwetenskappe in Bosbou: B.Sc. in Bosbou

Honneurs-Baccalaureus in die Natuurwetenskappe in Bosbou: Hons.-B.Sc. in Bosbou

Magister in die Natuurwetenskappe in Bosbou: M.Sc. in Bosbou

Doktor in die Wysbegeerte (Bosbou): Ph.D.(Bosbou)

Doktor in die Natuurwetenskappe in Bosbou: D.Sc. in Bosbou

Houtkunde

Baccalaureus in die Natuurwetenskappe in Houtkunde: B.Sc. in Houtkunde

Honneurs-Baccalaureus in die Natuurwetenskappe in Houtkunde: Hons.-B.Sc. in Houtkunde

Magister in die Natuurwetenskappe in Houtkunde: M.Sc. in Houtkunde

Doktor in die Wysbegeerte (Houtkunde): Ph.D.(Houtkunde)

Doktor in die Natuurwetenskappe in Houtkunde: D.Sc. in Houtkunde

Parke- en Ontspanningsadministrasie

B. in Parke- en Ontspanningsadministrasie

Natuurbewaring

Hons.-B.Sc. in Natuurbewaring

M.Sc. in Natuurbewaring

Ph.D. (Natuurbewaring)

D.Sc. in Natuurbewaring

GRADE

BOSBOU

Baccalaureus in die Natuurwetenskappe in Bosbou: B.Sc. in Bosbou

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasiëvrystelling) met 'n slaagsyfer in Wiskunde en Natuur- en Skeikunde op die Standaardgraad. Voornemende studente word sterk aangeraai om ook Biologie vir die standaard 10-eksamen te neem.

Leergang: Vier jaar voltydse studie.

Vakke vir die eerste jaar behels: Botanie, Wiskunde, Chemie, Fisika en Soölogie.

Studente kan ná die eerste studiejaar na die tweede studiejaar van die B.Sc. in Houtkunde-kursus oorskakel.

In hul derde studiejaar kies studente een van twee rigtings, naamlik Boskunde of Boskunde-Natuurbewaring.

Die hoofvakke van die graadkursus vir albei rigtings is Boskultuur III en Bosbestuur III.

Studente moet praktiese werk gedurende die vakansies doen en studiereise onderneem.

HOUTKUNDE

Baccalaureus in die Natuurwetenskappe in Houtkunde: B.Sc. in Houtkunde

Toelatingsvereiste: Soos vir B.Sc. in Bosbou.

Leergang: Vier jaar voltydse studie.

Vakke vir die eerste jaar behels: Botanie, Wiskunde, Chemie, Fisika en Soölogie.

Studente kan ná die eerste studiejaar na die tweede studiejaar van die B.Sc. in Bosbou-kursus oorskakel.

Vakke vir die vierde jaar behels: Houttegnologie III (hoofvak), Houtchemie, Bedryfskoste, Bosbeleid, Toegepaste Bedryfsielkunde, Produksie, Houtkundeverslag (hoofvak).

Studente moet praktiese werk gedurende die vakansies verrig en studiereise onderneem.

PARKE- EN ONTSPANNINGSADMINISTRASIE

B. in Parke- en Ontspanningsadministrasie

Toelatingsvereiste: Soos vir B.Sc. in Bosbou.

Leergang: Vier jaar voltydse studie.

Vakke vir die eerste jaar behels: Botanie, Chemie, Fisika, Soölogie en Wiskunde.

Hoofvakke vir die vierde jaar behels: Openbare Administrasie III, Opelug-ontspanning III, Siertuinboukunde en Blomverbouing III.

NATUURBEWARING

Hons.-B.Sc. in Natuurbewaring

Toelatingsvereistes: 'n B.Sc.-graad met Soölogie, Botanie of Biologie as een van die hoofvakke.

Leergang: Studente moet 'n goedgekeurde leergang van gevorderde studie, wat deur die betrokke dosente vir elke student afsonderlik vasgestel word, van minstens een jaar

volg, en in die eksamens slaag.

M.Sc. in Natuurbewaring

Toelatingsvereiste: B.Sc. in Bosbou of 'n ander goedgekeurde Baccalaureusgraad of 'n Honneurs-B.Sc.-graad wat deur die Senaat goedgekeur is.

Leergang: Studente moet 'n goedgekeurde leergang van navorsing en/of gevorderde studie van ten minste twee jaar (nê behaling van die Baccalaureusgraad) of ten minste een jaar (nê behaling van die Honneursgraad) volg, wat 'n periode van studie of navorsing op 'n ander erkende plek mag insluit.

Studente moet 'n bevredigende verhandeling inlewer.

BEROEPSDIENS

Daar moet duidelik tussen 'n Bosboubeampte en 'n Bosbouer onderskei word. Laasgenoemde volg nie 'n graadkursus nie maar word vir die Diploma in Bosbou opgelei aan die Kollege vir Bosbouers, Saasveld, ongeveer 10 km van George in die Kaapprovinsie af.

'n Bosboubeampte daarenteen is iemand wat die vierjarige B.Sc.-graad in Bosbou aan die Universiteit van Stellenbosch behaal het. Sy funksies in die Departement van Bosbou is onder andere die bestuur van staatsplantasies en -kwekerie, inheemse bosse, natuurreservate, staatshoutverwerkingsinstallasies; navorsing, voorligting aan die publiek en so meer.

Die werkgeleenthede vir vakkundiges blyk duidelik uit hul funksies asook uit die afdelings waarin die Departement verdeel is:

- Die Afdeling Bosbestuur is in beheer van die bedryfsreëling, natuurbewaring, boskultuurwerkzaamhede, buitelug-ontspanning, die bemarking van hout en verskeie bestuursaangeleenthede van die agt bosboustreke.
- Die Afdeling Bosbenutting wat onder meer die saagmeulbedryf en die benutting en bemarking van verwerkte hout beheer.
- Die Afdeling Bosnavorsing wat navorsingswerk beheer en kontroleer, byvoorbeeld dié wat in die rigtings boskultuur, houttegnologie, boshidrologie, boomveredeling, bosmeetkunde, bospatologie en so meer onderneem word.
- Ander afdelings van die departement is dié van bosbou-ekonomie, ontginning en verwerking, skakeling en inligting.
- Bosboubeamptes behartig ook die lesings aan studente vir die Diploma in Bosbou te Saasveld.

Bosboubeamptes kan derhalwe die hoogste poste in die Departement bereik soos dié in bestuurshoedanigheid, koördinerende, voorligting en hulp met die formulering van die departementele beleid en beplanning van langtermynprogramme volgens die eise van die ekonomie en die bosbou. Hulle word ook in diens geneem deur sommige munisipaliteite, myne, bosbou- en houtmaatskappye en die WNNR.

Raadpleeg ook Tersiêre Opleiding.

BOUKUNDE

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Port Elizabeth, Pretoria, Witwatersrand

Grade

Baccalaureus in Bouwetenskap: B.B.Sc. (UK)

Baccalaureus Scientiae in Boukunde: B.Sc. (Boukunde) (Natal, Wits)

Baccalaureus Scientiae in Bouadministrasie: B.Sc. (Bouadm.) (UOVS)

Baccalaureus in Boukunde: B.Bou. (UPE)

Baccalaureus in Boubestuur: B.B.M. (UPE)

Baccalaureus in Boubestuur: B.Sc. (Boubestuur) (UP)

Baccalaureus in Boukunde: B.Sc. (Bouk.) (UP)

Magistergrade

Magister in Boubestuur: M.Sc. (Boubestuur) (UP)

Magister Scientiae in Boukunde: M.Sc. (Boukunde) (Wits)

Doktorsgrade

Doctor Scientiae in Boukunde: D.Sc. (Boukunde) (Wits)

Doktor in Wysbegeerte: Ph.D. (Wits)

Doktor in Boubestuur: D.Sc. (Boubestuur) (UP)

GRADE

Baccalaureus in Bouwetenskap: B.B.Sc. (Kaapstad)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad, en 'n slaagsyfer in 'n wetenskapvak (liefs Natuur- en Skeikunde of Fisika) op die Standaardgraad.

Leergang: Vier jaar voltydse studie. Elke student moet tydens die vakansies vir drie tydperke van ten minste ses weke elk ondervinding by 'n goedgekeurde bou-aannemer opdoen voor toelating tot die tweede, derde en vierde jare onderskeidelik.

Die leergang behels onder andere die volgende kursusse: Boukonstruksie, Prysontleding, Boufinansies en Waardering, Boubestuur, Hoeveelhede, Handelsreg.

Baccalaureus Scientiae in Boukunde: B.Sc. Boukunde (Natal)

Toelatingsvereistes: Kyk p. 132.

Leergang: Vier jaar voltydse studie. Elke kandidaat moet ten minste ses weke ononderbroke praktiese ondervinding in 'n firma van algemene bou-aannemers opdoen voordat hy toegelaat kan word om vir die daaropvolgende jaar se werk in te skryf.

Die leergang behels onder andere die volgende kursusse: Bou-administrasie, Boukonstruksie, Struktuurleer, Ekonomie, Handelsreg, Toegepaste Bedryfsielkunde, Konstruksie-ontwerp en -praktyk.

Baccalaureus Scientiae in Boukunde: B.Sc. (Boukunde) (Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Hoër Graad of minstens 60 persent op die Standaardgraad en 'n slaagsyfer op die Hoër Graad of minstens 60 persent op die Standaardgraad in een van die volgende vakke: Biologie, Natuur- en Skeikunde, Fisiologie.

Leergang: Vier jaar voltydse studie.

Aan die einde van elk van die eerste, tweede en derde studiejare moet studente vir minstens ses weke gedurende die daaropvolgende lang vakansies praktiese werk op bepaalde konstruksieterreine uitvoer. Studente moet boonop deelneem aan besoeke en toere soos deur die Senaat bepaal.

Die leergang behels onder andere die volgende kursusse: Boukunde, Produksiebeplanning

en Ontwerp, Struktuurleer, Prysontleding en Boukoste, Bedryfsorganisasie en -bestuur, Wiskunde.

Baccalaureus Scientiae in Bouadministrasie: B.Sc. (Bouadm.) (Oranje-Vrystaat)

Toelatingsvereistes: Kyk p. 156.

Leergang: Die leergang strek oor vier jaar. 'n Kandidaat moet gedurende die eerste en tweede studiejare sy volle tyd aan die studie vir die graad wy. Gedurende die volgende twee studiejare moet hy voltyds by 'n bou-aannemer werksaam wees.

Die eerste twee jaar van die leergang is dieselfde as dié vir die graad B.Sc. in Bourekenkunde.

Die ander vakke vir die leergang sluit in onder andere die volgende: Boukonstruksie, Prysontleding, Boukontrakte en prosedure, Boufinansies, Spesifikasie, Arbeidsreg.

Baccalaureus in Boukunde: B.Bou. (Port Elizabeth)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde van minstens 40 persent op die Standaardgraad.

Leergang: Drie jaar voltydse studie.

Geen kandidaat mag deelyds studeer nie tensy hy voltyds in die kantoor van 'n geregistreerde praktiserende argitek werksaam is.

Na suksesvolle voltooiing van die leergang vir die graad B.Bou. mag die kandidaat voortgaan met vierde en vyfde voltydse studiejare. By bevredigende voltooiing hiervan word die graad B.Arch. aan hom toegeken. Die leergang behels onder andere die volgende kursusse: Ontwerp, Boumateriale, Struktuurleer, Geskiedenis en Teorie van Kuns en Argitektuur, Beroepspraktyk, Bou-ekonomie vir Argitekte.

Baccalaureus in Boubestuur: B.B.M. (Port Elizabeth)

of

Baccalaureus in Boubestuur: B.Sc. (Boubestuur) (Pretoria)

Toelatingsvereistes:

Port Elizabeth: Kyk B.Bou.

Pretoria: Kyk p. 164.

Leergang: Die leergang strek oor vyf jaar. 'n Kandidaat moet gedurende die eerste twee studiejare sy volle tyd aan die studie vir die graad wy, maar moet gedurende die derde, vierde en vyfde studiejare voltyds by 'n bou-aannemer werksaam wees.

Die leergang behels onder andere die volgende kursusse: Boubestuur, Hoeveelhede, Boufinansies, Prysontleding, Arbeidsreg, Bedryfsveiligheid.

Baccalaureus in Boukunde: B.Sc. (Bouk.) (Pretoria)

Toelatingsvereistes: Kyk p. 164.

Leergang: Drie jaar voltydse studie. Kandidate word aangeraai om praktiese ondervinding op te doen deur tydens universiteitsvakansies in die kantoor van 'n argitek werksaam te wees.

Die leergang behels onder andere die volgende kursusse: Boukunde, Kantoorpraktyk, Struktuurleer, Geboudienste, Bedryfsielkunde, Bou tegnologie, Hoeveelhede, Toegepaste Wiskunde.

BEROEPSDIENS

In die verlede het die bouwyerheid swaar geleun op die kennis van argitekte, bourekenaars en siviele ingenieurs. Die vinnige uitbreiding van dié nywerheid, die vervanging van tradisionele deur moderne boumateriale (byvoorbeeld dié van sintetiese aard), die toepassing van gesofistikeerde bouegnieke en die gepaardgaande organisasie om geboue vinnig en doeltreffend op te rig, is egter almal aspekte van die bouegnologie wat spesiale studie noodsaaklik maak. Veral die groter konstruksie maatskappye besef al hoe meer die waarde van die aanvullende kennis van gegradueerdes in boubestuur en boukunde. Van die klompie wat reeds hierdie kwalifikasie besit, is daar verskeie voorbeelde bekend van jongmense wat in bevel van bouprojekte van miljoene rande geplaas is en die projekte met sukses deurgevoer het.

Boubestuurders (mense, en in 'n mindere mate ook dames) word gewoonlik deur gevestigde bouaannemers in diens geneem. Mettertyd, namate kapitaal verkry en ervaring opgedoen is, kan die boubestuurder self 'n bouaannemer word.

Boukundiges word weer hoofsaaklik deur argitekte as senior assistente in diens geneem waar hulle in die argitekse kantoor veral met bouegnologie te doen het. Vervaardigers van boumateriaal neem gegradueerdes in boukunde in diens met die oog op kantoor- en reklamewerk.

Raadpleeg ook Tersiêre Opleiding.

BOUREKENKUNDE

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Port Elizabeth, Pretoria, Witwatersrand

Grade

Baccalaureus Scientiae in Bourekenkunde: B.Sc.(Q.S.) (UK, UOVS, Wits)

Baccalaureus in Bourekenkunde: B.Q.S. (Natal, UPE) of B.Sc.(Q.S.) (UP)

Magistergrade

Magister Scientiae in Bourekenkunde: M.Sc.(Q.S.) (UOVS, Wits)

Magister in Bourekenkunde: M.Q.S. (Natal, UPE) of M.Sc.(Q.S.) (UP)

Doktorsgrade

Doctor Scientiae in Bourekenkunde: D.Sc.(Q.S.) (Wits)

Doktor in Bourekenkunde: D.Q.S. (UPE) of D.Sc.(Q.S.) (UP)

Doktor in Wysbegeerte: Ph.D. (Natal, Wits)

GRADE

Baccalaureus Scientiae in Bourekenkunde: B.Sc.(Q.S.)

of

Baccalaureus in Bourekenkunde: B.Q.S. of B.Sc.(Q.S.)

(Kaapstad, Natal, Oranje-Vrystaat, Port Elizabeth, Pretoria)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Kaapstad: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad, en 'n slaagsyfer in 'n wetenskapvak (liefs Natuur- en Skeikunde of Fisika) op die Standaardgraad.

Natal: Kyk p. 132.

Oranje-Vrystaat: Kyk p. 156.

Port Elizabeth: 'n Slaagsyfer van minstens 40 persent in Wiskunde op die Standaardgraad.

Pretoria: Kyk p. 164.

Leergang: Die leergang strek oor vyf jaar en behels twee jaar voltydse en drie jaar deeltydse studie. 'n Kandidaat moet gedurende die derde, vierde en vyfde studiejare voltyds in die kantoor van 'n geregistreerde bourekenaar of van 'n plaaslike of ander staatsbourekenaarskantoor werksaam wees.

Die leergang sluit in onder andere die volgende kursusse: Bourekenkunde V of Hoeveelhede V, Beroepspraktyk, Prysontleding, Boufinansies, Struktuurleer, Ekonomie.

Baccalaureus Scientiae in Bourekenkunde: B.Sc.(Q.S.) (Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasiestelling) met 'n slaagsyfer op die Hoër Graad of minstens 60 persent op die Standaardgraad in Wiskunde en in een van die volgende vakke: Biologie, Natuur- en Skeikunde, Fisiologie.

Leergang: Vier jaar voltydse studie. Die leergang behels Dele I, II en III. Aan die einde van elke studiejaar van Dele I en II moet 'n student gedurende die daaropvolgende lang vakansie in die kantoor van 'n geregistreerde bourekenaar of 'n bourekenaarskantoor van 'n staatsdepartement, 'n provinsiale administrasie of van 'n plaaslike owerheid werksaam wees.

Die leergang sluit onder andere die volgende vakke in: Bouwetenskap, Teorie en Praktiek van Bourekenkunde, Wiskunde, Ekonomie, Kostewaardering en -beheer.

BEROEPSDIENS

Die Bourekenaar se terrein is alle aspekte van boukoste en daar word dikwels na hom verwys as die tegniese rekenmeester in die boubedryf. Hy werk nou saam met die argitek, ingenieur en bouaannemer. Hierby is hy 'n professionele raadgever, byvoorbeeld in die geval van 'n regsgeeding in verband met 'n boukontrak, die waardering van eiendom met die oog op versekering of advies aan eiendomsontwikkelaars en beleggers in vaste eiendom.

In die Staatsdiens het die Bourekenaar die geleentheid om in feitlik enige vertakking van die bourekenkunde werksaam te wees. Diegene in diens van die Departemente van Bantoe-administrasie en -ontwikkeling, Gemeenskapsbou en Openbare Werke is in Pretoria gesetel. Bourekenaars van die Provinsiale Administrasies word in hulle onderskeie hoofkantore gehuisves.

In die private sektor is die moontlikhede vir die bourekenaar feitlik onbeperk, terwyl goeie werkgeleenthede ook bestaan by byvoorbeeld munisipaliteite, die Spoorweë, die WNNR en universiteite. Mettertyd kan met 'n eie onderneming, wat vandag uiters lonend is, begin word.

Die professie is nie net vir mans bedoel nie. Dames is ewe-eens welkom daarin en daar is rede om te glo dat diegene met die regte aanleg en belangstelling, baie suksesvol daarin kan wees.

DIEETKUNDE

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Potchefstroom, Pretoria, Stellenbosch

Grade

Baccalaureus Scientiae in Dieetkunde: B.Sc.Dieet. (Natal)

Baccalaureus Scientiae met Dieetkunde en Fisiologie as hoofvakke: B.Sc. (PU vir CHO, US)

Baccalaureus in Dieetkunde: B.Sc. (Dieet.) (UP)

Honneursgrade

Baccalaureus Scientiae in Dieetkunde (Honneurs): B.Sc.Dieet. Hons. (Natal)

Honneurs Baccalaureus Scientiae: Honns. B.Sc. (PU vir CHO)

Baccalaureus Honores in Dieetkunde: B.Sc.(Dieet.)(Hons.) (UP)

Honneurs-B.Sc. (US)

Magistergrade

Magister Scientiae in Dieetkunde: M.Sc.Dieet. (Natal)

Magister Scientiae: M.Sc. (PU vir CHO)

Magister in Dieetkunde: M.Sc.(Dieet.) (UP)

M.Sc. (US)

Doktorsgrade

Doktor in die Wysbegeerte: Ph.D. (Natal, US)

Doctor Scientiae: D.Sc. (PU vir CHO, UP, US)

Diplomas

Diploma in Terapeutiese Dieetkunde (UK)

Universiteitsdiploma in Dieetkunde (PU vir CHO)

Diploma in Hospitaaldieetkunde (UOVS, PU vir CHO, US)

Nagraadse Diploma in Hospitaal-dieetkunde (UP)

GRADE

Baccalaureus Scientiae in Dieetkunde: B.Sc.Dieet. (Natal)

Toelatingsvereistes: Soos vir die B.Sc.-graad. Kyk p. 132.

Leergang: Drie jaar voltydse studie. Eerstejaarsvakke sluit onder andere in Chemie, Biologie of Dierkunde, Sielkunde of Sosiologie. Die vakke vir die tweede en derde jaar is Dieetkunde, Voedsel en Voeding, Huisbestuur, Veekunde, Biochemie, Mikrobiologie.

(i) Baccalaureus Scientiae met Dieetkunde en Fisiologie as hoofvakke: B.Sc. (Potchefstroom)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Natuur- en Skeikunde op minstens Standaardgraad.

Leergang: Drie jaar voltydse studie. 'n Student volg die B.Sc.-graadkursus met Dieetkunde en Fisiologie as hoofvakke. Eerstejaarsvakke sluit in onder andere Chemie I en Dierkunde I. Chemie II en Mikrobiologie IA word in die tweede jaar geneem.

'n Student moet gedurende universiteitsvakansies praktiese werk in 'n hospitaal doen.

(ii) Baccalaureus Scientiae met Dieetkunde en Fisiologie as hoofvakke: B
(Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met slaagpunte in Wiskunde en Natuur- en Skeikunde, minstens een op die Hoër Graad.

Leergang: Drie jaar voltydse studie. Eerstejaarsvakke sluit in onder andere Chemie I, Soölogie I en Huishouding. Biochemie I, Fisiologie I en Dieetkunde I word in die tweede jaar geneem. Derdejaarsvakke is Fisiologie II, Dieetkunde II en Inrigtingsbestuur.

Studente kan deur middel van nagraadse studie aan die PU vir CHO en Stellenbosch die volgende grade in Dieetkunde verwerf: Honns. B.Sc., M.Sc. en D.Sc.

Baccalaureus in Dieetkunde: B.Sc.(Dieet.) (Pretoria)

Toelatingsvereistes: Soos vir die B.Sc.-graad. Kyk p. 164.

Leergang: Drie jaar voltydse studie. Eerstejaarsvakke sluit in onder andere Chemie, Fisika, Voedselwetenskap, Huisbestuur en Dieetpatrone. Die vakke vir die derde jaar behels Kommunikasie, Voedingsleer, Terapeutiese Voeding, Statistiek Spesiaal, Voedseldiensbestuur en 'n Projek: Voeding.

Kandidate moet Noodhulp- en Tuisverplegingssertifikate voor die einde van hul studie verwerf.

Kandidate moet gedurende 'n universiteitsvakansie vir ten minste drie weke in die voedseldepartement van 'n hospitaal werk.

DIPLOMAS

Diploma in Terapeutiese Dieetkunde (Kaapstad)

Toelatingsvereistes: B.Sc.-graad met Fisiologie, Mikrobiologie, Chemie of 'n ander goedgekeurde hoofvak of 'n graad in Huishoudkunde of Dieetkunde.

Leergang: 1½ jaar voltydse studie. Die volgende is die vernaamste vakke: Dieetkunde, Voeding, Uitgesoekte mediese en chirurgiese onderwerpe vir dieetkundiges, Inrigtingsbestuur en Verversingsdiens, Kookkuns, Voedseltegnologie, Openbare Gesondheid, Volkekunde.

Universiteitsdiploma in Dieetkunde (Potchefstroom)

Toelatingsvereiste: B.Sc.-graad met Dieetkunde en Fisiologie as hoofvakke of die B.Sc.(Dieetkunde)-graad.

Leergang: Een jaar voltydse studie. Die leergang behels die volgende vakke: Voeding, Voedingsleer, Voedseladministrasie, Inrigtingsbeheer, Sosiologie Spesiaal, Mikrobiologie.

Diploma in Hospitaaldieetkunde of

Nagraadse Diploma in Hospitaal-dieetkunde

(Oranje-Vrystaat, Potchefstroom, Pretoria, Stellenbosch)

Toelatingsvereistes: B.Sc. met Dieetkunde en Fisiologie as hoofvakke of B.Sc.(Dieetkunde) of B.Sc. in Huishoudkunde (Dieetkundige rigting).

Leergang: Die Diploma word uitgereik aan studente wat 'n voltydse diens tyd en onderrig van 12 maande in 'n goedgekeurde hospitaal bevredigend voltooi en 'n eksamen suksesvol afgelê het.

BEROEPSDIENS

Dieetkunde is een van die ideale kursusse vir die natuurwetenskaplik georiënteerde meisie. Alhoewel dit aan Huishoudkunde verwant is, is die Dieetkundige egter iemand wat die wetenskap van voeding interpreteer in terme van voedsel vir gesonde sowel as siek mense. Die uiteindelijke doelstelling van die Dieetkundige is dus die bevordering van goeie gesondheid deur middel van korrekte voeding. Werkgeleentheid op grond van basiese of in sommige gevalle nagraadse kwalifikasies is onder andere die volgende:

- Die hospitaaldieetkundige met die volgende spesialiseringsoortlikhede:
 - . 'n Administratiewe dieetkundige verantwoordelik vir die werk en opleiding van toesighouers en andere wat maaltye voorberei.
 - . 'n Terapeutiese dieetkundige wat die etes van pasiënte beplan volgens voorskrif van 'n geneesheer.
 - . 'n Kliniese dieetkundige wat 'n dieet vir pasiënte beplan wat nie in hospitale opgeneem is nie.
 - . 'n Onderwys-dieetkundige vir beplanning van kursusse, toesig oor en onderrig van dieetkundige assistente, verpleegsters, mediese en tandheelkundige studente.
 - . 'n Navorsingsdieetkundige van die hospitaal, wat navorsingsprojekte in voedsel en voeding lei en beplan.
 - . In die kleiner hospitaal, met minder geleentheid vir spesialisering, sal 'n dieetkundige in feitlik al die genoemde rigtings funksioneer.
- 'n Dieetkundige vir die verskaffing van vakkundige leiding aan nywerhede, weeshuise, skool- en universiteitskoshuise, kleuterskole, tehuise vir bejaardes, hotelle en ander inrigtings waar voedsel in groot hoeveelhede berei word.
- Dieetkundiges as navorsers in diens van die Mediese Navorsingsraad, SABS, WNNR, vrugte- en groente-inmaakfabrieke, voedselverskaffingsnywerhede; die verskillende beheerrade soos die Vleis-, Suiwel- en die Sitrusraad, universiteite en so meer.
- 'n Onderwyspos in diens van die onderwysdepartemente van die provinsies of 'n dosent aan 'n opleidingskollege of universiteit met besondere geleentheid vir navorsing en spesialisasie.
- 'n Konsulterende dieetkundige met 'n eie praktyk. (Hierdie rigting is betreklik jonk in S.A.)
- 'n Joernaliste wat vrouerubrieke in tydskrifte en nuusblaaie sowel as vir die radio, televisie en advertensie maatskappye behartig of as reisende verteenwoordiger optree.
- Dieetkundiges verbonde aan die Afdeling Nasionale Voeding van die Departement van Gesondheid. Hier is sy 'n belangrike lid van 'n span vir die lewering van gesondheidsvoorligtingsdienste. Haar taak van voedingsvoorligting word behartig deur middel van lesings, radiopraatjies, films en strookfilms, kort kursusse, beantwoording van navrae, ensovoorts.

'n Dieetkundige het dus die geleentheid om, in ooreenstemming met haar opleiding, te kies tussen rigtings soos voorligting, hospitaalwerk, grootmaatspyseniering, navorsing, onderwys of 'n eie praktyk. Die rigting wat sy kies, sal die aard van haar werk bepaal. Kyk ook Huishoudkunde, p. 340.

FARMASIE/APTEKERSWESE

Universiteite: Potchefstroom, Rhodes

Grade

Baccalaureus Scientiae (Farmasie): B.Sc.(Farm.) (PU vir CHO)

Baccalaureus in Farmasie: B.Farm. (Rhodes)

Honneursgrade

Honneurs Baccalaureus Scientiae (Farmasie): Honns. B.Sc.(Farm.) (PU vir CHO)

Honneurs Baccalaureus Scientiae: B.Sc.(Hons.) (Rhodes)

Magistergrade

Magister Scientiae (Farmasie): M.Sc.(Farm.) (PU vir CHO)

Magister Scientiae: M.Sc. (Rhodes)

Doktorsgrade

Doctor Scientiae (Farmasie): D.Sc. (Farm.) (PU vir CHO)

Doktor in die Wysbegeerte: Ph.D. (Rhodes)

Doctor Scientiae: D.Sc. (Rhodes)

Diploma

Universiteitsdiploma in Farmakologie: U.D.F. (PU vir CHO)

GRAAD

Baccalaureus Scientiae (Farmasie): B.Sc.(Farm.)

of

Baccalaureus in Farmasie: B.Farm.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Potchefstroom: Die algemene vereistes soos gestel vir toelating tot 'n B.Sc.-graad (kyk p. 161) geld ook hier, met dien verstande dat studente Natuur- en Skeikunde minstens op Standaardgraad moes geslaag het.

Rhodes: Kyk p. 137.

Leergang: Vier jaar voltydse studie.

Voor toelating tot die tweede studiejaar moet 'n student bewys lewer van sy registrasie as aptekerstudent by die S.A. Aptekerskommissie.

Die graad sal na suksesvolle voltooiing van die leergang toegeken word, maar die student mag slegs as apteker by die S.A. Aptekerskommissie registreer na voltooiing van 'n kwekelingskap soos deur die Aptekerskommissie bepaal.

Eerstejaarsvakke is soos volg: Chemie, Fisika, Dierkunde, Plantkunde. Aan die Rhodes-universiteit neem studente Biologiese Wetenskap i.p.v. Dierkunde en Plantkunde, asook Wiskunde.

Die hoofvakke vir die graad is Farmakologie, Farmaseutiese Chemie en Farmaseutika.

DIPLOMA

Universiteitsdiploma in Farmakologie: U.D.F. (Potchefstroom)

Toelatingsvereistes: B.Sc.(Farm.)-graad of die graad M.B., Ch.B. of 'n gelykwaardige kwalifikasie.

Leergang: Een jaar en behels 'n studie in gevorderde Farmakologie.

BEROEPSDIENS

Die aptekersberoep wat deur mans en dames beoefen kan word, is baie oud en het nog altyd hoë aansien geniet, aangesien die apteker veel meer is as iemand wat skoonheidsmiddels, snuisterye en pille verkoop. 'n Apteker is 'n vakkundige met 'n professionele opleiding van hoë gehalte en sy deskundige kennis is 'n onontbeerlike aanvulling by die werk van geneeshere en hospitale. Inderdaad vorm die farmaseutiese profesie vandag die koördinerende skakel tussen vervaardiger en geneesheer, geneesheer en pasiënt, pasiënt en gemeenskap, en sodoende word 'n belangrike deel van die gesondheidsdiens aan die volk beheer. Die beroep is nie beperk tot die bekende kleinhandelsapteker wat hoofsaaklik medisyne volgens doktersvoorskrif voorberei, en patente medisyne of ander middels sowel as allerlei artikels verkoop nie.

Ander vertakkings van die beroep is byvoorbeeld:

- Die mediese verteenwoordiger wat geneeshere en apteke besoek om nuwe medisyne bekend te stel en te verkoop.
- Die apteker wat deur 'n groothandelaar of vervaardiger van medisyne in diens geneem word met die oog op navorsing in farmaseutiese produkte, vervaardiging en toets van medisyne, ontwerp van toerusting, beheer van produksie en verpakking, behartiging van aankope, verkope, advertensie ens.
- Die hospitaalapteker verbonde aan 'n hospitaal vir die behartiging van farmaseutiese en verwante dienste.
- Die spoorwegapteker in diens van die Spoorweë.
- 'n Dosent aan 'n opleidingsentrum.
- Die apteker in diens van die Departement van Gesondheid waar sy dienste hoofsaaklik op twee terreine aangewend word, te wete hospitaalapteekdienste en medisynebeheer.

Nagraadse opleiding bly steeds belangrik, veral om te voorsien in die behoefte van die farmaseutiese industrie en opleidingsentra. Die ooreenkoms tussen die Suid-Afrikaanse Aptekerskommissie en die Farmaseutiese Vereniging van Brittanje skep ook die geleentheid vir Suid-Afrikaanse studente vir ervaring en studie oorsee.

Raadpleeg ook Tersiêre Opleiding vir die gelykwaardige opleiding van aptekers aan die kolleges vir gevorderde tegniese onderwys.

FISIOTERAPIE

Universiteite: Kaapstad, Oranje-Vrystaat, Stellenbosch, Witwatersrand

Grade

Baccalaureus Scientiae (Fisioterapie): B.Sc.(Fisio.) (UK)

Baccalaureus in Fisioterapie: B.Sc.(Fisio.) (UOVS)

Baccalaureus in die Natuurwetenskappe in Fisioterapie: B.Sc. in Fisioterapie (US)

Baccalaureus Scientiae in Fisioterapie: B.Sc.(Fisioterapie) (Wits)

Magistergraad

Magister Scientiae in Fisioterapie: M.Sc.(Fisioterapie) (Wits)

Doktorsgraad

Doktor in Wysbegeerte: Ph.D. (Wits)

Diplomas en Sertifikaat

Onderwysersertifikaat in Fisioterapie (UK)

Onderwysdiploma in Fisioterapie (UP, Wits)

Diploma vir Terapeute (Buitengewone Onderwys): D.T.B.O. (Unisa) Kyk OPVOEDKUNDE p. 212.

GRADE

Baccalaureus Scientiae (Fisioterapie): B.Sc.(Fisio.) of

Baccalaureus in Fisioterapie: B.Sc.(Fisio.) of

B.Sc. in Fisioterapie of B.Sc.(Fisioterapie)

(Al die bogenoemde universiteite)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling).

Addisionele vereistes:

Kaapstad: 'n Slaagsyfer in Wiskunde op die Standaardgraad, en 'n mediese sertifikaat.

Oranje-Vrystaat: 'n Slaagsyfer in Wiskunde op die Standaardgraad. Voorlopig sal voornemende studente nog aangeraai word om Skei- en Natuurkunde en indien moontlik ook Biologie vir die st. 10-eksamen aan te bied.

Stellenbosch: Slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Standaardgraad.

Witwatersrand: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad, en 'n mediese sertifikaat.

Leergang: Vier jaar voltydse studie.

Inskrywing aan die Universiteit van Stellenbosch is beperk en studente word gedurende September van die voorafgaande jaar gekeur. Aansoeke om toelating tot die kursus moet die Registrateur voor 30 Junie bereik.

Eerstejaarsvakke sluit in Fisika, Biologie of Soölogie (Stellenbosch), Chemie en Sielkunde (buiten Kaapstad). Die hoofvak is Fisioterapie. Ander vakke is onder andere Anatomie, Fisiologie en Kliniese Fisioterapie.

DIPLOMA EN SERTIFIKAAT

Onderwysersertifikaat in Fisioterapie of

Onderwysdiploma in Fisioterapie (Kaapstad, Pretoria, Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling); 'n kwalifikasie in Fisioterapie wat by die S.A. Geneeskundige en Tandheelkundige Raad registreerbaar is; en minstens twee jaar goedgekeurde ondervinding van Fisioterapie in die praktyk.

Leergang: Vier akademiese kwartale (Kaapstad) of een jaar voltydse studie (Pretoria) of twee jaar deeltydse studie (Witwatersrand).

BEROEPSDIENS

Fisioterapie, net soos arbeidsterapie, vorm 'n baie belangrike deel van die paramediese dienste. Dit is 'n diens wat aanvullend tot die geneeskundige praktyk is. Die primêre funksie van die fisioterapeut is om die pasiënt te help om homself te help. Vir dié doel word verskeie metodes toegepas en word siek of beseerde mense, persone met vertraagde of verswakte spierwerking en so meer, volgens doktersvoorskrif behandel. Die werk is soms vermoeiend maar nooit eentonig nie.

Die meeste fisioterapeute werk in hospitale of fisioterapeutiese klinieke waar apparaat en geriewe beskikbaar is om die vyf hoofvorms van behandeling t.w. massering en meganoterapie, elektroterapie, fototerapie, hidroterapie en ultrasoniese terapie, te onderneem. Fisioterapeute kan werk in afdelings vir volwassenes of kinders; afdelings vir mediese, ortopediese en snykundige gevalle; afdelings vir hart-, kraam- of ongeluksgevalle in intensiewe behandelingseenhede of sentra vir serebraal gestremdes. Afgesien hiervan is daar vir hulle ook gunstige geleenthede in sommige Staatsdepartemente, nywerhede, myne, private mediese klinieke en 'n eie praktyk.

Daar bestaan tans 'n groot tekort aan fisioterapeute en veral dosente in dié rigting is baie skaars. Bekwame persone (dames sowel as mans) kan dus baie vinnig vorder. Registrasie as fisioterapeut by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad is verpligtend.

Raadpleeg ook Tersiêre Opleiding vir die kursus van die Pretoriase Kollege vir Fisioterapie.

GENEESKUNDE

Universiteite: Kaapstad, Natal (net vir Nie-Blankes), Oranje-Vrystaat, Pretoria, Stellenbosch, Witwatersrand

Grade

Baccalaureus in Geneeskunde en Baccalaureus in Snykunde (of Chirurgie): M.B.,Ch.B. of B.M.,B.Ch. of M.B.,B.Ch. (bogenoemde universiteite)

Baccalaureus Scientiae (Geneeskunde): B.Sc.(Med.) (UK)

Baccalaureus Scientiae (Geneeskundige Wetenskappe): B.Sc.(Med.Sci.) (Natal)

Baccalaureus in Mediese Wetenskappe: B.Med.Sc. (UOVS)

Baccalaureus Scientiae in Patologie: B.Sc. (Patologie) (Wits)

Honneursgrade

Honneurs-Baccalaureus Scientiae (Geneeskunde): B.Sc.(Med.)(Hons.) (UK)

Honneurs-Baccalaureus in Mediese Wetenskappe: B.Med.Sc.(Hons.) (UOVS)

Honneurs-Baccalaureus in die Natuurwetenskappe in Geneeskundige Wetenskappe: Hons.-B.Sc. in Geneeskundige Wetenskappe (US)

Magistergrade

Magister in Geneeskunde: M.Med. (UK, Natal, UOVS, UP, US, Wits)

Magister in Chirurgie: Ch.M. (UK, Wits)

Magister in Mediese Wetenskappe: M.Med.Sc. (UOVS)

Magister in Farmakologiese Geneeskunde: M.Pharm.Med. (UP)

Magister in Huisarts Geneeskundige Praktyk: M.Prax.Med. (UP)

Magister in Militêre Geneeskunde: M.Mil.Med. (UP)

Magister in die Natuurwetenskappe in Geneeskundige Wetenskappe: M.Sc. in Geneeskundige Wetenskappe (US)

Magister in Ortopediese Chirurgie: Ch.M.(Orth.) (Wits)

Doktorsgrade

Doktor in Geneeskunde: M.D. of D.M. (UK, Natal, UOVS, UP, US, Wits)

Doktor in die Wysbegeerte: Ph.D. (UK, Wits)

Doktor in Mediese Wetenskappe: D.Phil. (UOVS)

Doktor in die Wysbegeerte (Geneeskunde): Ph.D.(Med.) (US, Wits)

Doktor in die Wysbegeerte in Geneeskundige Wetenskappe: Ph.D. in Geneeskundige Wetenskappe (US)

Doktor in die Natuurwetenskappe in Geneeskundige Wetenskappe: D.Sc. in Geneeskundige Wetenskappe (US)

Doktor in die Natuurwetenskappe (Geneeskunde): D.Sc.(Med.) (US)

Diplomas (Nagraads)

Diploma in Anesthesiologie (Wits)

Diploma in Bedryfsgeneeskunde (UP)

Diploma in Bedryfsgesondheid (Wits)

Diploma in Fisiese Geneeskunde (Wits)

Diploma in Gemeenskapsgeneeskunde (UK)

Diploma in Geneeskundige Administrasie (UP)

Diploma in Kindergeneeskunde (Wits)

Diploma in Mediese Fisika (na M.Sc. in Fisika) (UP)

Diploma in Sielkundige Geneeskunde (UK, Wits)

Diploma in Tropiese Geneeskunde en Higiëne (Wits)

Diploma in Volksgesondheid (UP, Wits)

Voorgraadse diploma:

Diploma in Ortoptika (Wits)

GRADE

Baccalaureus in Geneeskunde en Baccalaureus in Snykunde: M.B.,Ch.B. of B.M.,B.Ch. of M.B.,B.Ch.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Kaapstad: 'n Slaagsyfer in Wiskunde op die Standaardgraad.

Oranje-Vrystaat: 'n Slaagsyfer in Wiskunde op die Standaardgraad. Voorlopig word voornemende studente nog aangeraai om Natuur- en Skeikunde en indien moontlik ook Biologie vir die st. 10-eksamen aan te bied.

Pretoria: Kyk p. 164.

Stellenbosch: 'n Slaagsyfer in Wiskunde asook in Natuur- en Skeikunde op die Standaardgraad.

Witwatersrand: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 60 persent op die Standaardgraad.

Leergang: Ses jaar voltydse studie en een jaar internskap.

Voorgraadse studente wat van voorneme is om te studeer vir die graad moet hulle aan die begin van hulle tweede studiejaar vir die graad by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad laat registreer.

Die leergang vir die eerste jaar sluit die volgende vakke in: Chemie, Fisika en Biologie of Plantkunde en Dierkunde. Stellenbosch skryf 'n kursus in Wiskunde voor. Studente neem Anatomie en Fisiologie in hulle tweede jaar. Vakke vir die finale jaar is

Interne Geneeskunde, Chirurgie, Obstetrie en Ginekologie. Die leergang behels onder andere ook die volgende vakke: Patologie, Mikrobiologie, Farmakologie, Geregtelike Geneeskunde, Psigiatrie en Pediatrie.

'n Kandidaat moet, nadat hy die graad verwerf het, vir minstens een jaar opleiding as 'n intern ondergaan in 'n erkende en goedgekeurde inrigting alvorens hy hom by die S.A. Geneeskundige en Tandheelkundige Raad mag laat registreer en as geneesheer mag praktiseer.

Baccalaureus Scientiae (Geneeskunde): B.Sc.(Med.) (Kaapstad)

Toelatingsvereiste: Soos vir die graad M.B., Ch.B.

Leergang: Drie jaar voltydse studie. Die leergang behels agt kursusse, drie waarvan nie deel van die leergang vir die M.B., Ch.B.-graadkursus mag wees nie.

Verpligte vakke sluit in Dierkunde I of Biologie, Chemie I, Fisika I, Anatomie I, Fisiologie I.

'n Kandidaat mag tegelykertyd vir die grade B.Sc.(Med.) en die M.B., Ch.B. inskryf.

Baccalaureus Scientiae (Geneeskundige Wetenskap): B.Sc.(Med.Sci.) (Natal)

Toelatingsvereiste: Soos vir die graad M.B., Ch.B.

Leergang: Vier jaar voltydse studie. Die eerste drie jaar van die leergang is soos vir die graad M.B., Ch.B.

Baccalaureus in Mediese Wetenskappe: B.Med.Sc. (Oranje-Vrystaat)

Toelatingsvereiste: Soos vir die graad B.M., B.Ch.

Leergang: Drie jaar voltydse studie. Die leergang behels nege kursusse. 'n Student wat in die vereiste eerstejaarskursusse geslaag het, kan na keuring tot B.M., B. Ch. II toegelaat word.

Die hoofvakke is Anatomie III en Fisiologie II.

Studente wat in die B.M., B.Ch. II slaag, kan tot die derde studiejaar van B.Med.Sc. toegelaat word en moet dan, om die B.Med.Sc.-graad te verwerf, die volgende kursusse aanbied: Anatomie III, Fisiologie II en Chemie II.

Baccalaureus Scientiae in Patologie: B.Sc. (Patologie) (Witwatersrand)

Toelatingsvereiste: Soos vir die graad M.B., B.Ch.

Leergang: Vier jaar voltydse studie. Studente volg twee van die volgende kursusse in hul derde en vierde studiejaar: Chemiese Patologie, Hematologie, Mikrobiologie, Immunologie, Mondpatologie, Patologie.

'n Student wat in die voorgeskrewe kursusse van die eerste drie studiejaar van die M.B., B.Ch.- of B.D.S. (Tandheelkunde)-graad geslaag het, kan tot die vierde studiejaar van dié graadkursus toegelaat word.

Magister in Geneeskunde: M.Med.

Toelatingsvereistes: 'n Kandidaat moet vir minstens twee jaar in besit wees van die graad M.B., Ch.B. en moet vir minstens een jaar as geneesheer geregistreer wees.

Leergang: Drie tot vyf jaar na gelang van die vereistes van die betrokke departement.

Universiteite: Die graad word soos volg in die verskeie rigtings deur genoemde universiteite verleen:

Anesthesiologie – UK, UN, UOVS, UP, US
 Chirurgie – UK, UN, UOVS, UP, US
 Dermatologie – UK, UN, UOVS, UP, US
 Fisiese Geneeskunde – UP
 Gemeenskapsgeneeskunde – UK
 Geneeskunde – UK, UN
 Geneeskundige Administrasie – UP
 Geregtelike Geneeskunde – UP
 Geriatrie – UP
 Hematologie – UOVS
 Interne Geneeskunde – UOVS, UP, US
 Kardio-Torakschirurgie – UOVS
 Kerngeneeskunde – UK
 Kindergeneeskunde of Pediatrie – UK, UN, UOVS, UP, US
 Neurochirurgie – UK, UOVS, UP
 Neurologie – UP
 Obstetrie en Ginekologie – UK, UN, UOVS, UP, US
 Omvattende Geneeskunde – US
 Onkochemoterapie – UP
 Oogheelkunde – UK, UN, UOVS, UP, US
 Oor-, Neus- en Keelkunde – UK, UN, UOVS, UP, US
 Ortopedie – UK, UOVS, UP, US
 Patologie – UN, UP, Wits
 Patologie (Anatomies) – UK, UOVS, US
 Patologie (Chemies) – UK, UOVS, US
 Patologie (Geregtelik) – UK
 Patologie (Hematologies) – UK
 Patologie (Klinies) – UK, UOVS, US
 Patologie (Mikrobiologies) – UK, UOVS, US
 Plastiese Chirurgie – UOVS, UP
 Plastiese en Rekonstruktiewe Chirurgie – UK, US
 Preventiewe Geneeskunde – UP
 Psigiatrie – UP, US
 Radiologie – UN
 Radiologiese Diagnose of Radiologiese Diagnostiek of Diagnostiese Radiologie – UK, UN, UOVS, UP, US, Wits
 Radiologiese Terapie of Radioterapie – UK, UN, UOVS, UP, US, Wits
 Torakschirurgie – UK, UP, US
 Urologie – UK, UOVS, UP, US

VOORGRAADSE DIPLOMA

Diploma in Ortoptika (Witwatersrand)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standard 10-sertifikaat (Matrikulasie=vrystelling). Studente moet medies geskik wees.

Leergang: Twee jaar voltydse studie. Die leergang sluit in vyf kursusse. Hulle is onder andere, Anatomie vir Ortoptici, Optika en Elementêre Ortoptika, Oogheelkunde vir Ortoptici.

BEROEPSDIENS

'n Geneesheer kan alleen of in vennootskap met een of meer kollegas in 'n privaat praktyk as 'n algemene praktisyn werksaam wees. In dié geval sal sy werk hoofsaaklik uit die diagnose van siektes en die behandeling van pasiënte bestaan. Die meeste algemene praktisyns doen egter ook kleinere operasies. Dikwels vind die algemene praktisyn dit nodig om die pasiënt na 'n spesialis te verwys vir diagnose, operasie of behandeling.

As spesialis in die een of ander rigting dra die geneesheer moontlik groter verantwoordelikheid, maar dan is sy werksure gewoonlik vasgestel en gaan hy nie rond om pasiënte tuis te besoek nie. Spesialiseringsterreine bied aan die geneesheer 'n baie wye keuse. Gedurende die opleidingstydperk as spesialis is hy as 'n kliniese assistent in 'n hospitaal werksaam.

Die breë terrein van algemene volksgesondheid en die besondere werk van die gespesialiseerde staatsinrigtings, staatshospitale en staatsbeheerde laboratoriums, bied aan die geneeskundige en die mediese navorser uiters interessante en belowende geleenthede vir 'n loopbaan in diens van die Staat. Staatsmediese beamptes is werksaam in die Departemente van Arbeid, Nasionale Opvoeding en Gesondheid. In laasgenoemde Departement is die werksaamhede in verskillende afdelings verdeel, naamlik geestesgesondheid, distriksgeneeshere, patologiese- en laboratoriumdienste, tuberkulosediens, volksgesondheidsadministrasie en hospitalisasie in Bantoetuislande. Die Departement van Mynwese beskik oor poste vir Mediese Lede wat in die Pneumokonioseraad dien. Talle geneeshere en spesialiste is ook in diens van die Provinsiale departemente van hospitaaldienste.

In Suid-Afrika is daar plek vir nog baie meer geneeshere en spesialiste. Hierby verkeer die mediese wetenskap, en daarby inbegrepe die versorging van siekes, in die jare sewentig voor 'n uitdaging wat vernuf en vindingrykheid beproef soos nog nooit tevore nie. Vir elke jongman en -vrou in die geneeskunde wat bereid is tot nagraadse studie en navorsing, lê daar in hierdie beroep groot geleenthede.

Raadpleeg ook Tersiêre Opleiding vir die verskillende paramediese rigtings.

HUISHOUDKUNDE

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Potchefstroom, Pretoria, Stellenbosch

Grade

Baccalaureus Scientiae in Huishoudkunde: B.Sc.Huishoudkunde (Natal, UOVS)

Baccalaureus Scientiae in Huishoudkunde (Educationis): B.Sc. Huishoudkunde(Ed.) (UOVS)

Baccalaureus Scientiae (Huishoudkunde): B.Sc.(Huish.) (PU vir CHO)

Baccalaureus Scientiae (Huishoudkunde) (Educationis): B.Sc.(Huish.Ed.) (PU vir CHO)

Baccalaureus in Huishoudkunde: B.Sc.(Huish.) (UP)

Baccalaureus in Wis- en Natuurkunde in Huishoudkunde (Educationis): B.Sc.(Huish.)(Ed.) (UP)

B.Sc. in Huishoudkunde (Ed.) (US)

B. in Huishoudkunde (US)

B. in Huishoudkunde (Ed.) (US)

Honneursgrade

Baccalaureus Scientiae in Huishoudkunde (Honneurs): B.Sc. Huishoudkunde Hons. (Natal)

Honneurs Baccalaureus Scientiae: Honns. B.Sc. (PU vir CHO)

Baccalaureus Honores in Huishoudkunde: B.Sc.(Huish.)(Hons.) (UP)

Hons.-B.Sc. in Huishoudkunde (US)

Hons.-B. in Huishoudkunde (US)

Magistergrade

Magister Scientiae in Huishoudkunde: M.Sc.Huish. (Natal)

Magister Scientiae: M.Sc. (PU vir CHO)

Magister in Huishoudkunde: M.Sc.(Huish.) (UP)

M.Sc. in Huishoudkunde (US)

M. in Huishoudkunde (US)

Doktorsgrade

Doktor in die Wysbegeerte: Ph.D. (Natal)

Doctor Scientiae: D.Sc. (PU vir CHO)

Doktor in die Wysbegeerte (Huishoudkunde): Ph.D.(Huishoudkunde) (US)

Doktor in die Natuurwetenskappe in Huishoudkunde: D.Sc. in Huishoudkunde (US)

Diplomas

Nagraadse Voorligtingsdiploma in Huishoudkunde (US)

Hoër Onderwysersdiploma in Huishoudkunde (UK) (Kyk OPVOEDKUNDE p. 200)

Die volgende universiteite bied 'n vierjarige onderwysersdiplomakursus aan met Huishoudkunde as een van die spesialiteitsrigtings: Oranje-Vrystaat, Potchefstroom, Pretoria, Stellenbosch, Witwatersrand. Kyk OPVOEDKUNDE.

GRADE

Baccalaureus Scientiae in Huishoudkunde: B.Sc.Huish. (Natal)

Toelatingsvereistes: Soos vir die B.Sc.-graad. Kyk p.132.

Leergang: Drie jaar voltydse studie. Die vakke vir die eerste jaar is onder andere Chemie, Biologie of Dierkunde, Sielkunde of Sosiologie. Tweede- en derdejaarsvakke is Kleding en Tekstiele, Voedsel en Voeding, Huisbestuur, Veekunde, Biochemie, Mikrobiologie.

Baccalaureus Scientiae in Huishoudkunde: B.Sc. Huishoudkunde (Oranje-Vrystaat)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Standaardgraad.

Leergang: Vier jaar voltydse studie. Die vakke vir die eerste jaar is Voedselwetenskap, Kleding, Biologie, Chemie en Elementêre Fisika.

Die vierdejaarsvakke is Voedselwetenskap, Kleding, Interieur en Voedingsleer.

Baccalaureus Scientiae in Huishoudkunde (Educationis): B.Sc. Huishoudkunde (Ed.)
(Oranje-Vrystaat)

Toelatingsvereistes: Soos vir die graad B.Sc. Huishoudkunde.

Leergang: Vier jaar voltydse studie. Die leergang vir die eerste drie jaar is dieselfde as dié vir die graad B.Sc. Huishoudkunde. In hul vierde studiejaar volg studente die H.O.D.-kursus met Metodiek Voedingsleer en Metodiek Kleding.

~~Baccalaureus Scientiae (Huishoudkunde): B.Sc.(Huish.) (Potchefstroom)~~

~~Toelatingsevereistes:~~ Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling) Die algemene vereistes soos gestel vir toelating tot 'n B.Sc.-graad (kyk p. 161) geld ook hier, met dien verstande dat studente Natuur- en Skeikunde minstens op Standaardgraad moet geslaag het.

~~Leergang:~~ Vier jaar voltydse studie. Die vakke vir die eerste jaar is die volgende: Kookkuns I, Fisiologie I, Huisbestuur I, Chemie I, Fisika.

Die vierdejaarsvakke is Kookkuns IV, Kleding III, Voedingsleer II. Fisiologie word tot op derdejaarsvlak geneem.

Die B.Sc.Hons.- en M.Sc.-grade kan in Kookkuns geneem word.

~~Baccalaureus Scientiae (Huishoudkunde)(Educationis): B.Sc.(Huish. Ed.) (Potchefstroom)~~

~~Toelatingsvereiste:~~ Soos vir die graad B.Sc.(Huish.)

~~Leergang:~~ Vier jaar voltydse studie. Die leergang is min of meer dieselfde as dié vir die graad B.Sc.(Huish.), behalwe dat Kookkuns net tot op derdejaarsvlak geneem word en dat die vierde jaar bestee word aan Kleding III of Voedingsleer II en kursusse soos vir die U.O.D. (kyk p.204.) voorgeskrywe.

~~Baccalaureus in Huishoudkunde: B.Sc.(Huish.) (Pretoria)~~

~~Toelatingsvereiste:~~ Soos vir die B.Sc.-graad. Kyk p. 164.

~~Leergang:~~ Vier jaar voltydse studie. Die leergang maak voorsiening vir 'n keuse tussen twee hoofrigtings, naamlik

- (i) Kleding en Interieur
- (ii) Voedsel en Voeding.

Die kursus met hoofrigting Voedsel en Voeding is vir professionele doeleindes gelykstaande aan die B.Sc.(Dieetkunde)-graad.

Die voorgeskrewe leergang vir die eerste studiejaar is soos volg vir albei rigtings: Chemie, Fisika, Kleding en Voedselwetenskap.

'n Kandidaat moet die Noodhulp- en Tuisverplegingssertifikate van die S.A. Rooikruisvereniging of 'n gelykwaardige vereniging voor die einde van haar studie verwerf.

~~Baccalaureus in Wis- en Natuurkunde in Huishoudkunde (Educationis): B.Sc.(Huishoudkunde) (Pretoria)~~

~~Toelatingsvereiste:~~ Soos vir die B.Sc.-graad. Kyk p. 164.

~~Leergang:~~ Vier jaar voltydse studie. Die vakke vir die eerste studiejaar is soos vir die graad B.Sc.(Huish.). Die leergang behels ook onderwysvakke soos Pedagogiek III en Bordwerk en Skrif.

~~B.Sc. in Huishoudkunde (Ed.) (Stellenbosch)~~

~~Toelatingsvereistes:~~ Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling) met 'n slaagsyfer in Wiskunde en Natuur- en Skeikunde, minstens een waarvan op die Hoër Graad moet wees.

~~Leergang:~~ Vier jaar voltydse studie. Die vakke vir die eerste jaar is Chemie, Fisika, Wiskunde, Fisiologie, Geskiedenis en Waardering van die Huishoudkunde. Die leergang sluit ook voorgeskrewe H.O.D.-vakke in (kyk p. 208) bv. Opvoedkundige Sielkunde, Filosofie van die Opvoeding, Onderwysmetodiek van Huishoudkunde en Naaldwerk.

Die hoofvak is Voedsel - Voeding III of Kleding - Interieur III.

B. in Huishoudkunde (Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde en 'n natuurwetenskapvak op die Standaardgraad.

Leergang: Vier jaar voltydse studie. Die leergang behels onder andere die volgende vakke: Sosiologie I en II, Fisiologie I, Huisbestuur I en II met Voedsel - Voeding III of Kleding - Interieur III as hoofvak.

B. in Huishoudkunde (Ed.) (Stellenbosch)

Toelatingsvereistes: Soos vir die graad B. in Huishoudkunde.

Leergang: Vier jaar voltydse studie. Die leergang behels min of meer dieselfde vakke as dié vir die graad B. in Huishoudkunde, maar sluit ook voorgeskrewe H.O.D.-vakke in. (Kyk p. 208.)

DIPLOMA

Nagraadse Voorligtingsdiploma in Huishoudkunde (Stellenbosch)

Toelatingsvereiste: Die graad B.Sc. in Huishoudkunde of die B.Sc.-graad met Dieetkunde en Fisiologie as hoofvakke.

Leergang: Een jaar voltydse studie.

BEROEPSDIENS

Die huishoudkundige is betrokke by tuisskepping en stel haar ten doel om 'n fisiese en sosiale omgewing te skep waarin gesonde menseverhoudings tot stand kan kom. Dit is gevolglik die ideale kursus vir die natuur- sowel as sosiaalwetenskaplik georiënteerde meisie met 'n wye belangstelling. Die opleiding kom dus neer op die voorbereiding vir 'n aangename en belowende loopbaan en gelyktydig ook toerusting met wetenskaplike kennis vir die toekomstige huisvrou. Hierby het die getroude vrou steeds die geleentheid om haar opleiding ook tot voordeel van die gemeenskap te benut. Selfs die onderwyseres in huishoudkunde, wat 'n professionele persoon is, sal waardevolle inligting en dienste buite die skoolverband kan lewer. As gevolg van verskeie rigtings wat beskikbaar is, kan selfs mans vandag tot hierdie professie toetree.

Beroepsmoontlikhede vir die huishoudkundige is onder andere die volgende:

- 'n Onderwyseres in huishoudkunde aan 'n provinsiale hoërskool of skole van die Departement van Nasionale Opvoeding; 'n dosent aan 'n opleidingsinrigting of universiteit.
- 'n Kommunikasieskakel tussen fabrikant en verbruiker ten opsigte van huishoudelike benodigdhede; in diens van 'n argitek of 'n firma wat te doen het met die vervaardiging van klerasie, voedsel, meubels, binnenshuiseversiering of mode-ontwerp; in diens, hoofsaaklik vir voorligting, van die beheerrade soos die Vleis-, Wol-, Melk-, Koring-, Mielie-, Suiwel-, Eier-, Droëbone- en Sitrusraad.
- Joernaliste vir vrouerubrieke in tydskrifte, nuusblaaie, radio, televisie en advertensiematenskappe of reisende verteenwoordiger.
- 'n Navorsingsbeampte in diens van byvoorbeeld die WNNR, SABS en RAK vir navorsing na tekstiele, klere, voedsel, ens.
- 'n Eie praktyk om op te tree as mode-, interieur- en voedinggraadgeefer.

Die Departement van Nasionale Opvoeding neem vakkundiges (huishoudkunde) in diens hoofsaaklik met die oog op voorligting aan die publiek. Die werk bestaan uit lesings, demonstrasies, kursusse, uitstallings, groeppesprekings, radiopraatjies, artikels vir nuusblaaie en tydskrifte, persoonlike onderhoude en so meer. Eksperimentele kookkuns en smaaklikheidstoetse word ook onderneem.

Soos op talle ander gebiede moet ambisie en ervaring gekombineer word met verdere opleiding en selfs nagraadse studie om tot die hoogste poste te kan vorder.

Kyk ook Dieetkunde, p. 330.

INGENIEURSWESE

Universiteite: Kaapstad, Natal, Pretoria, Stellenbosch, Witwatersrand

Die Randse Afrikaanse Universiteit bied opleiding in Chemiese, Meganiese, Elektriese en Siviele Ingenieurswese aan tot op tweedejaarsvlak. Die Potchefstroomse Universiteit bied ook opleiding aan in Ingenieurswese tot op tweedejaarsvlak.

Grade

Baccalaureus Scientiae in Ingenieurswese: B.Sc.(Ing.) of B.Sc.Eng. (UK, Natal, US, Wits)

Baccalaureus in Ingenieurswese: B.Sc.(Ing.) (UP)

Baccalaureus in Ingenieurswese: B.Eng. (US)

Honneursgrade

Baccalaureus Honores in Ingenieurswese: B.Sc.(Ing.)(Hons.) (UP)

Hons.-B.Sc.Eng. (Elektrotegniese Ingenieurswese) (US)

Honneurs-Baccalaureus in Ingenieurswese: Hons.-B.Eng. (US)

Magistergrade

Magister Scientiae in Ingenieurswese: M.Sc.(Ing.) (UK, Natal, Wits)

Magister in Ingenieurswese: M.Sc.(Ing.) (UP) of M.Eng. (US)

Doktorsgrade

Doktor in die Wysbegeerte: Ph.D. (UK, Natal, Wits)

Doktor in die Wysbegeerte (Ingenieurswese): Ph.D. (Ingenieurswese) (US)

Doctor Scientiae in Ingenieurswese: D.Sc.(Ing.) (UK, Natal, Wits)

Doktor in Ingenieurswese: D.Sc.(Ing.) (UP) of D.Eng. (US, Wits)

Diplomas

Diploma in Fotogrammetrie (Natal)

Diploma in Ingenieurswese (UK, Natal)

Diploma in Ingenieurswese vir Gegradueerdes (Wits)

Diploma in Mynbou (UP)

Nagraadse Diplomas in Ingenieurswese: N.D.I.

- Nagraadse Diplomas in Meganiese Ingenieurswese en

- Nagraadse Diplomas in Elektrotegniese Ingenieurswese (US)

GRADE

Baccalaureus Scientiae in Ingenieurswese: B.Sc.(Ing.) of

Baccalaureus in Ingenieurswese: B.Eng. of B.Sc.(Ing.)

(bogenoemde universiteite)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasie=vrystelling).

Addisionele vereistes:

Kaapstad: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad.

Natal: Kyk p. 132.

Pretoria: Kyk p. 164.

Stellenbosch: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 60 persent op die Standaardgraad en 'n slaagsyfer in Natuur- en Skeikunde op die Standaardgraad.

Witwatersrand: Slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Hoër Graad of minstens 60 persent op die Standaardgraad. Applikante word aangeraai om dié vakke op die Hoër Graad aan te bied.

Leergang: Vier jaar voltydse studie behalwe aan die Universiteit van Stellenbosch, waar dit vyf jaar duur. Die Universiteit van Pretoria raai sommige van die studente aan om die kursus oor vyf jaar te versprei.

Aan die Universiteit van Pretoria kan die graadkursus gedeeltelik na-uurs en gedeeltelik voltyds geneem word:

- Vyf jaar indien slegs die eerste akademiese jaar oor twee jaar na-uurse studie versprei word; of
- ses jaar indien ook die tweede akademiese jaar oor twee jaar na-uurse studie versprei word.

Die Universiteit van Stellenbosch bied ook die graad B.Sc. Ing. in Elektrotegniese Ingenieurswese aan. Dié graad strek oor vier jaar voltydse studie.

Oor die algemeen neem ingenieursstudente die basiese wetenskappe, Wiskunde, Toegepaste Wiskunde, Fisika en Chemie gedurende die eerste studiejaar en begin dan met die gekose rigting aan die begin van die tweede jaar.

Al die universiteite wat die graad toeken, bied die volgende studierigtings aan: Chemiese Ingenieurswese, Elektrotegniese Ingenieurswese, Meganiese Ingenieurswese en Siviele Ingenieurswese.

Die Universiteit van Stellenbosch bied die volgende rigtings aan onder Meganiese Ingenieurswese:

- Masjienbou
- Bedryfsrigting
- Verkoeling en Lugreëling
- Lugvaartkunde
- Marine-rigting
- Outomobiel.

Onder Elektrotegniese Ingenieurswese word die volgende rigtings deur die Universiteit van Stellenbosch aangebied: Swaarstroom, Swakstroom of Marine-rigting.

Die Universiteit van die Witwatersrand bied die volgende rigtings aan onder Meganiese Ingenieurswese:

- Lugvaartkundige Ingenieurswese
- Bedryfsingenieurswese
- Meganiese Ingenieurswese.

Die volgende studierigtings in Ingenieurswese word deur die genoemde universiteite aangebied:

Bedryfsingenieurswese - Pretoria

Landbou-ingenieurswese (kyk p. 355) - Natal, Pretoria, Stellenbosch

Landmeetkunde - Witwatersrand (kyk p. 361)

Metallurgiese Ingenieurswese of Metallurgie - Pretoria, Witwatersrand

Mynbou-geologie - Witwatersrand

Mynbou-ingenieurswese - Pretoria, Witwatersrand.

Studente doen praktiese werk gedurende die lang vakansies.

DIPLOMAS

Diploma in Fotogrammetrie (Natal)

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n goedgekeurde graad, 'n professionele kwalifikasie in Siviele Ingenieurswese of Landmeetkunde of 'n ander aanvaarbare kwalifikasie.

Leergang: Een jaar voltydse studie of minstens twee maar nie meer as drie jaar deeltydse studie nie.

'n Kandidaat moet die voorgeskrewe praktiese werk voltooi en die eksamens in Fotogrammetrie aflê.

Diploma in Ingenieurswese (Kaapstad)

Toelatingsvereistes: Toelating tot die Diploma is, behalwe met spesiale toestemming van die Senaat, beperk tot -

- (i) gegradueerdes van die Universiteit van Kaapstad of enige ander erkende universiteit; of
- (ii) nie-gegradueerdes wat in besit is van geskikte professionele kwalifikasies.

'n Diploma in Ingenieurswese vir Gegradueerdes sal aan die suksesvolle kandidaat wat onder (i) toegelaat is, toegeken word en 'n Diploma in Ingenieurswese aan kandidate wat onder (ii) toegelaat is.

Leergang: Die leergang bestaan uit agt kursusse gekies uit spesiale kursusse wat deur die Fakulteit van Ingenieurswese en ander Fakulteite aangebied word.

Elke kursus bestaan uit ongeveer dertig uur se lesings, studiekeles en laboratoriumwerk.

Diploma in Ingenieurswese (Natal)

Toelatingsvereiste: 'n Kandidaat moet in besit wees van die B.Sc.(Ing.)-graad of tot die status daarvan toegelaat wees.

Leergang: 'n Minimum van een semester studie.

'n Kandidaat kan sy kandidaatskap verander tot dié vir die M.Sc.(Ing.)-graad in welke geval hy 'n verhandeling moet inlewer afgesien van die voorgeskrewe kursusse wat hy vir die Diploma moet voltooi.

Diploma in Ingenieurswese vir Gegradueerdes (Witwatersrand)

Toelatingsvereistes: 'n Kandidaat moet in besit wees van die B.Sc.(Ing.)-graad of die B.Sc.(Hons.)-graad of tot die status daarvan toegelaat wees.

Leergang: Een jaar voltydse of drie jaar deeltydse studie. 'n Kandidaat moet ten minste nege kursusse voltooi.

'n Kandidaat vir die M.Sc.(Ing.)-graad wat die voorgeskrewe kursusse vir die graad ge=

druip het, kan as 'n kandidaat vir die Diploma toegelaat word en sy kandidaatskap word dan beskou asof dit 'n aanvang geneem het op die datum van sy toelating as kandidaat vir die M.Sc.(Ing.)-graad.

Diploma in Mynbou (Pretoria)

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n Baccalaureusgraad in enige vertakking van Ingenieurswese of 'n Baccalaureusgraad in Mynbou-geologie of tot die status daarvan toegelaat wees.

Leergang: 'n Minimum van een jaar voltydse studie. Voor die aanvang van die kursus moet 'n kandidaat minstens vier weke praktiese ervaring ondergronds in 'n goedgekeurde myn opdoen. Voor toekenning van die Diploma moet die kandidaat vir 'n verdere vier weke goedgekeurde praktiese mynbou-ondervinding opdoen.

Nagraadse Diplomas in Ingenieurswese: N.D.I. (Stellenbosch)

Toelatingsvereistes: 'n Student moet in besit wees van 'n goedgekeurde vierjarige Baccalaureusgraad in die Ingenieurswese of 'n ander aanvaarbare kwalifikasie en tersaaklike ondervinding.

Leergang: Een jaar voltydse studie. Die N.D.I. word in die volgende rigtings aangebied:

- Nagraadse Diplomas in Meganiese Ingenieurswese: Die Diploma word in die volgende studierigtings toegeken:
Verkoeling en Lugreëling, Bedryfsingenieurswese, Outomobielingenieurswese, Lugvaartkunde.
- Nagraadse Diplomas in Elektrotegniese Ingenieurswese: Die Diploma word in die volgende studierigtings toegeken: Swaarstroomrigting, Swakstroomrigting.

Daar is 'n voorgeskrewe kursus vir elke studierigting.

BEROEPSDIENS

Ingenieurswese is vandag 'n lewensbelangrike vertakking van die Toegepaste Wetenskap. Die wetenskaplikes soek byvoorbeeld na basiese kennis. Hulle doel is om nuwe beginsels of kombinasies van bekende beginsels te ontdek ten einde natuurverskynsels te verklaar en maak hiervoor gebruik van die Wiskunde, Fisika, Chemie en so meer. Hierteenoor sorg die ingenieurs dat die kennis wat die wetenskaplikes aan die mensdom besorg, toegepas word. Hoewel ingenieurs ook denkers is, is hulle uit die aard van hul professie manne en vroue van die daad.

Daar bestaan wel verskeie vertakkings in die ingenieurswese maar hulle kan nie waterdig afgebaken word nie, sodat werksaamhede in die een dikwels met dié van die ander ooreenslaan. Die vinnige toename in die kennis van die ingenieur het ook gelei tot talle onderafdelings in die ingenieurswese wat nie almal hier bespreek kan word nie. Daar is byvoorbeeld die lugvaart-, skeeps- en kerningenieurswese, asook rigtings soos masjienbou, verkoeling en lugreëling en so meer. Meer inligting oor hierdie terreine kan van die betrokke universiteite of die Federasie van Verenigings vir Professionele Ingenieurs, Posbus 61019, Marshalltown, 2107, Transvaal, verkry word.

Met die oog op 'n samevattende beeld daarvan, word die ingenieurswese in die volgende agt vertakkings ingedeel en elke vertakking kortliks bespreek:

Chemiese Ingenieurswese: Die snelle nywerheids groei van die Republiek skep geleenthede aan al hoe meer ingenieurs in die chemiese nywerheid. Waar ook al chemiese veranderings uitgevoer word, is daar werk vir die chemiese ingenieur. Atoominstallasies, die vervaardiging van ysterhoudende en nie-ysterhoudende metaal, olieraffinaderye en die nuwe-produkinstallasies wat daaraan verbode is, die vervaardiging van verf, rubber, rayon, papier, suiker, kunsmis, springstowwe, glas, seep, sement, politoer, hout, plastiek, farmaseutiese middels en die verwerking van minerale - dit is die terrein van die chemiese ingenieur, wat hoofsaaklik te doen het met die ontwerp, werking en instandhouding van installasies. Van die werkgewers op dié gebied is eerstens al die betrokke nywerhede, maar ook instansies soos Yskor, Sasol, RAK, WNNR, Foskor, SABS en die Staatsdepartemente van Gesondheid, Waterwese en Verdediging.

Elektriese Ingenieurswese: Die gebied van die elektriese ingenieur word in twee verdeel, naamlik dié van krag en dié van elektronika. Eersgenoemde bestaan onder andere uit die ontwerp, vervaardiging en/of instandhouding en beheer van elektrisiteitsontwikkelininstallasies, transformators en skakeltuig, elektriese motore, kragkabels, langafstand-hoëspanningkraglyne, elektriese lokomotiewe en allerhande soorte elektriese masjinerie. Die terrein van die elektronika dek "swakstroom"-apparaat, wat buise, transistors, relés en katodestraalbuise gebruik, en ook die gebied van die telekommunikasie-ingenieurswese met sy outomatiese sentrales, meerkanaaltransmissie met draag- en mikrogolf, radio, televisie en navigasiehulpmiddels soos radar, klankfilmreproduksie en baie ander elektroniese middels vir gebruik in die nywerhede en wetenskaplike navorsing.

Instansies wat gebruik maak van die dienste van 'n elektriese ingenieur is byvoorbeeld die Spoorweë, Evkom, munisipaliteite, die Pos- en Telekommunikasiewese, nywerhede, fabriekke, radiowese, privaat ondernemings, SABS en myne. Poste as dosent kan ook beklee word aan 'n universiteit of kollege wat tegniese opleiding verskaf. Verskeie Staatsdepartemente maak gebruik van die dienste van elektrotegniese ingenieurs en die aard van laasgenoemde se pligte verskil van departement na departement. Die Departemente is dié van Openbare Werke, Landbou-tegniese Dienste, Vervoer, Bantoe-administrasie en -ontwikkeling, Mynwese, Gemeenskapsbou, Arbeid en die Administrasies van die Provinsies en Suidwes-Afrika.

Industriële Ingenieurswese: Hierdie is 'n betreklike nuwe vertakking en bestaan basies daaruit dat dié ingenieur hom toelê op die maksimale benutting van die produksiefaktore deur beplanning, rangskikking van toerusting, skedulering van werk, beheer oor arbeid, produksie, materiaal, kwaliteit en koste. Hy kombineer sy ingenieurskennis (hoofsaaklik op die gebied van die meganika) met die beginsels van bestuurs- en bedryfseconomie.

Sy beroepsrigting lê hoofsaaklik in nywerhede soos die Spoorweë, myne, Yskor, Sasol, Foskor, NOK; groot fabriekke; munisipaliteite; doseerwerk aan 'n universiteit en navorsing.

Landbou-ingenieurswese: Die meganisering van landbou ontwikkel baie snel en gevolglik groei die vraag na landbou-ingenieurs steeds. In die moderne landboubedryf is die ingenieur verantwoordelik vir landboumasjinerie; ingenieursaspekte van grondbewaring; hantering, opberging en prosessering van materiaal; ontwerp van plaasstrukture en die uitlê van werwe, en besproeiings- en dreineringsaangeleenthede. Die meeste ingenieurs spesialiseer gewoonlik in een of meer van hierdie velde.

Die grootste werkgewers op hierdie gebied is die Staatsdepartemente van Landbou-tegniese Dienste, Bantoe-administrasie en -ontwikkeling, Waterwese; verskillende Landboukoöperasies soos dié vir sitrus- en sagtevrugte, suiker en tabak; handel en nywerheid wat te doen het met landbouprodukte soos die wolnywerheid en Foskor; ondernemings wat landbou-implemente vervaardig; universiteite en kolleges wat doseerwerk in hierdie rigting onderneem. Vir die nagraadse student bestaan daar veral in die Staatsdepartemente besondere geleentheid om interessante navorsingsprojekte aan te pak.

Meganiese/Werktuigkundige Ingenieurswese: Hierdie vakgebied omsluit die ontwerp, konstruksie, bemerking, installering en instandhouding van werktuigkundige uitrusting, soos masjiengereedskap, materiaalhanteringsuitrusting, outomatiese produksielynmasjinerie vir fabriekke, mynbou-installasies, pad- en landboumasjinerie, verkoelings- en lugversorgingsinstallasies, stoomketels, pompe, lugkompressors, turbines, olie- en gas-

enjins, motors, vliegtuie, skepe en spoorweglokomotiewe. Hierdie ingenieurs ontwerp ook planne vir die aanleg van nuwe fabrieke. Die meganiese ingenieurswese lewer derhalwe 'n besondere diens aan die gemeenskap en kan tereg beskou word as die hoeksteen van die moderne tegnologie. Die verwerking, hantering en verspreiding van 'n produk is direk afhanklik van die toepassing van die beginsels van die meganiese ingenieurswetenskap.

Gevolglik word die beste beroepsmoontlikhede gevind by die Spoorweë; fabrieke en ander groot nywerheidsondernemings soos myne, Yskor, Sasol en so meer; die WNNR; lug- en seevaartmaatskappye; en groot munisipaliteite. 'n Private praktyk as raadgewende ingenieur of 'n dosentpos aan 'n universiteit of tegniese kollege is ook moontlik. Die Staatsdiens bied in hierdie rigting besonder aantreklike loopbane in die Departemente van Openbare Werke, Bantoe-administrasie en -ontwikkeling, Verdediging, Landbou-tegniese Dienste, Arbeid, Mynwese, Waterwese en die Administrasies van die Provinsies en Suidwes-Afrika. Die besonder wye terrein vir navorsing is beslis 'n uitdaging.

Metallurgiese Ingenieurswese: Die terrein van hierdie ingenieur is tweeledig, te wete (1) die onttrekking (ekstraksie) of vrystelling van 'n metaal uit sy oorspronklike erts en komplekse verbindings, en (2) die bestudering van die fisiese eienskappe daarvan met die oog op verwerking in bruikbare produkte. Die werksaamhede behels dus alle aspekte van metaal- en legeringstegnologie - van die stadium waar die metaalhoudende minerale gemyn en vir behandeling beskikbaar gestel word, totdat die verwerkte produk aan die mens gelewer word vir gebruik.

Die metaalvervaardigingsbedryf toon geweldige vooruitgang en bied derhalwe geleenthede aan meer en meer ingenieurs, veral wat navorsing betref. Die volgende is slegs 'n paar van die vele instansies by wie werkgeleenthede bestaan: Yskor, WNNR, SABS, alle myne wat metale ontgin, die yster- en staalbedryf, doseerposte aan universiteite en kolleges vir gevorderde tegniese onderwys.

Kyk ook Metallurgie, p. 177.

Myningenieurswese: Alhoewel mynbou in die RSA gewoonlik in verband staan met goud, diamante en steenkool, word talle ander minerale soos yster-, chroom-, mangaan-, asbes- en kopererts ook hier gemyn. Die myningenieur het te doen met alle soorte mynbou - van die stadium waar hy en die geoloë nuwe neerslae soek totdat 'n nuwe myn gevestig die metaal of minerale vir verkoop geproduseer word. Hy het te doen met sowel die wetenskaplike as die praktiese aspekte van die mynbou - van die ontginningstadium af tot by die bemerkbare produk. Hy kan ook vind dat hy vraagstukke in verband met die aanleg van dorpe, paaie, spooraansluitings, krag- en watertoevoer moet help oplos. Baie myningenieurs beklee ook uitvoerende en bestuursposte, veral waar dit gaan oor toesighouding en veiligheid. 'n Gekwalifiseerde myningenieur kan in die Departement van Mynwese ook aangestel word as inspekteur van myne.

Siviele Ingenieurswese: Hierdie ingenieurs, wat die grootste groep in die land vorm, het in die algemeen gesproke te doen met die beplanning, ontwerp, aanleg, bou en instandhouding van projekte wat daarop gemik is om die mens se fisiese omgewing tot sy nut en voordeel te beheer en te reguleer. In die praktyk kom sulke projekte neer op brûe, paaie, dokke, aanloopbane by lughawens, spoorweë, tunnels, damme, kanale, riool- en dreineringsstelsels, gas- en watertoevoer, skagtorings van myne en ander groot strukture. Die siviele ingenieurswese bestaan uit talle gespesialiseerde onderafdelings soos dié van die struktuuringenieur, munisipale ingenieur, pad- of spoorwegingenieur, wateringenieur, ens. Daar is dus talle geleenthede vir spesialisasie, insig, eie inisiatief en navorsing.

Aangesien van die grootste projekte die verantwoordelikheid van die Staat is, word die grootste verskeidenheid van werkgeleenthede gevind in die Departemente van Waterwese, Openbare Werke, Landbou-tegniese Dienste, Bantoe-administrasie en -ontwikkeling, Vervoer, Gemeenskapsbou en die Administrasies van die vier Provinsies en Suidwes-Afrika. Siviele ingenieurs word ook in diens geneem deur die Spoorweë, munisipaliteite van groot stede, die WNNR, konstruksie maatskappye en ander private ondernemings, universiteite en kolleges vir gevorderde tegniese onderwys. Hierbenewens is die Raadgewende Ingenieurs as werkgewers van veral siviele maar ook van ander ingenieurs baie belangrik. Hiermee hang ook saam die geleenthede van die private konsulerende praktyk as 'n uiteindelijke loopbaan vir gegraduateerde. Raadgewende Ingenieurs staan in eie diens en

hulle of hul firmas ontvang opdragte van Staats-, provinsiale of munisipale instansies en, in 'n baie groot mate van nywerheids- en ander ondernemings vir die ontwerp en toesig oor die oprigting van projekte. Die Suid-Afrikaanse Vereniging van Raadgewende Ingenieurs maak byvoorbeeld tans gebruik van die dienste van meer as 1000 professionele ingenieurs en byna 2000 ingenieursassistenten en tegnisiërs op die gebied van siviele ingenieurswese en van sowat 400 en 600 respektiewelik op die gebied van elektriese, meganiese, verwarmings- en lugreëlingsingenieurswese. Hierby staan daar ongeveer 600 professionele ingenieurs aan die hoof van of is hulle in vennootskap met sulke raadgewende ingenieursfirmas.

Raadpleeg ook Tersiere Opleiding vir die opleiding van ingenieurstechnici.

KOMMUNIKASIEKUNDE/JOERNALISTIEK

Universiteite: Oranje-Vrystaat, Potchefstroom, Randse Afrikaanse Universiteit, Rhodes, Suid-Afrika

Grade

Baccalaureus Artium (Kommunikasiekunde): B.A. (Kommunikasiekunde) (UOVS)

Baccalaureus Artium (Kommunikasiekunde): B.A.(Komm.) (PU vir CHO)

Baccalaureus in die Lettere en Wysbegeerte: B.A.(Kommunikasie) (RAU)

Baccalaureus in Joernalistiek: B.Joernalistiek (Rhodes)

Baccalaureus Artium: B.A. (Unisa)

Honneursgrade

Honneurs-Baccalaureus Artium (Kommunikasiekunde): B.A.(Hons.)(Kommunikasiekunde) (UOVS)

Honneurs-Baccalaureus in die Lettere en Wysbegeerte (RAU)

Honneurs-Baccalaureus Artium: Hons.B.A. (Unisa) of B.A.(Hons.) (Rhodes)

Magistergrade

Magister Artium (Kommunikasiekunde): M.A.(Kommunikasiekunde) (UOVS) of M.A.(Komm.) (PU vir CHO)

Magister in die Lettere en Wysbegeerte: M.A. (RAU)

Magister Artium: M.A. (Rhodes, Unisa)

Doktorsgrade

Doctor Philosophiae: D.Phil. (UOVS, PU vir CHO)

Doktor in die Lettere en Wysbegeerte: D.Litt. et Phil. (RAU)

Doktor in die Wysbegeerte: Ph.D. (Rhodes)

Doctor Litterarum et Philosophiae: D.Litt. et Phil. (Unisa)

Diplomas

Universiteitsdiploma in Kommunikasiekunde: U.D.K. (PU vir CHO)

Nagraadse Diploma in Kommunikasie (RAU)

GRADE

Baccalaureus Artium (Kommunikasiekunde): B.A.(Kommunikasiekunde) (Oranje-Vrystaat)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie. Elf kursusse met Kommunikasiekunde as een van die hoofvakke. Die tweede hoofvak word uit die volgende vakke gekies: 'n Moderne taal (Bantoe-tale inbegrepe, Ekonomie, Geskiedenis, Kunstgeskiedenis en Kunstwaardering, Privaatreg, Sielkunde, Sosiologie, Staatsleer, Toegepaste Volkekunde, Volkekunde, Wysbegeerte.

'n Leeskennis van Duits en/of Frans word aanbeveel vir studente wat voornemens is om na graads in Kommunikasiekunde te studeer.

Tikvaardigheid tot minstens die standaard van Tikskrif I word aanbeveel vir studente wat voornemens is om die joernalistiek as loopbaan te kies.

Baccalaureus Artium (Kommunikasiekunde): B.A.(Komm.) (Potchefstroom)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Vier jaar voltydse studie. 'n Student moet in minstens 15 kursusse slaag. 'n Student volg Kommunikasiekunde I en II in die eerste en tweede jaar onderskeidelik en Publisierkunde III en IV en Skakel- en Reklamekunde III en IV in die derde en vierde jaar. Kommunikasiereg word in die tweede en derde jaar gevolg. Die ander kursusse word gekies uit die gewone B.A.-vakke, een waarvan 'n hoofvak moet wees.

Die B.A.(Komm.)-graad verleen toelating tot die studie van die graad M.A.(Komm.).

Baccalaureus in die Lettere en Wysbegeerte: B.A.(Kommunikasie) (Randse Afrikaanse Universiteit)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook p. 59.

Leergang: Drie jaar voltydse studie. Die leergang bestaan uit elf kursusse. Kommunikasieleer is 'n verpligte hoofvak. 'n Tweede hoofvak moet gekies word uit: 'n Taal, Sosiologie, Sielkunde, Opvoedkunde, Ekonomie, Geskiedenis, Kunstgeskiedenis, Bybelkunde, Algemene Taalwetenskap, Wysbegeerte, Volkekunde, Staatsleer, Wiskundige Statistiek, Wiskunde.

Verpligte byvakke is: Sielkunde I; Sosiologie I; Statistiese Metodes A; en vier semesterkursusse in 'n taal of tale.

Baccalaureus in Joernalistiek: B.Joernalistiek (Rhodes)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook p. 32.

Leergang: Drie jaar voltydse studie. Die leergang behels tien kursusse, drie waarvan in Joernalistiek moet wees en drie in die tweede hoofvak gekies uit die gewone B.A.-vakke. Indien dié hoofvak 'n taal is, moet minstens nog 'n kursus in 'n ander taal gevolg word.

Baccalaureus Artium: B.A. (Suid-Afrika)

Toelatingsvereistes: Kyk p. 63.

Leergang: Minstens drie jaar. Studente volg die leergang vir 'n gewone B.A.-graad (kyk p. 63) met Kommunikasiekunde as een van die hoofvakke. Die tweede hoofvak moet een van die volgende wees: Geskiedenis, Kriminologie, Opvoedkunde, Sielkunde, Sosiologie, Staatsleer, 'n Taal, Volkekunde.

Verpligte byvakke is: Linguistiek I òf Wysbegeerte I òf 'n kursus in 'n vak nie onder bogenoemde reeds as tweede hoofvak gekies nie.

DIPLOMAS

Universiteitsdiploma in Kommunikasiekunde: U.D.K. (Potchefstroom)

Toelatingsvereiste: 'n Goedgekeurde Baccalaureusgraad.

Leergang: Een jaar voltydse studie of twee jaar deeltydse studie.

Nagraadse Diploma in Kommunikasie (Randse Afrikaanse Universiteit)

Toelatingsvereiste: 'n Baccalaureusgraad.

Leergang: Twee jaar voltydse studie.

Die Diploma word aangebied vir studente wat nie voorheen in die Kommunikasieleer gestudeer het nie.

Studente moet gedurende die eerste jaar die verpligte byvakke aanvul saam met Kommunikasieleer I en neem gedurende die tweede jaar Kommunikasieleer II en III.

Kyk B.A.(Kommunikasiekunde) (RAU) vir verpligte byvakke.

BEROEPSDIENS

Kommunikasiekunde sal in die jare wat kom 'n rol van al hoe groter betekenis speel met betrekking tot mense- en volkereverhoudinge. Dit ontsluit die nuwe wêreld van die twintigste eeu waarin dinge verbysterend vinnig gebeur en waarin motiewe en doelstellinge van individue en volkere maklik verkeerd geïnterpreteer kan word. Media van kommunikasie soos die koerant, die radio, televisie, die tydskrif en rolprent het ook die wêreld as't ware klein laat word, sodat daar eintlik in min wêrelddele enige geheime oorgebly het.

In dié veranderende wêreld het die mens al hoe meer behoefte aan betroubare inligting oor wat om hom gebeur. Daarom word al hoe hoër eise gestel aan die persoon wat inligting aan ander oordra, en val die klem op wat oorgedra word en hoe dit oorgedra word. Die kommunikasiekundige se taak is dan daarin geleë dat die inligting wat hy of sy oordra, so gestel sal word dat dit die grootste trefkrag sal hê en tot onderlinge begrip en vertroue tussen mens en mens en tussen volk en volk sal lei.

Enkele van die beroepsmoontlikhede waarvoor die student deur Kommunikasiekunde toegerus word, is die joernalistiek, die skakelwese, die reklamewese en die diplomatieke en inligtingsdiens.

- Joernalistiek: Die gebied van die joernalistiek as beroep met sy talle vertakkings word al hoe wyer, en die avontuur en bekoring daarvan al hoe groter. Ofskoon die meeste joernaliste by dagblaaie begin werk, is die joernalistiek nie tot koerante beperk nie. Die radio bied byvoorbeeld uitdagende beroepsgeleenthede. Boonop staan ons land op die vooraand van geweldige ontwikkelinge op kommunikasiegebied met die koms van televisie en die moontlikhede wat dit gaan oopstel. Weens die hoër eise wat aan Televisiejoernaliste gestel word, kan geeneen van hulle van die straat af gehaal word nie; hulle moet deeglik opgelei en vir hul taak toegerus wees. Televisie beteken egter nie die einde van dagblaaie, tydskrifte of die radio nie. Tog sal hierdie media verplig word om hul kommunikasie nog beter en doeltreffender te behartig. Dit sal deeglik opgeleide mense vereis. Hoewel 'n matrikulant deur 'n onderneming as leerlingjoernalis in diens geneem kan word om indiensopleiding te ondergaan, het universiteitsopleiding vandag feitlik noodsaaklik geword, aangesien dit belangrike akademiese agtergrond voorsien en bydra tot die verruiming van kennis van mense en sake. Die gegraduateerde of gediplomeerde geeniet ook gewoonlik voorkeur vir bevordering.

- Skakelwese: Skakelwerk is in Suid-Afrika in sy kinderskoene en die moontlikhede is haas onbeperk. In 'n dinamiese samelewing waarin kompetisie daaglik toeneem, is die opbou van 'n openbare beeld vir 'n maatskappy of ander onderneming onontbeerlik. Feitlik geen groot organisasie kan dit meer bekostig om sonder skakelbeamptes klaar te kom nie.

Almal beseef meer en meer hoe belangrik gesonde verhoudings met die publiek is. Selfs die organisasies wat hul dienste aan ander organisasies verkoop, neem skakelbeamptes in diens. Ander werkgewers is byvoorbeeld plaaslike besture, regerings- en statutêre liggame, internasionale organisasies, universiteite en ander opvoedkundige instellings, welsynsorganisasies, koerante, die SAUK, versekeringsmaatskappye en so meer. Al meer vroue word in hierdie rigting benut en die ondernemende persoon met verbeeldingskrag en bereidheid om hard te werk, vind in die skakelwêreld 'n lonende loopbaan.

Kyk ook p. 361 en p. 365.

Raadpleeg ook Tersiêre Opleiding.

- Reklamewese: Die reklamebedryf is een waarvan die potensiaal, veral in Suid-Afrika, nog lank nie ten volle ontplooi het nie. Soos wat die ekonomie vooruitgaan, sal hierdie bedryf ook van krag tot krag gaan. Die werk is uiters dinamies van aard en die reklamebeampte of advertensie-agent moet sorg dat hy voortdurend tred hou met nuwe wendinge en verwickelinge op dié gebied. Vir die persoon wat belangstel in die behendige en skeppende hantering van tale, lê die wêreld van advertensieskrywer oop. Reklamewerk is egter nie hiertoe beperk nie. Die reklamebeampte word al hoe meer 'n sleutelfiguur in die bekendstelling van 'n onderneming. Vir die persoon wat oor die nodige opleiding en die regte eienskappe beskik, is daar alle geleentheid om mettertyd sy eie onderneming te begin en dié uit te bou tot 'n winsgewende advertensie-agentskap. Die beroep is ook besonder geskik vir dames.

- Diplomatiese en inligtingsdiens: Die bekendstelling van 'n land, sy mense en doelstellings - binnelands en buitelands - stel hoë eise aan die inligtingsbeampte en die diplomaat. Vir die persoon wat in dié rigting belangstel, verskaf die Kommunikasiekunde die nodige agtergrondkennis, veral vir die buitelandse persattaché van die Departement van Inligting. (Kyk ook p. 67.)

Kommunikasiekunde kan ook tot voordeel vir sommige beroepe met ander vakke gekombineer word, soos met Bedryfsielkunde vir die personeelbeampte; met Drama- en Toneelkunde vir die persoon wat die verhoog, die televisieskerm, die rolprentskerm of die mikrofoon as rigting kies; met Biblioteekkunde vir 'n loopbaan in die biblioteekwese; met Sielkunde of Sosiologie vir 'n navorsingspos in diens van byvoorbeeld die RGN.

Raadpleeg ook Tersiêre Opleiding.

KRYGSKUNDE

Universiteit: Stellenbosch

Grade

Baccalaureus in die Krygskunde: B.Mil.

Honneurs-Baccalaureus in die Krygskunde: Hons.-B.Mil.

Magister in die Krygskunde: M.Mil.

GRADE

Baccalaureus in die Krygskunde: B.Mil.

Toelatingsvereistes: Studente moet

- (i) in besit wees van 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling);
- (ii) vir B.Mil.-rigting Lettere en Wysbegeerte Wiskunde op die Standaardgraad geslaag het, en vir B.Mil.-rigting Natuurwetenskappe Wiskunde en Natuur- en Skeikunde op die Standaardgraad; en
- (iii) deur 'n militêre keurraad vir offisiersopleiding aanvaar wees.

Leergang: Drie jaar voltydse studie.

Die B.Mil-graad kan in een van die volgende rigtings gevolg word:

- Lettere en Wysbegeerte
- Natuurwetenskappe
- Handelsvakke.

Al die leergange van die B.Mil-kursus word aan die Militêre Akademie te Saldanha gevolg. Die Militêre Akademie is die setel van die Fakulteit van Krygskunde.

Die B.Mil.-vakke is dieselfde as dié wat die Universiteit aanbied. Die leerplanne is net by die behoeftes van die Suid-Afrikaanse Weermag aangepas met die toevoeging van Lugvaartkunde, Vlootnavigasie, Militêre Reg, Krygsgeskiedenis en Militêre Geografie.

BEROEPSDIENS

'n Loopbaan as offisier in die Staande Mag (Leër, Vloot en Lugmag) is aantreklik, interessant en afwisselend. Die funksie van die offisiërskorps is onder andere dié van organisasie, administrasie, beplanning, asook opleiding van die Burgermag en Kommando's. Die groot aantal offisiërsposte waarvoor voorsiening gemaak word, bied besonder goeie vooruitsigte aan enige jongman. Hierby is dit duidelik dat die Staande Mag, as gevolg van die talle bykomende voordele aan personeel, beslis vir die materiële, liggaamlike en geestelike welsyn van sy lede sorg.

Na suksesvolle voltooiing van die opleidingskursus word kandidaatoffisiere met die rang van luitenant aangestel. Indien hulle verder in die vereiste bevorderingskursusse slaag, kan hulle normaalweg tot die hoogste range bevorder word. Hierby is die B.Mil.-graad hieltemal aanneemlik in die burgerlike lewe en kan dit ook tot nagraadse studie aan enige Suid-Afrikaanse universiteit lei.

Kyk ook Tersiêre Opleiding vir regstreekse offisiërsopleiding.

LANDBOU

Universiteite: Natal, Oranje-Vrystaat, Pretoria, Stellenbosch

Grade

Baccalaureus Scientiae Agriculturae: B.Sc.Agric. (Natal, UOVS)

Baccalaureus in Landbou: B.Sc.(Agric.) (UP)

B.Sc. in Landbou (US)

Baccalaureus Agriculturae: B.Agric. (UOVS)

Baccalaureus in Landbou (Educationis): B.Sc.(Agric.)(Ed.) (UP)

B. in Landbou-onderwys (US)

B. in Landboubestuur (US)

Honneursgrade

Honneurs-Baccalaureus Scientiae Agriculturae: B.Sc. Agric.(Hons.) (UOVS)

Honneurs-Baccalaureus Agriculturae: B.Agric.(Hons.) (UOVS)

Baccalaureus Honores in Landbou: B.Sc.(Agric.)(Hons.) (UP)

Baccalaureus Honores Institutionis Agrariae: B.Inst.Agrar.(Hons.) (UP)

Hons.-B.Sc. in Landbou (US)

Hons.-B. in Landboubestuur (US)

Magistergrade

Magister Scientiae Agriculturae: M.Sc.Agric. (Natal, UOVS)

Magister Agriculturae: M.Agric. (UOVS)
Magister in Landbou: M.Sc.(Agric.) (UP)
Magister Institutionis Agrariae: M.Inst.Agrar. (UP)
M.Sc. in Landbou (US)
M. in Landboubestuur (US)

Doktorsgrade

Doctor Scientiae Agriculturae: D.Sc.Agric. (Natal, UOVS)
Doktor in die Wysbegeerte: Ph.D. (Natal)
Doktor in Landbou: D.Sc.(Agric.) (UP)
Doctor Institutionis Agrariae: D.Inst.Agrar. (UP)
Ph.D.(Landbou) (US)
D.Sc. in Landbou (US)
Ph.D.(Landboubestuur) (US)

GRADE

Baccalaureus Scientiae Agriculturae: B.Sc.Agric. of

Baccalaureus in Landbou: B.Sc.(Agric.) of

B.Sc. in Landbou

(Natal, Oranje-Vrystaat, Pretoria, Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasie=
vrystelling).

Addisionele vereistes:

Natal: Kyk p. 132.

Oranje-Vrystaat: 'n Slaagsyfer in Wiskunde op die Standaardgraad.

Pretoria: Kyk p. 164.

Stellenbosch: Slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Standaardgraad.

Leergang: Vier jaar voltydse studie. Eerstejaarsvakke sluit in onder andere Chemie, Fisika, Wiskunde, Biologie of Plantkunde of Dierkunde, maar verskil na gelang van keuse van hoofvakke.

Aan die begin van die tweede jaar begin studente met die studie van een of twee van die volgende hoofvakke, wat in sommige gevalle van een universiteit na 'n ander verskil, aangesien elke universiteit sy kursusse by die streek aanpas waarin dit geleë is: Akkerbou of Agronomie, Biochemie, Biometrie, Dierewetenskappe of Diereproduksie, Entomologie, Erflikheidsleer of Genetika, Grondkunde, Landbou-ekonomie, Landbou-weerkunde (Natal, UOVS), Mikrobiologie, Plantsiektekunde, Pluimveekunde, Pomologie (US), Siertuinboukunde en Blomverbouing (US) of Tuinboukunde (Natal, UP), Suiwelkunde, Weidingsleer, Wingerdbou en Wynkunde (US).

Daar kan van kandidate vereis word om vir 'n sekere tydperk gedurende die universiteitsvakansies van die derde en/of vierde studiejaar praktiese werk op 'n goedgekeurde plaas of ander plek te doen.

Die Universiteite van Natal, Pretoria en Stellenbosch bied Landbou-ingenieurswese aan onder die Fakulteit Ingenieurswese (kyk p. 344) en die Universiteit van die Oranje-Vrystaat as een van die vakke in die Fakulteit Landbou.

Baccalaureus Agriculturae: B.Agric. (Oranje-Vrystaat)

Toelatingsvereiste: Soos vir B.Sc.Agric.

Leergang: Drie jaar voltydse studie. Daar is vier verskillende leergange:

- Plante/Diereringting, wat ontwerp is vir die opleiding van boere, onderwysers en bedryfsadviseurs.
- Plante/Diereringting/Beskermingsleer, wat ontwerp is vir bedryfsadviseurs.
- Suiwel/Veekunde/Mikrobiologie, wat ontwerp is om in die behoeftes van suiweltegnoloë, bedryfsadviseurs en boere te voorsien.
- Besproeiingsleer: Hierdie leergang voorsien in die behoeftes van voornemende besproeiingsboere.

Baccalaureus in Landbou (Educationis): B.Sc.(Agric.)(Ed.) (Pretoria)

Toelatingsvereiste: Kyk p. 164.

Leergang: Vier jaar voltydse studie. Eerstejaarsvakke behels Chemie, Fisika, Biologiese Wetenskap, Pedagogiek I en Landboukunde. Derdejaarsvakke sluit in onder andere Plantproduksie, Diereproduksie, Suiweltegnologie, Genetika, Entomologie. Die vierde jaar sluit net opvoedkundige vakke in, met Pedagogiek III as hoofvak.

B. in Landbou-onderwys (Stellenbosch)

Toelatingsvereiste: Soos vir B.Sc. in Landbou.

Leergang: Vier jaar voltydse studie. Eerstejaarsvakke is Biologie, Chemie, Fisika en Wiskunde. Tweede- en derdejaarsvakke sluit in onder andere Akkerbou - Weiding, Dierefisiologie, Diereproduksie, Grondkunde, Biometrie en Erflikheidsleer. Die vierde jaar behels die volledige kursus soos voorgeskryf vir die Hoër Onderwysdiploma. (Kyk p. 208.)

B. in Landboubestuur (Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde en 'n natuurwetenskapvak op die Standaardgraad.

Leergang: Drie jaar voltydse studie.

Alle studente moet vóór voltooiing van die derde jaar van die kursus vir ten minste twee maande van hulle somer- en/of wintervakansies praktiese werk op 'n goedgekeurde plaas of by 'n ander instansie doen.

Die twee hoofvakke is Bestuur en Beplanning III en Bedryfseconomie III. Ander vakke sluit in, onder andere, Beginsels van Landbouwetenskap, Vrugteproduksie, Diereproduksie, Dieresiektes, Handelsreg, Personeelbestuur, Openbare Administrasie I.

Hierdie kursus is bedoel om aan persone wat wil gaan boer of hulle as boerderybestuurders wil bekwaam, 'n deeglike opleiding in die bestuur en beplanning van boerdery te gee.

Baccalaureus Honores Institutionis Agrariae: B.Inst.Agrar.(Hons.) (Pretoria)

Toelatingsvereistes: 'n Kandidaat moet in besit wees van een van die volgende grade of tot die status daarvan toegelaat wees: Drie- of vierjarige grade in Landbou; B.Sc.(Ing.)(Agric.); B.V.Sc.; B.Sc.(Huishoudkunde); B.Sc.(Dieetkunde); B.Sc.(Bosbou).

Leergang: Minstens een akademiese jaar. Die leergang sluit in Agrariese Voorligting en ander voorgeskrewe vakke wat aanbeveel mag word.

Studente moet gedurende universiteitsvakansies prakties of navorsingswerk of spesiale studie doen.

BEROEPSDIENS

Navorsing na beter, meer produktiewe en meer ekonomiese metodes van primêre voedselproduksie is een van die hofterreine van arbeid vir gegradueerdes in Landbou. Daarom bied die landbou so 'n groot verskeidenheid van moontlikhede, nie slegs in die boerdery self nie, maar in die handel, nywerheid, navorsing, onderwys, bewaring en ander gespesialiseerde dienste. Veral wat betref hierdie nie-boerderyaspekte van landbou word beroepe steeds gespesialiseerd en in baie gevalle het professionele opleiding op universiteitsvlak nodig geword. Die kursusse bied 'n basis vir navorsing en die praktiese toepassing daarvan. In die nywerhede, byvoorbeeld fabrieke wat landboubenodighede fabriseer, word landbougegradueerdes geplaas in die poste van tegniese diensbeamptes, verkoopsverteenvoerders, navorsingsbeamptes, produksievoorligtingsbeamptes en dergelyke meer. Daar word egter beklemtoon dat die verwerwing van 'n B.-graad in Landbou slegs die eerste stap in die rigting van professionele opleiding verteenwoordig. Veral op die gebied van navorsing is nagraadse studie uiters belangrik. Dit is eweens nodig dat kandidate by voorbaat deeglik sal besin oor die vakke vir 'n besondere rigting wat hulle wil volg of, omgekeerd, sekerheid sal verkry oor werkgeleenthede indien hulle spesifieke vakke op die oog het.

Die volgende is sommige van die hoofstudierigtings of -vakke en 'n aanduiding van werkgeleenthede:

Agronomie (Akkerbou): Dit verskaf die nodige agtergrond aan voornemende boere wat die grond gaan bewerk. Die private sektor bied goeie betrekkings as verkoopsagente of navorsers in diens van kunsmismaatskappye, saadadviseurs, waardeerders en kontroleurs van gewasse, bestuurders van groot boerderyondernemings, ens. By die verskillende Beheerrade bestaan daar 'n vraag na inspekteurs en tegnoloë, terwyl meulenaars, bakkers, mouters en firmas wat spuitstowwe soos onkruidodders vervaardig en versprei, persone met agronomie as vak nodig het. Koöperasies het ook steeds meer produktebestuurders met opleiding in hierdie rigting nodig. Die Departement van Landbou-tegniese Dienste neem akkerboukundiges in diens om navorsing te doen in verband met nuwe variëteite, verbouingspraktyke, oesmetodes ens., terwyl ander voorligting op hierdie gebied onderneem. Die Departement van Bantoe-administrasie en -ontwikkeling se afdelings Landbou en Ontwikkelingswerk neem landboukundiges in diens vir die ontwikkeling van die tuislande.

Biochemie: Kyk p. 171.

Biometrie: Biometrici se vernaamste taak is om navorsers en bestuurders te help met die beplanning van eksperimente en opnames en die ontleding van resultate. Hulle beklee gewoonlik poste aan landboukundige, biologiese en mediese navorsingsinstitute; aan universiteite as dosente in Biometrie sowel as in Wiskundige Statistiek, en aan navorsingsdepartemente van groot kommersiële firmas. Hulle tree ook in diens van die WNNR, SABS en onderwysdepartemente. Die Staatsdiens bied verskeie werkgeleenthede en veral in die Departement van Landbou-tegniese Dienste bestaan daar geleentheid om eie navorsing in verskillende rigtings te onderneem.

Dierefisiologie: Fisioloë kan poste beklee as dosente aan verskeie universiteite waar dierlike en menslike fisiologie gedoseer word; as onderwysers in vakke soos fisiologie, biologie, biochemie en landbou; as konsultante of navorsers in diens van firmas wat voer produseer, koöperasies, voedingsnavorsingsinstitute en laboratoria; as vakkundige beamptes verbonde aan institute waar biologiese en/of biochemiese navorsing gedoen word soos in die Staatsdepartemente van Landbou-tegniese Dienste, Landbou-ekonomie en -be-marking, Bantoe-administrasie en -ontwikkeling, Gesondheid, die Transvaalse Provinsiale Administrasie en die Administrasie van Suidwes-Afrika.

Kyk ook Fisiologie, p. 175.

Dierewetenskappe/Diereproduksie/Veekunde: Studente wat in diere belangstel en hierdie studierigting gekies het, het 'n wye keuse wat loopbane betref. Afgesien van die praktiese veeboerdery is daar byvoorbeeld geleenthede in diens van die beheerrade, private bemerkingsorganisasies, veevoermaatskappye, die Suid-Afrikaanse Vereniging vir Dierproduksie, groot boerderymaatskappye en koöperasies. Die Departement van Landbou-tegniese Dienste bied ruim geleentheid vir navorsing in verskillende vertakkinge van die Veekunde. Navorsers kan in algemene veeteelt, fisiologie, voeding, teling, vleis- of woltegnologie spesialiseer. Die vernaamste sentrum hiervoor is die Navorsingsinstituut

vir Vee- en Suiwelkunde naby Pretoria. Hierbenewens is daar heelwat ander vakkundiges wat met die administrasie en beheer van nasionale skemas belas is. Ander Staatsdepartemente wat veekundiges in diens neem, is dié van Landbou-ekonomie en -bemarking en Bantoe-administrasie en -ontwikkeling.

Dierkunde: Kyk p. 173.

Entomologie (Insektekunde): Kyk p. 174.

Fisika: Kyk p. 174.

Genetika (Erflikheidsleer): Kyk p. 175.

Grondkunde en Plantvoeding: Vir grondkundiges bestaan daar feitlik onbeperkte werkgeleenthede waarvan hier slegs n paar genoem word. Die Departement van Landbou-tegniese Dienste neem grondkundiges in diens vir navorsingswerk en byvoorbeeld opnames en beplanning van besproeiingskemas, opvanggebiede en plase. Proewe word met bemestingstowwe gedoen, terwyl vakvoorligtingsbeamptes boere adviseer oor bemesting, besproeiing, grondbewerking ens.

Ook kunsmisfirmas het grondkundiges nodig om navorsingsprojekte uit te voer of voorligting aan boere te gee, terwyl groot ondernemings soos die suikernywerheid, groot boerdery-ondernemings, ingenieursfirmas en koöperasies grondkundiges vir verskillende doeleindes nodig het. Buite die landbou word toepassing gevind vir die gespesialiseerde kennis van grondkundiges by stads- en streeksbeplanning, padbou, prospektering vir minerale en bodemopnames. Universiteite, kolleges vir gevorderde tegniese onderwys en sekondêre skole met 'n landboustudierigting het poste in Grondkunde vir dosente en onderwysers. Vir persone wat die boerdery as beroep kies, is hierdie vakrigting onmisbaar.

Landboubestuur: Kyk p. 356.

Landbou-ekonomie: Daar bestaan tans 'n groot tekort aan landbou-ekonome, hoofsaaklik as gevolg van die klem op wetenskaplike tegnieke in die boerdery wat steeds die probleem van produksiekoste na vore bring. Die opleiding is dan ook hoofsaaklik bedoel vir voornemende navorsers, voorligtingsbeamptes, landbou-ondernemers, landbou-administrateurs, dosente en onderwysers.

Landbou-ekonome kan onder andere in diens geneem word as: Onderwysers en navorsers aan landboukolleges en universiteite; ekonome in die Staatsdepartemente van Landbou-ekonomie en -bemarking (afdelings landbouproduksie-ekonomie, landboubemarkingsnavorsing, koöperasies en die Nasionale Bemarkingsraad), Landbou-tegniese Dienste en Bantoe-administrasie en -ontwikkeling (verskeie afdelings); navorsers en/of adviseurs in diens van die WNNR, die NOK, landboubeheerrade, landbou-organisasies soos die SALU, Landbou-koöperasies en private instansies soos maatskappye wat kunsmis en landboubenodighede voorsien, chemiese bedrywe, en so meer. 'n Landbou-ekonoom kan ook as 'n private konsultant optree.

Kyk ook Ekonomie, p. 126.

Landbou-ingenieurswese: Kyk p. 348.

Landbou-onderwys: Gekwalifiseerde landbou-onderwysers word deur die Provinsiale Onderwysdepartemente in diens geneem vir aanstelling aan sekondêre skole waaraan 'n landboustudierigting verbonde is. Die onderwysersopleiding tesame met nagraadse kwalifikasies is ook 'n ideale kombinasie vir die poste verbonde aan landboukolleges, kolleges vir gevorderde tegniese onderwys en universiteite. Landbou-onderwysers wat oor die vereiste ervaring beskik, kan ook deur die Departement van Nasionale Opvoeding as Landsdiensbeamptes aangestel word. In dié hoedanigheid tree hulle dan op as organiseerders van die Landsdiensbeweging en moet hulle die belange daarvan bevorder.

Landbouweerkunde: Landbouweerkundiges in die Departement van Landbou-tegniese Dienste doen navorsing oor 'n wye veld en in 'n verskeidenheid van gespesialiseerde rigtings soos byvoorbeeld straling, beweging van lug, hitte, vogtigheid en klimaatstoestande. Hulle tree normaalweg op in medewerking met navorsers in ander vakrigtings van die landbou.

Gevolgtlik word die hele veld tussen basiese navorsing en praktiese toepassing van kennis gedek.

Hoewel dit 'n jong vakrigting is, het Landbouweerkunde vandag een van die lewenskragtige vertakkinge van weerkunde in Suid-Afrika geword. Dit bied interessante werk- en navorsingsgeleenthede vanweë die land se uiterstes van hitte, koue, reën en droogte, asook sonskyn, ryp, hael en selfs kapok. Die navorsers het dus die geleentheid om 'n belangrike bydrae op landbougebied te lewer. Hierbenewens bied die landboufakulteite van die betrokke twee universiteite betrekkings as dosente aan opgeleide landbouweerkundiges.

Kyk ook Weerkunde, p. 181.

Mikrobiologie: Kyk p. 177.

Plantkunde: Kyk p. 179.

Plantsiektekunde (Plantpatologie): Hierdie gespesialiseerde studierigting open die weg na interessante loopbane in landbou, byvoorbeeld as voorligters of adviseurs in die Departement van Landbou-tegniese Dienste, die verskillende Beheerrade soos die Sagtevrugte-, Sitrus- en Mielierade, private ondernemings soos die Suikerinstituut, inmaakondernemings en firmas wat in plaagbeheermiddels handel dryf. Die Departement van Landbou-tegniese Dienste bied verder besondere geleentheid aan navorsers by die verskillende Navorsingsinstitute soos dié vir Plantebeskerming, Vrugte en Voedseltegnologie, Wynbou en Wynbereiding, Sitrus en Subtropiese Vrugte, Tuinbou en Tabak. Behalwe poste wat bestaan vir dosente, word deur verskillende universiteite ook ruim voorsiening vir navorsing gemaak. Onderwys kan ook in Biologiese vakke aan skole en landboukolleges gegee word. Gegradeerdes kan verder in die private diens tree van eienaars van groot plase of plantasies, kwekerye en so meer.

Pluimveekunde: Hierdie vakrigting dek die wye veld van bestuur, voeding, teling en die verwerking en preserving van pluimveeprodukte. Die meeste pluimveekundiges aanvaar betrekkings in die Staatsdepartemente van Bantoe-administrasie en -ontwikkeling, Landbou-ekonomie en -bemarking en van Landbou-tegniese Dienste. Laasgenoemde departement bied onder andere poste aan voorligters en navorsers wat byvoorbeeld in voeding, teling of fisiologie gespesialiseer het. Gegradeerdes word ook in die hoedanigheid van navorsers of adviseurs in diens geneem deur byvoorbeeld Onderstepoort, die veevoervaardigingsbedryf, die Suid-Afrikaanse Pluimveevereniging, die handel wat gemoeid is met geneesmiddels en verwante produkte, groot telersondernemings en ondernemings wat eiers en slaghoenders produseer. Poste vir dosente in Pluimveekunde bestaan aan sekere universiteite en die meeste landboukolleges.

Skeikunde: Kyk Chemie, p. 172.

Suiwelkunde: Vanweë die skaarste aan gekwalifiseerde Suiwelkundiges en van voedselkundiges in die algemeen, bestaan daar voldoende werkgeleenthede vir afgestudeerdes, byvoorbeeld as navorsers aan die Navorsingsinstituut vir Vee- en Suiwelkunde in die Departement van Landbou-tegniese Dienste en die WNNR se Instituut vir Voedselnavorsing; as tegniese beheer- en ontwikkelingsbeamptes in die Suiwelbedryf en ook in die Voedselbedryf in die algemeen (private ondernemings); as standardebeamptes by die SABS; as fabrieksvoorligters en gehaltebeheerbeamptes in die Departement van Landbou-tegniese Dienste of by private ondernemings; as dosente en navorsers aan universiteite en ook aan opleidingsinrigtings soos die Landboukollege te Glen waar tegnisi vir die suiwelbedryf opgelei word.

Ander moontlike werkgewers is byvoorbeeld munisipaliteite, die Suiwelraad en ondernemings wat suiweltoerusting vervaardig en verkoop.

Tuinboukunde/Siertuinboukunde en Blomverbouing: Die studie in Tuinboukunde omsluit die verbouing van tuingewasse en van die wyse waarop die natuurlike gedrag van plante verander kan word om aan die mens se behoeftes te voldoen. Siertuinboukunde en Blomverbouing is die studierigting wat te doen het met plante wat oor sulke besondere verfraaiingseienskappe beskik dat hulle kommersieel en ekonomies belangrik is, of nog kan word. Werkgeleenthede kan gevind word as eienaars van 'n eie boerderyonderneming; in diens

van munisipaliteite of kommersiële kwekerie van sierplante en snyblom- en potplantverbouers; as bestuurders en/of tegniese adviseurs van groot vrugte-, groente- en blomplase; as voorligtingsbeamptes in diens van die Departemente van Landbou-tegniese Dienste en Bantoe-administrasie en -ontwikkeling, die SA Sitrusraad en maatskappye wat landbouchemikalieë en kunsmisstowwe vervaardig.

Studente word aangemoedig om nagraads te studeer om in diens geneem te word as navorsers aan die navorsingsinstitute onder beheer van die Sitrusraad, die Sagtevrugte- en Droëvrugterade, die groot vrugtekwekersmaatskappye, kommersiële firmas en die Departement van Landbou-tegniese Dienste (vir Tuinbou te Pretoria, vir Vrugte en Voedseltegnologie te Stellenbosch, vir Sitrus en Subtropiese Vrugte te Nelspruit en vir Wynbou en Wynbereiding te Stellenbosch).

Pomologie (Vrugtekunde) geniet as onderafdeling van Tuinbou, besondere aandag aan die Universiteit van Stellenbosch. Loopbaanvooruitsigte is ongeveer dieselfde as dié hierbo genoem. Die ontwikkeling van reuse-besproeiingskemas in dele van die land sal die vraag na tuinboukundiges en pomoloë beslis in die toekoms laat toeneem.

Vrugtewetenskap: Kyk Voedselwetenskap, p. 407.

Weidingsleer: Weidingsleerstudente is in baie gevalle voornemende boere. Aangesien hulle ook besondere kennis van verwante vakke soos Veekunde, Akkerbou, Grondkunde, Biochemie, Mikrobiologie en Genetika moet hê, sal beroepsmoontlikhede in hierdie geval in 'n groot mate ooreenstem met dié vir genoemde vakrigtings. Die leergang maak voorsiening vir basiese kennis vir navorsing wat onderneem kan word aan enige landbounavorsingsinstituut van byvoorbeeld die Departement van Landbou-tegniese Dienste, 'n universiteit of 'n wetenskaplike, landboukundige of nywerheidsorganisasie. Weidingkundiges kan ook aangestel word as voorligtingsbeamptes; as dosente by landboukolleges en landboufakulteite; as tegniese verkoopsmanne vir vervaardigers van landbouchemikalieë, saad of voedsel en ook as bestuurders van groot landbouondernemings. Poste bestaan ook in die Departement van Bantoe-administrasie en -ontwikkeling.

Wingerdbou en Wynkunde: Beroepsmoontlikhede in hierdie rigting word in 'n groot mate gevind in die drie rigtings waaruit die student kan kies, naamlik:

- Die algemene rigting, wat voldoen aan die vereistes van die boerderybedryf, wynbereidingspraktyk en landbouvoorligting;
- Wingerdbou, wat aan die vereistes vir navorsing en voorligting voldoen;
- Wynkunde, wat voldoen aan vereistes vir wynekundige navorsing, die wynbereidingspraktyk en wyntegnologie.

Werkgeleenthede kan gevind word as wynekundige voorligtings-, inspeksie- of navorsingsbeamptes in die Departement van Landbou-tegniese Dienste en Bantoe-administrasie en -ontwikkeling; as selfstandige boere of bestuurders van wingerdplase; as wynmakerbestuurders, kwaliteitsbeheerbeamptes, wyntegnoloë, produksiebestuurders, wynekelderbestuurders en so meer in die wynbedryf.

Ander werkgeleenthede vir landboukundiges:

- Landbouvoorligting: 'n Aanduiding van landbouvoorligting as loopbaan is reeds by sommige studierigtings of vakke aangetoon. Die rigting omvat 'n groot verskeidenheid van aktiwiteite wat gerig is op die optimale ontginning van die land se landboupotensiaal. Die voorligter se taak kom daarop neer om boere bewus te maak van die leentes in hul bedryf en om hulle te motiveer tot groter doeltreffendheid in boerderymetodes.

In die Departement van Landbou-tegniese Dienste kan gegradeerdes in landbou in enigeen van die sowat 120 voorligtingskantore as voorligtingsbeamptes aangestel word. Ongeveer dieselfde aantal vakkundiges behartig die werk in die private sektor of in diens van landboukoöperasies. Meer mense is egter dringend nodig om hierdie omvangryke, noodsaaklike en interessante diens aan boere te lewer. In die Departement van Bantoe-administrasie en -ontwikkeling bestaan geleenthede vir soortgelyke dienste.

- Plant- en saadbeheer: Die Afdeling Plant- en Saadbeheer van die Departement Landbou-tegniese Dienste neem gegraduateerde in diens om onder andere die gehalte van saad te beheer wat in Suid-Afrika bemark of uitgevoer word en vir die beoordeling van nuwe variëteite.

- Publikasies: Vir aanstelling in hierdie afdeling vereis die Departement van Landbou-tegniese Dienste 'n toepaslike universiteitsgraad soos B.Sc.(Agric.) of B.A. met byvoorbeeld Afrikaans, Engels, Kommunikasiekunde, Sielkunde, of Sosiologie as hoof- of aanvullende vakke. Kyk ook p. 70.

- Skakeling: Die Departement van Landbou-tegniese Dienste het poste vir skakelbeamptes in die volgende drie rigtings: Vakkundige Beampte (Skakeling) (vereiste: B.Sc.(Agric.)-graad, of 'n ander graad tesame met ervaring op die gebied van skakeldienste en met 'n landboukundige agtergrond); Ingenieur (Skakeling) (vereiste: soos vir ingenieur); Veearts (Skakeling) (vereiste: soos vir veearts).

Raadpleeg ook Tersiere Opleiding.

LANDMEETKUNDE

Universiteite: Kaapstad, Natal, Pretoria, Witwatersrand

Grade

Baccalaureus Scientiae in Landmeetkunde: B.Sc.(Landmeetkunde) (UK, Natal)

Baccalaureus in Landmeetkunde: B.Sc.(Landmeetkunde) (UP)

Baccalaureus Scientiae in Ingenieurswese: B.Sc.(Ing.) (Wits)

Magistergrade

Magister Scientiae in Ingenieurswese: M.Sc.(Ing.) (UK, Wits)

Magister Scientiae in Landmeetkunde: M.Sc.(Landmeetkunde) (Natal)

Magister in Landmeetkunde: M.Sc.(Landmeetkunde) (UP)

Doktorsgrade

Doktor in die Wysbegeerte: Ph.D. (UK, Natal, Wits)

Doctor Scientiae in Ingenieurswese: D.Sc.(Ing.) (UK, Wits)

Doctor Scientiae in Landmeetkunde: D.Sc.(Landmeetkunde) (Natal)

Doktor in Landmeetkunde: D.Sc.(Landmeetkunde) (UP)

Doktor in Ingenieurswese: D.Ing. (Wits)

Diploma

Diploma in Fotogrammetrie (Natal)

GRADE

Baccalaureus Scientiae in Landmeetkunde: B.Sc.(Landmeetkunde) of

Baccalaureus in Landmeetkunde: B.Sc.(Landmeetkunde) of

Baccalaureus Scientiae in Ingenieurswese: B.Sc.(Ing.)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Kaapstad: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad.

Natal: Kyk p. 132.

Pretoria: Kyk p. 164.

Witwatersrand: Slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Hoër Graad of minstens 60 persent op die Standaardgraad. Applikante word aangeraai om dié vakke op die Hoër Graad aan te bied.

Leergang: Vier jaar voltydse studie. Die leergang sluit in onder andere die volgende vakke: Landmeetkunde, Stadsbeplanning, Aardbolkunde, Wiskunde, Toegepaste Wiskunde, Fisika. Sommige universiteite sluit kursusse in Sterrekunde by die leergang in.

Kandidate moet praktiese veldwerk onder toesig van 'n landmeter gedurende die universiteitsvakansies verrig.

Die eksamens vir die graad in Landmeetkunde word deur die Raad vir die Erkenning van Landmeterseksamens erken as geskik vir die teoretiese opleiding wat kragtens die Opmetingswet, 1927 (Wet Nr. 9 van 1927 soos gewysig) vereis word.

Gegradueerdes in Landmeetkunde mag na 'n tydperk van 270 werksdae onder toesig van 'n geregistreerde landmeter en na voltooiing van die Proefmeting vereis deur die Opmetingsraad, as gekwalifiseerde landmeters geregistreer word.

DIPLOMA

Diploma in Fotogrammetrie (Natal)

Toelatingsvereistes: 'n Kandidaat moet in besit wees van 'n goedgekeurde graad, professionele kwalifikasies in Siviele Ingenieurswese of Landmeetkunde of ander aanneemlike kwalifikasies.

Leergang: Een jaar voltydse of ten minste twee maar nie meer nie as drie jaar deeltydse studie.

'n Kandidaat moet die voorgeskrewe praktiese werk voltooi en die eksamens in Fotogrammetrie aflê.

BEROEPSDIENS

Die opvatting dat 'n landmeter iemand is wat daar langs die pad deur 'n instrument loer of met 'n voertuig ry, gelaai met gekleurde paaltjies, is beslis nie meer verteenwoordigend van die aktiwiteite van hierdie professie nie. Alhoewel hy verplig is om 'n groot deel van sy tyd buitenshuis deur te bring, word sy werk vandag met behulp van lugfoto's en elektroniese of optiese meetmetodes na 'n kantoor verplaas om daar met behulp van moderne metodes afgehandel te word.

In die Republiek, waar die proses van verdeling en onderverdeling, die beplanning van nuwe stede, bou van paaie en so meer nog lank sal voortduur, is die werkvooruitsigte vir landmeters feitlik onbeperk. Staatsdepartemente neem landmeters in diens om verskeie pligte te vervul. In die Natalse Provinsiale Administrasie is landmeters in die kantoor van die Privaatdorperaad belas met die onderverdeling van grond en die aanleg en uitbreiding van stede. In die Departement van Landboukrediet en Grondbesit werk landmeters in die Opmetingsafdeling, in die kantoor van die landmeter-generaal en in die driehoeksmetingkantoor se geodetiese tak, topografiese tak, Suidwes-Afrikatak en kartografiese tak. Ander Staatsdepartemente wat landmeters in diens neem, is dié van Gemeenskapsbou, Bantoe-administrasie en -ontwikkeling, Waterwese en Vervoer. Werkgeleenthede vir landmeters bestaan ook by die Spoorweë, munisipaliteite van groot stede, Evkom, die Randwaterraad, die myne, die WNNR en universiteite. Nadat ruim ervaring opgedoen is, kan daar met 'n private praktyk, gewoonlik saam met andere, begin word.

LANDSKAPARGITEKTUUR

Universiteit: Pretoria

Grade

Baccalaureus in Landskapargitektuur: B.L.

Magister in Landskapargitektuur: M.L.

GRAAD

Baccalaureus in Landskapargitektuur: B.L.

Toelatingsvereistes: Kyk p. 164.

Leergang: Die leergang strek oor vier jaar. 'n Kandidaat moet gedurende die eerste drie studiejare sy volle tyd aan die studie vir die graad wy, terwyl hy gedurende die vierde studiejaar voltyds in die diens van 'n landskapargitek of 'n verwante bedryf werk-saam moet wees. Gedurende die universiteitsvakansies van die vierde jaar mag 'n studie-reis as deel van die studie vir die vierde jaar onderneem word. 'n Verslag oor die studiereis moet na voltooiing daarvan voorgelê word.

Kandidate word aangeraai om praktiese ondervinding op te doen deur tydens universiteitsvakansies gedurende die eerste drie studiejare in diens van 'n landskapargitek of 'n verwante bedryf werksaam te wees.

Die leergang behels onder andere die volgende kursusse: Landskapargitektuur IV; Publieke Administrasie II; Omgewingsgeskiedenis III; Tuinbou II; Stadsaanleg; Plantkunde I; Grondkunde; Boutegnologie.

BEROEPSDIENS

Landskapargitektuur sluit in beplanning en aanbevelings ten opsigte van terreine of areas om dié so doeltreffend en aantreklik as moontlik te maak. Die werk impliseer besondere samewerking met ingenieurs, munisipale beamptes, tuinboukundiges en ander. Dit bied ook geleentheid vir spesialisasie in beplanning en uitlê van byvoorbeeld parke en speelterreine, skool- en universiteitsterreine, sake-sentra, paaie en so meer.

Die grootste werkverskaffers is die Staatsdiens, Provinsiale Administrasies en munisipaliteite. 'n Private praktyk bied besondere vooruitsigte, aangesien baie instansies wat hierdie dienste nodig het, nie 'n voltydse argitek in diens het nie.

LIGGAAMLIKE OPVOEDKUNDE/OPVOEDING

Universiteite: Oranje-Vrystaat, Potchefstroom, Pretoria, Rhodes, Stellenbosch

Grade

Baccalaureus Artium (Liggaamlike Opvoeding): B.A.(L.O.) (UOVS, Rhodes)

Baccalaureus Scientiae met Liggaamlike Opvoedkunde: B.Sc. (PU vir CHO)

Baccalaureus in Lettere en Wysbegeerte in Liggaamlike Opvoedkunde: B.A.(L.O.) (UP)

Baccalaureus in Lettere en Wysbegeerte (Educationis)(Liggaamlike Opvoedkunde): B.A.(Ed.)(L.O.) (UP)

B.A.-graad en die B.Sc.-graad (met Liggaamlike Opvoedkunde as een van die hoofvakke) (US)

Honneursgrade

Honneurs-Baccalaureus Artium (Liggaamlike Opvoeding): B.A.(Hons.)(L.O.) (UOVS)

Honneurs-Baccalaureus Scientiae: Honns.B.Sc. (PU VIR CHO)

Baccalaureus Honores in Lettere en Wysbegeerte in Liggaamlike Opvoedkunde:
B.A.(L.O.)(Hons.) (UP)

Baccalaureus Artium met Honneurs: B.A.(Hons.) (Rhodes)

Hons.-B. in Liggaamlike Opvoedkunde (US)

Magistergrade

Magister Artium (Liggaamlike Opvoeding): M.A.(L.O.) (UOVS)

Magister Scientiae: M.Sc. (PU vir CHO)

Magister in Lettere en Wysbegeerte in Liggaamlike Opvoedkunde: M.A.(L.O.) (UP)

Magister Artium: M.A. (Rhodes)

M. in Liggaamlike Opvoedkunde (US)

Doktorsgrade

Doctor Philosophiae: D.Phil. (UOVS)

Doctor Scientiae: D.Sc. (PU vir CHO)

Doktor in Wysbegeerte: D.Phil. (UP)

Doktor in die Wysbegeerte: Ph.D. (Rhodes)

Ph.D. (Liggaamlike Opvoedkunde) (US)

B.-graadkursus in Primêre Onderwys met spesialisasie in Liggaamlike Opvoedkunde (US)
(Kyk OPVOEDKUNDE p.208.)

Diplomas

Diploma in Liggaamlike Opvoedkunde (Rhodes)

Die volgende universiteite bied 'n vierjarige onderwysersdiplomakursus aan met Liggaamlike Opvoeding as een van die spesialiteitsrigtings: Oranje-Vrystaat, Port Elizabeth, Pretoria, Randse Afrikaanse Universiteit, Stellenbosch, Witwatersrand. Kyk OPVOEDKUNDE.

GRADE

Baccalaureus Artium (Liggaamlike Opvoeding): B.A.(L.O.) of

Baccalaureus in Lettere en Wysbegeerte in Liggaamlike Opvoedkunde: B.A.(L.O.) of

B.A.-graad met Liggaamlike Opvoedkunde

(Oranje-Vrystaat, Pretoria, Rhodes, Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). 'n Mediese sertifikaat word vereis.

Addisionele vereistes:

Pretoria: Kyk p. 57.

Rhodes: Kyk p. 32.

Leergang: Drie jaar voltydse studie. Studente volg die leergang vir die gewone B.A.-graad met Liggaamlike Opvoedkunde as een van die vereiste twee hoofvakke.

Voornemende onderwysers/esse kan na voltooiing van die graadkursus 'n eenjarige onderwysersdiplomakursus volg.

Die Universiteit van Pretoria sluit ook twee kursusse in Bio-Ergonomika en een kursus in Higiëne in die leergang in.

Baccalaureus Scientiae met Liggaamlike Opvoedkunde: B.Sc. (Potchefstroom)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook p. 161.

'n Student moet vooraf sy mediese geskiktheid vir die kursus laat vasstel.

Leergang: Drie jaar voltydse studie. Studente volg die leergang vir die gewone B.Sc.-graad met Liggaamlike Opvoedkunde as een van die twee hoofvakke. Die tweede hoofvak kan een van die volgende vakke wees: Fisiologie, Wiskunde, Dierkunde, Teorie van Statistiek, Plantkunde.

Studente moet minstens een kursus in Fisiologie neem.

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Liggaamlike Opvoedkunde):

B.A.(Ed.)(L.O.) (Pretoria)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met Afrikaans en Engels as geslaagde vakke.

Leergang: Vier jaar voltydse studie. Studente volg twee kursusse in Bio-Ergonomika, een in Higiëne en drie in Pedagogiek. Die hoofvakke is Liggaamlike Opvoedkunde en 'n vak gekies uit goedgekeurde skoolvakke. Die vierde studiejaar sluit in onderwysvakke soos Skoolorganisasie en -administrasie, Vakdidaktiek en Skoolpraktyk.

B.Sc. met Liggaamlike Opvoedkunde: B.Sc. (Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met slaagsyfers in Wiskunde en Natuur- en Skeikunde waarvan minstens een op die Hoër Graad moet wees. 'n Mediese verslag moet ingelewer word.

Leergang: Drie jaar voltydse studie. Studente volg die leergang vir die gewone B.Sc.-graad met Liggaamlike Opvoedkunde as een van die vereiste twee hoofvakke.

Na behaling van die graad kan die student die H.O.D.-(kyk p. 208), Hons. B.Sc.- of M.Sc.-kursus volg.

DIPLOMA

Diploma in Liggaamlike Opvoedkunde (Rhodes)

Toelatingsvereistes: 'n Baccalaureusgraad of 'n erkende onderwysersertifikaat. 'n Kandidaat moet 'n mediese sertifikaat voorlê.

Leergang: Een jaar voltydse studie. 'n Kandidaat moet 'n kursus volg in die teorie en praktyk van gimnastiek, spele en sport, en in die onderrig van dié vakke.

BEROEPSDIENS

'n Graad (B.A. of B.Sc.) met Liggaamlike Opvoedkunde as een hoofvak, bied werkgeleenthede as onderwysers; as ontspanningsbeamptes by nywerhede, myne en munisipaliteite; as instruktors in die Weermag, Polisie en Gevangeniswese; as organiseerders van Liggaamlike Opvoedkunde in die onderwysdepartemente vir Blanke-, Bantoe- en Kleurlingskole. Saam met die vak Joernalistiek is daar ruim geleenthede by byvoorbeeld tydskrifte, dagblaie en die SAUK. Die Departement van Sport en Ontspanning bied ook meer en meer werkgeleenthede. Een van die poste wat beklee kan word, is dié van skakelbeampte wie se taak dit is om sportaktiwiteite landswyd te koördineer en deelname aan sport te bevorder.

Talle mans en vroue in Suid-Afrika, veral in die stedelike gebiede, neem egter nie aan georganiseerde sport deel nie, hoewel hulle tog 'n behoefte aan liggaamlike ontwikkeling en ontspanning het. In dié geval bied 'n private gimnasium die ideale geleentheid aan gekwalifiseerdes wat ook oor die nodige kennis, inisiatief en organisasievermoë beskik.

MUSIEK

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Port Elizabeth, Potchefstroom, Pretoria, Rhodes, Stellenbosch, Suid-Afrika, Witwatersrand

Grade

Baccalaureus Musicae: B.Mus. (UK, Natal, UOVS, UPE, PU vir CHO, Rhodes, US, Wits)

Baccalaureus in Musiek: B.Mus. (UP)

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Musiek): B.A.(Ed.)(Musiek) (UP)

B.Mus.(Ed.) Spesialisering: Instrumentale of Sang-onderwys (US)

B.Mus.(Ed.) Spesialisering: Skoolmusiek (US)

Baccalaureus Musicologiae: B.Mus. (Unisa)

Baccalaureus Artium (Musiek): B.A.(Musiek) (UOVS)

B-graadkursus in Primêre Onderwys met spesialisering in Skoolmusiek (US) Kyk OPVOEDKUNDE p. 208.

Honneursgrade

Honneurs-Baccalaureus Musicae: B.Mus.(Hons.) (UOVS) of Honns.B.Mus. (PU vir CHO) of Hons.-B.Mus. (US)

Baccalaureus Honores in Musiek: B.Mus.Hons. (UP)

Honneurs-Baccalaureus Musicologiae: Hons.-B.Mus. (Unisa)

Honneurs-Baccalaureus Artium in Musiekwetenskap: B.A.(Hons.)(Musiekwetenskap) (UOVS)

Baccalaureus Artium Honores (Mus.): B.A.Hons.(Mus.) (UPE)

Magistergrade

Magister Musicae: M.Mus. (UK, Natal, UOVS, UPE, PU vir CHO, Rhodes, US, Wits)

Magister in Musiek: M.Mus. (UP)

Magister Musicologiae: M.Mus. (Unisa)

Magister Artium in Musiekwetenskap: M.A.(Musiekwetenskap) (UOVS)

Magister Artium in Musiek: M.A. in Musiek (UPE)

Doktorsgrade

Doctor Musicae: D.Mus. (UK, Natal, UOVS, UPE, PU vir CHO, Rhodes, US, Wits)

Doktor in Musiek: D.Mus. (UP)

Doctor Musicologiae: D.Mus. (Unisa)

Doktor in die Wysbegeerte: Ph.D. (Natal, Rhodes)

Doctor Philosophiae in Musiekwetenskap: D.Phil.(Musiekwetenskap) (UOVS)

Doctor Philosophiae: D.Phil. (UPE)

Doctor Litterarum: D.Litt. (UPE)

Talle mans en vroue in Suid-Afrika, veral in die stedelike gebiede, neem egter nie aan georganiseerde sport deel nie, hoewel hulle tog 'n behoefte aan liggaamlike ontwikkeling en ontspanning het. In dié geval bied 'n private gimnasium die ideale geleentheid aan gekwalifiseerdes wat ook oor die nodige kennis, inisiatief en organisasievermoë beskik.

MUSIEK

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Port Elizabeth, Potchefstroom, Pretoria, Rhodes, Stellenbosch, Suid-Afrika, Witwatersrand

Grade

Baccalaureus Musicae: B.Mus. (UK, Natal, UOVS, UPE, PU vir CHO, Rhodes, US, Wits)

Baccalaureus in Musiek: B.Mus. (UP)

Baccalaureus in Lettere en Wysbegeerte (Educationis) (Musiek): B.A.(Ed.)(Musiek) (UP)

B.Mus.(Ed.) Spesialisering: Instrumentale of Sang-onderwys (US)

B.Mus.(Ed.) Spesialisering: Skoolmusiek (US)

Baccalaureus Musicologiae: B.Mus. (Unisa)

Baccalaureus Artium (Musiek): B.A.(Musiek) (UOVS)

B-graadkursus in Primêre Onderwys met spesialisering in Skoolmusiek (US) Kyk OPVOEDKUNDE p. 208.

Honneursgrade

Honneurs-Baccalaureus Musicae: B.Mus.(Hons.) (UOVS) of Honns.B.Mus. (PU vir CHO) of Hons.-B.Mus. (US)

Baccalaureus Honores in Musiek: B.Mus.Hons. (UP)

Honneurs-Baccalaureus Musicologiae: Hons.-B.Mus. (Unisa)

Honneurs-Baccalaureus Artium in Musiekwetenskap: B.A.(Hons.)(Musiekwetenskap) (UOVS)

Baccalaureus Artium Honores (Mus.): B.A.Hons.(Mus.) (UPE)

Magistergrade

Magister Musicae: M.Mus. (UK, Natal, UOVS, UPE, PU vir CHO, Rhodes, US, Wits)

Magister in Musiek: M.Mus. (UP)

Magister Musicologiae: M.Mus. (Unisa)

Magister Artium in Musiekwetenskap: M.A.(Musiekwetenskap) (UOVS)

Magister Artium in Musiek: M.A. in Musiek (UPE)

Doktorsgrade

Doctor Musicae: D.Mus. (UK, Natal, UOVS, UPE, PU vir CHO, Rhodes, US, Wits)

Doktor in Musiek: D.Mus. (UP)

Doctor Musicologiae: D.Mus. (Unisa)

Doktor in die Wysbegeerte: Ph.D. (Natal, Rhodes)

Doctor Philosophiae in Musiekwetenskap: D.Phil.(Musiekwetenskap) (UOVS)

Doctor Philosophiae: D.Phil. (UPE)

Doctor Litterarum: D.Litt. (UPE)

Diplomas

Kaapstad

Onderwyserslisensiaatdiploma in Musiek

Voordraersdiploma in Musiek

Voordraersdiploma in Orkessel

Onderwysersdiploma in Opera

Voordraersdiploma in Opera

Diploma in Ballet

Primêre Onderwysersertifikaat: Spesiale Endossement in Musiek. Kyk OPVOEDKUNDE p.201.

Natal

Voordraersdiploma

Oranje-Vrystaat

Diploma in Kerkmusiek

Kunstenaarsdiploma in Musiek

UOVS-Onderwysdiploma in Musiek: U.O.D.M.

UOVS-Onderwyslisensiaat in Musiek

Voordraerslisensiaat in Musiek

Port Elizabeth

Diploma in Musiekonderwys

Diploma in Orkessel

Solistediploma in Musiek

Potchefstroom

Diploma vir Kerkkorreliste: D.K.O.

Laer Universiteitsdiploma in Musiekvoordrag

Potchefstroomse Universiteitsonderwyslisensiaat in Musiek: P.U.O.L.M. Kyk OPVOEDKUNDE p. 204.

Pretoria

Diploma in Musiek (Individuele Onderwys)

Diploma in Musiek (Kerkmusiek)

Sertifikaat in Kerkmusiek

Rhodes

Lisensiaatdiploma in Musiek: R.U.L.M.

Universiteitsdiploma vir Musiekonderwysers en

Primêre Musiekonderwysersertifikaat: Kyk OPVOEDKUNDE p. 207.

Stellenbosch

Diploma vir Kerkkorreliste

Hoër Onderwysdiploma (Sekondêr - Musiek): H.O.D. (Sekondêr - Musiek)

Lisensiaat in Musiekvoordrag: L.M.V.

Hoër Lisensiaat in Musiekvoordrag: Hoër L.M.V.

Lisensiaat in Musiekonderwys: L.M.O. en

Diploma in Spesialiseringsonderwys (Skoolmusiek): Kyk OPVOEDKUNDE p. 209.

Witwatersrand

Diploma in Musiek: Dip.Mus.

Lisensiaat in Musiek: L.M.

Hoër Diploma in Musiek: H.Dip.M.

Voordraersdiploma in Musiek

Die volgende universiteite bied 'n vierjarige onderwysersdiplomakursus aan met Musiek as een van die spesialiteitsrigtings: Port Elizabeth, Potchefstroom, Pretoria. Kyk OPVOEDKUNDE.

GRADE

Baccalaureus Musicae: B.Mus. of

Baccalaureus in Musiek: B.Mus.

(Al die bogenoemde universiteite buiten die Universiteit van Suid-Afrika)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Kaapstad: Kandidate moet bewys lewer van 'n sekere standaard van vaardigheid op die klavier en in algemene musikaliteit.

Oranje-Vrystaat: 'n Slaagsyfer in Musiek van minstens 60 persent of 'n standaard in praktiese musiek wat gelykstaan aan dié van die Gevorderde Eksamen van die Universiteit van Suid-Afrika.

Port Elizabeth: 'n Kandidaat moet sowel die Voorsitter van die Vakkomitee vir Musiek as die Direkteur van die Konservatorium oortuig dat hy (i) in praktiese musiek 'n standaard bereik het wat ooreenkom met dié van die Sertifikaateksamen Graad VII van die Universiteit van Suid-Afrika of (ii) 60 persent in Musiek op die Standaardgraad, of (iii) 50 persent in Musiek op die Hoër Graad, behaal het.

Potchefstroom: 'n Kandidaat moet die betrokke dosente in 'n praktiese toets oortuig van sy vaardigheid in die uitvoerende kuns en sy musikaliteit en algemene kennis van musiek, en hy moet 'n standaard bereik het gelykstaande aan die Gevorderde Sertifikaat van die Universiteit van Suid-Afrika.

Pretoria: 'n Kandidaat moet die betrokke dosente in 'n praktiese toets daarvan oortuig dat sowel sy vaardigheid in die uitvoerende kuns as sy musikaliteit en algemene kennis van musiek sy toelating regverdig.

Stellenbosch: 'n Slaagsyfer in Musiek van minstens 50 persent op die Hoër Graad of minstens 60 persent op die Standaardgraad.

Witwatersrand: 'n Slaagsyfer in Musiek op die Hoër Graad. Kyk ook p. 37.

Leergang: Vier jaar voltydse studie. Elke universiteit het een of meer leergange waaruit die student een moet kies:

Kaapstad: Studente kies een van die volgende spesiale rigtings: Musiekwetenskap, Skoolmusiek, Voordrag, Komposisie, Musiekbiblioteekkunde.

Studente wat die eerste drie jaar van die gespesialiseerde Skoolmusiekkursus suksesvol

voltooi het, word in die vierde jaar toegelaat tot die kursus vir die Sekondêre Onderwysersdiploma of dié vir die Nagraadse Primêre Onderwysersdiploma. Na voltooiing word die graad en die diploma toegeken.

'n Student wat in Musiekbiblioteekkunde spesialiseer, word na voltooiing van die eerste drie jaar toegelaat tot die kursus vir die Hoër Diploma in Biblioteekkunde (kyk p. 321.) Die graad en die diploma word aan die suksesvolle student toegeken.

Natal: 'n Kandidaat moet in die twee Algemene Kursusse, naamlik Musiek III en Praktiese Studie III slaag, asook in een van die vyf spesiale rigtings wat aangebied word, naamlik: Musiekonderwys; Komposisie; Voordrag (i) Instrumenteel of (ii) Stem; Musiekwetenskap; Volksmusiekwetenskap.

Volksmusiekwetenskap sluit in onder andere Sosiale Antropologie I, II en III.

Oranje-Vrystaat: Kandidate kies een van vier rigtings vir die derde en vierde studiejaar, naamlik: Musiekwetenskap, Musiekteorie, Skoolmusiek en die Praktiese rigting.

Port Elizabeth: Kandidate kies een van die volgende twee leergange: Akademies of Musiekonderwys.

Potchefstroom: 'n Student moet een van die volgende vier leergange voltooi. Die hoofvakke word vir elkeen aangedui:

- A. Musiekgeskiedenis IV, Kunstgeskiedenis III
- B. Musiekgeskiedenis IV, Praktiese Musiek IV, Praktiese Musiekleer IV
- C. Harmonie IV, Kontrapunt IV, Praktiese Musiek IV, Praktiese Musiekleer IV, Orkestrasie II, Komposisie II
- D. Musiekgeskiedenis IV of Harmonie IV en Kontrapunt IV, Praktiese Musiekleer IV, Musiekopvoedkunde III, Praktiese Musiek IV.

Pretoria: Kandidate kies een van vier rigtings aan die begin van die derde studiejaar: Musiekwetenskap, Komposisie, Uitvoerende Kuns, Kerkmusiek.

Rhodes: Kandidate moet die 21 voorgeskrewe kursusse voltooi. Die hoofvakke is Musiekgeskiedenis IV, Musiekteorie IV en Ensemble IV.

Stellenbosch: Kandidate kies een van vyf rigtings aan die begin van die derde studiejaar: Onderwys (B.Mus.(Ed.)), Praktiese rigting, Musiekwetenskap, Kerkmusiek, Komposisie.

Witwatersrand: Kandidate moet die 21 voorgeskrewe kursusse van die leergang voltooi. Vierdejaarsvakke behels Dirigeer II (halwe kursus); Kontrapunt, Harmonie en Komposisie IV; Musiekgeskiedenis IV; Praktiese Musiekstudie IV.

Baccalaureus in Lettere en Wysbegeerte (Educationis)(Musiek): B.A.(Ed.)(Musiek)
(Pretoria)

Toelatingsvereistes: Soos vir die graad B.Mus. (Pretoria).

Leergang: Vier jaar voltydse studie. Die hoofvakke is Musiekgeskiedenis III, Praktiese Musiekstudie III, Skoolmusiek III en Pedagogiek III. In die vierde studiejaar neem kandidate onderwysvakke.

Baccalaureus Musicologiae: B.Mus. (Suid-Afrika)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standard 10-sertifikaat (Matrikulasievystelling). 'n Student moet 'n standaard bereik het wat gelyk staan aan dié van Graad VII van dié Universiteit se Musieksertifikaateksamens of dié van Musiek vir die Matrikulasie- of gelykstaande eksamen.

Leergang: Vier jaar. Die leergang bestaan uit 12 kursusse. Die hoofvakke is Musiekgeskiedenis IV en Harmonie en Kontrapunt IV.

Baccalaureus Artium (Musiek): B.A.(Musiek) (Oranje-Vrystaat)

Toelatingsvereiste: Soos vir B.Mus.

Leergang: Drie jaar voltydse studie. Studente volg die B.A.-leergang met Musiek as een van die hoofvakke.

Die Universiteite van Natal, Rhodes en Stellenbosch bied ook Musiek aan as een van die hoofvakke vir die B.A.-graad.

Die Universiteite van Port Elizabeth, Potchefstroom, Pretoria, Suid-Afrika en die Witwatersrand bied Musiekgeskiedenis aan as hoofvak vir die B.A.-graad.

Die Universiteit van Kaapstad bied eerste en tweede kwalifiserende B.A.-kursusse aan in die vak Musiek.

DIPLOMAS

Onderwyslisensiaatdiploma in Musiek

of die

Onderwysdiploma in Opera (Kaapstad)

Toelatingsvereiste: Minstens 'n Standaard 10-sertifikaat.

Leergang: Die leergang van elk van bogenoemde diplomas strek oor vier jaar.

Studente wat bewys lewer van besondere vaardigheid en wat voordat hulle vir die diploma-kursus ingeskryf het, werk voltooi het wat deur die Senaat as gelykwaardig aanvaar word, kan van die eerste jaar van die betrokke leergang vrygestel word.

Voordraersdiploma in Musiek

Voordraersdiploma in Orkessel

Voordraersdiploma in Opera

Diploma in Ballet (Kaapstad)

Toelatingsvereiste tot bogenoemde diplomas: Standaard 10-sertifikaat.

Leergang: Die leergang van elk van die bogenoemde diplomas strek oor drie jaar.

Studente wat bewys lewer van besondere vaardigheid en wat voordat hulle vir die diploma-kursus ingeskryf het, werk voltooi het wat deur die Senaat as gelykwaardig aanvaar word, kan van die eerste jaar van die betrokke leergang vrygestel word.

Voordraersdiploma (Natal)

'n Eenjarige nagraadse kursus vir òf die instrument òf die stem.

Diploma in Kerkmusiek (Oranje-Vrystaat) of

Diploma in Musiek (Kerkmusiek) (Pretoria) of

Diploma vir Kerkorreliste (Stellenbosch)

Toelatingsvereistes: Standaard 10-sertifikaat. Kandidate moet bewys lewer van hul vaardigheid in die bespeling van die orrel, asook van voldoende musikaliteit en algemene kennis van musiek.

Leergang: Drie jaar voltydse studie, maar aan die Universiteit van Stellenbosch twee jaar.

Die leergang behels onder andere Harmonie en Kontrapunt, Koorleiding of Himnologie

(Pretoria), Musiekgeskiedenis, Orrel.

Diploma vir Kerkorreliste (Potchefstroom)

Toelatingsvereistes: Standaard 10-sertifikaat en die sertifikaat vir die intermediêre orreleksamen van die Universiteit van Suid-Afrika of 'n gelykstaande standaard, en die sertifikaat vir die gevorderde klaviereksamen van die Universiteit van Suid-Afrika of 'n gelykstaande standaard.

Leergang: Drie jaar voltydse studie. 'n Student kan gelyktydig vir die Diploma vir Kerkorreliste en die B.Mus.-graad inskrywe.

Kunstenaarsdiploma in Musiek (Oranje-Vrystaat)

Toelatingsvereistes: Die B.Mus.-graad òf die Onderwysdiploma in Musiek, òf die Voordraerslisensiaat van die UOVS, òf 'n ander toereikende kwalifikasie.

'n Kandidaat moet deur middel van 'n toelatingseksamen in die praktiese hoofvak bewys lewer van voldoende bevoegdheid as 'n voordraer.

Leergang: 'n Kandidaat wat in besit is van die B.Mus.-graad of die UOVS-Voordraerslisensiaat kan na een jaar verdere studie tot die eksamen toegelaat word, terwyl 'n student wat die Onderwysersdiploma besit, na twee jaar studie toegelaat word.

UOVS-Onderwysdiploma in Musiek (Oranje-Vrystaat)

Toelatingsvereistes: Standaard 10-sertifikaat met 'n slaagsyfer in Musiek van minstens 60 persent of 'n standaard in praktiese musiek wat gelykstaan aan die Gevorderde Eksamen van die Universiteit van Suid-Afrika.

Leergang: Vier jaar voltydse studie. Die leergang is soos dié vir die B.Mus.-graad.

UOVS-Onderwyslisensiaat in Musiek

Toelatingsvereistes: Soos vir die UOVS-Onderwysdiploma in Musiek.

Leergang: 3 jaar voltydse studie. Die hoofvakke is Praktiese Musiekstudie III en Historiese en Sistematiese Musiekstudie III.

Voordraerslisensiaat in Musiek (Oranje-Vrystaat)

Toelatingsvereiste: Die UOVS-Onderwyslisensiaat in Musiek.

Leergang: Een jaar.

Diploma in Musiekonderwys (Port Elizabeth)

Toelatingsvereistes: Standaard 10-sertifikaat. 'n Kandidaat moet sowel die Voorsitter van die Vakkomitee vir Musiek as die Direkteur van die Konservatorium vir Musiek oortuig dat hy 'n standaard in 'n praktiese hoofvak bereik het wat ooreenkom met dié van die Sertifikaateksamen Graad VII van die Universiteit van Suid-Afrika.

Leergang: Drie jaar voltydse studie. Die leergang sluit in Akademiese Vakke soos Musiekgeskiedenis, Kontrapunt, Skoolmusiek en Praktiese Vakke soos Hoofinstrument en Metodiek van die Hoofinstrument.

Diploma in Orkessel (Port Elizabeth)

Toelatingsvereistes: Die graad B.Mus. of die Diploma in Musiekonderwys.

'n Kandidaat moet die Direkteur van die Konservatorium vir Musiek oortuig dat hy 'n voldoende standaard in 'n goedgekeurde praktiese orkesinstrument bereik het om die studie met vrug te kan begin.

Leergang: Een jaar voltydse studie.

Solistediploma in Musiek (Port Elizabeth)

Toelatingsvereistes: Die graad B.Mus. of die Diploma in Musiekonderwys.

'n Kandidaat moet die Direkteur van die Konservatorium vir Musiek oortuig dat hy 'n voldoende standaard in 'n goedgekeurde praktiese instrument bereik het om die studie met vrug te kan begin.

Leergang: Twee jaar voltydse studie.

Laer Universiteitsdiploma in Musiekvoordrag (Potchefstroom)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Een jaar.

Die eksamen sluit die uitvoering van 'n volledige konsertprogram in.

Diploma in Musiek (Individuele Onderwys) (Pretoria)

Toelatingsvereistes: Standaard 10-sertifikaat. 'n Kandidaat moet die betrokke dosente in 'n praktiese toets daarvan oortuig dat sowel sy vaardigheid in die uitvoerende kuns as sy musikaliteit en algemene kennis van musiek sy toelating tot die studie regverdig.

Leergang: Drie jaar voltydse studie. Die leergang behels onder andere Harmonie, Kontrapunt, Praktiese Musiekstudie, Skoolmusiek en Musiekgeskiedenis.

Rhodes-universiteit se Lisensiaatdiploma in Musiek: R.U.L.M.

Toelatingsvereistes: Standaard 10-sertifikaat, of die Fakulteitsraad moet oortuig wees van die kandidaat se geskiktheid om die kursus te volg. Laasgenoemde word slegs op grond van gevorderde ouderdom en/of besondere aanleg oorweeg.

Leergang: Drie jaar voltydse studie.

Die Diploma kan toegeken word as 'n diploma òf vir voordraers, òf vir onderwysers/esse, òf vir koorleiers, òf vir kerkkorreliste.

Hoër Onderwysdiploma (Sekondêr - Musiek): H.O.D.(Sekondêr - Musiek) (Stellenbosch)

Toelatingsvereistes: Standaard 10-sertifikaat met 'n slaagsyfer in Musiek van minstens 50 persent op die Hoër Graad of minstens 60 persent op die Standaard Graad; of die kandidaat moet die Gevorderde Eksamen (Universiteit van Suid-Afrika) in die praktiese hoofonderwerp afgelê en in Harmonie 'n standaard gelykstaande aan die Hoër afdeling (Universiteit van Suid-Afrika) bereik het, of 'n toelatingseksamen gelykstaande aan voorgemelde eksamen aflê in die praktiese hoofonderwerp en in Harmonie.

Leergang: Vier jaar voltydse studie. Die Diploma kan in die volgende spesialisering= rigtings verwerf word:

- Instrumentale of Sang-onderwys
- Skoolmusiek.

Lisensiaat in Musiekvoordrag: L.M.V. (Stellenbosch)

Toelatingsvereistes: Standaard 10-sertifikaat. Studente moet deur middel van 'n toelatingseksamen in die praktiese hoofonderwerp bewys lewer van voldoende bevoegdheid as voordraers. Die minimum standaard wat vereis word, is gelykstaande aan die Graad VIII-eksamen van die Universiteit van Suid-Afrika.

Studente moet ook deur middel van 'n toelatingseksamen bewys lewer van voldoende kennis in Harmonie, of Musiek met minstens 60 persent in die St. 10-eksamen geslaag het, of 'n eksamen in Harmonie afgelê het, gelykstaande aan die Graad V-eksamen van die Universi=

teit van Suid-Afrika.

Leergang: Drie jaar.

Hoër Lisensiaat in Musiekvoordrag: Hoër L.M.V. (Stellenbosch)

Toelatingsvereistes: Die B.Mus.-graad of die B.A.-graad met Musiek as een van die hoofvakke, of die Onderwysersdiploma in Musiek, of die Lisensiaat in Musiekonderwys, of die Lisensiaat in Musiekvoordrag, of 'n ander kwalifikasie wat deur die Senaat as toereikend geag word.

Studente moet deur middel van 'n toelatingseksamen in die praktiese hoofonderwerp bewys lewer van voldoende bevoegdheid as voordraers.

Leergang: Een jaar.

Diploma in Musiek: Dip.Mus. (Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling).

Leergang: Drie jaar voltydse studie. Die derde studiejaar sluit onder andere die volgende kursusse in: Klasonderwys en Musiekmetodiek III, Algemene Musiekkennis III, Voordrag III.

Lisensiaat in Musiek: L.M. (Witwatersrand)

Toelatingsvereiste: Soos vir die Diploma in Musiek hierbo.

Leergang: Drie jaar voltydse studie. Derdejaarskursusse behels onder andere Klasonderwys en Musiekmetodiek I, Ensemble II, Voordrag III.

Hoër Diploma in Musiek: H.Dip.M. (Witwatersrand)

Toelatingsvereistes: Diploma in Musiek of 'n onderwysersdiploma of lisensiaat in musiek en minstens vier jaar ondervinding in onderwys, of 'n B.Mus.-graad.

Leergang: Een jaar voltydse studie.

Voordraersdiploma in Musiek (Witwatersrand)

Toelatingsvereistes: Diploma in Musiek of 'n Lisensiaat in Musiek of 'n B.Mus.-graad of 'n onderwysers- of voordraersdiploma of lisensiaat in musiek van 'n erkende inrigting, en vier jaar ondervinding in onderwys of in openbare uitvoerings.

Leergang: Een jaar voltydse studie of twee jaar deelydse studie.

BEROEPSDIENS

Die ontwikkeling van die RSA bring, soos op baie ander terreine, 'n groot behoefte mee aan opgeleide persone in die musiek as professie. Vir die student wat reeds op jeugdige ouderdom met intensiewe opleiding in musiek begin het, wat die liefde daarvoor, belangstelling daarin, die besondere musiekaanvoeling en -aanleg en musikale vermoë besit, en wat bereid is om baie tyd aan oefening te bestee, bestaan daar 'n wye keuse van spesialiteitsterreine.

Die belangrikste waarvoor 'n universiteitsgraad of -diploma 'n man of dame laat kwalifiseer, is die onderwys in sowel ateljee as skool (primêre en sekondêre), die uitsaaiwese, die rade vir die uitvoerende kunste van die provinsies, die pers, kerke en sekere biblioteekdienste. Op grond van ervaring, bekendheid en nagraadse kwalifikasies, word bekende musici steeds uitgesonder vir verskeie verantwoordelike betrekings, byvoorbeeld aan opleidingskolleges, kolleges vir gevorderde tegniese onderwys, universiteite, konservatoriums, simfonie-orkeste ens. Vir die persoon wat nie by 'n amptelike inrigting

in diens tree nie, is daar die geleentheid om op feitlik enige plek privaat lesse te gee en sy beroep te beoefen gedurende periodes wanneer dit hom pas. So kan 'n orkeslid byvoorbeeld ook 'n musiekonderwyser wees.

RADIOGRAFIE

Universiteite: Oranje-Vrystaat, Pretoria

Diplomas

Diploma in Diagnostiese Radiografie (UOVS)

Diploma in Terapeutiese Radiografie (UOVS)

Diploma in Radiografiese Diagnostiek (UP)

Diploma in Radiografiese Terapie (UP)

Diploma in Radiobeskerming vir Susters (UP)

DIPLOMAS

Diplomas in Diagnostiese en Terapeutiese Radiografie (Oranje-Vrystaat)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Standaardgraad. Voorlopig sal voornemende studente nog aangeraai word om Natuur- en Skeikunde en indien moontlik ook Biologie vir die Standaard 10-eksamen aan te bied.

Aansoeke om toelating tot die kursus moet gerig word aan: Die Mediese Superintendent, Nasionale Hospitaal, Bloemfontein.

Leergang: Twee jaar voltydse studie vir die Diploma in Diagnostiese Radiografie. Die Diploma in Terapeutiese Radiografie word toegeken na 'n verdere studie van een jaar na die verkryging van die Diploma in Diagnostiese Radiografie.

Die kursusse word in samewerking met die Nasionale Hospitaal aangebied.

Diagnostiese Radiografie - sluit in die volgende vakke: Biofisika I en II; Anatomie, Fisiologie en Radiografiese Anatomie; Radiografiese Fotografie; Radiografie-tegniek I en II; Patologie (Spesiaal).

Terapeutiese Radiografie - sluit in die volgende vakke: Stralingsterapie II; Biofisika III.

Diploma in Radiografiese Diagnostiek (Pretoria)

Toelatingsvereistes: Standaard 10-sertifikaat met Wiskunde en daarbenewens by voorkeur ook Natuurkunde of Skei- en Natuurkunde as geslaagde vakke.

Elke kandidaat moet vir vyf weke 'n preliminêre kursus in verpleging aan die H.F. Verwoerd-hospitaal volg met die oog op keuring voordat die kandidaat tot die kursus toegelaat kan word.

Leergang: Twee jaar voltydse studie. Gedurende hierdie tyd moet elke kandidaat aan die Departement van Radiodiagnostiek van die H.F. Verwoerd-hospitaal as studentradiograaf verbonde wees.

Die leergang bestaan uit twee dele: Deel I duur een jaar en sluit kursusse in die volgende vakke in: Mediese Fisika, Fotografie, Anatomie, Fisiologie, Radiografiese Diagnostiek I. Deel II duur een jaar en word gewy aan kursusse in die volgende vakke: Radiografiese Diagnostiek II, Radio-isotope en Radiobeskerming, Apparaatkonstruksie.

'n Kandidaat wat die Diploma in Radiografiese Diagnostiek verwerf het, kan na verdere studie van een akademiese jaar die Diploma in Radiografiese Terapie verwerf.

Diploma in Radiografiese Terapie (Pretoria)

Toelatingsvereistes: Standaard 10-sertifikaat met Wiskunde en by voorkeur ook Natuurkunde of Skei- en Natuurkunde as geslaagde vakke.

Elke kandidaat moet vir vyf weke 'n preliminêre kursus in verpleging aan die H.F. Verwoerd-hospitaal volg met die oog op keuring voordat die kandidaat tot die kursus toegelaat kan word.

Leergang: Twee jaar voltydse studie. Gedurende hierdie tyd moet die kandidaat aan die Departement Radioterapie van die H.F. Verwoerd-hospitaal as studentradiograaf verbonde wees.

Die vakke is soos dié vir die Diploma in Radiografiese Diagnostiek behalwe dat Radiografiese Terapie I en II in plaas van Radiografiese Diagnostiek I en II gevolg word.

Diploma in Radiobeskerming vir Susters (Pretoria)

Toelatingsvereistes: Standaard 10-sertifikaat en die status van 'n Suster in 'n algemene hospitaal.

Leergang: Een jaar voltydse studie. Gedurende hierdie tyd moet elke kandidaat aan die departemente Radiodiagnostiek en Radioterapie van die H.F. Verwoerd-hospitaal verbonde wees as suster-studentradiograaf.

BEROEPSDIENS

Radiografie omsluit twee vertakkinge, naamlik radiografiese diagnostiek (ondersoek van die pasiënt met behulp van X-straalapparaat) en radioterapie (X-straalbehandeling van uiterlik onsigbare kwale). Albei die rigtings is interessant en sluit 'n verskeidenheid van pligte in wat in samewerking met geneeshere en hospitaalbeamptes, maar hoofsaaklik onder toesig en volgens voorskrif van 'n radioloog, uitgevoer moet word. (Die radioloog is 'n gekwalifiseerde geneesheer wat ook in radioterapie en/of radiografiese diagnostiek gespesialiseer het.)

Normaalweg word die beroep deur dames beoefen. Daar bestaan egter ook geleentheid vir gekwalifiseerde manlike persone om dit met sukses te beoefen. Wanopvattinge oor X-strale, die gebruik daarvan en die gevare daaraan verbonde, het in die verlede baie belangstellendes aan hierdie beroep laat twyfel. Vandag word daar egter voldoende voorsorgmaatreëls getref om die radiografiese teen moontlike bestraling te beskerm en die beroep is dus absoluut veilig.

Radiografiste word in diens geneem deur al die hospitale in die land en veral persone wat oor die dubbele kwalifikasie (in radiografiese diagnostiek sowel as radioterapie) beskik, behoort geen probleme te ondervind om 'n geskikte pos te bekom nie. Baie radiografiste word ook aangestel in die private praktyke van radioloë. Die Suid-Afrikaanse kwalifikasie word internasionaal erken, en veral die dubbele kwalifikasie baan die weg tot oorsese ervaring in diagnostiese en terapeutiese werk.

Raadpleeg ook Tersiêre Opleiding.

REGSGELEERDHEID

Universiteite: Al die universiteite in die Republiek van Suid-Afrika.

Grade

Baccalaureus Procurationis: B.Proc. (Al die universiteite behalwe US)

Baccalaureus Iuris: B.Iur. (UOVS, UP, Unisa) of B.Iuris (RAU)

Baccalaureus Juris: B.Juris (UPE) of B.Jur. (PU vir CHO)

Baccalaureus Legum: LL.B. (Al die universiteite)

Magistergraad

Magister Legum: LL.M. (Al die universiteite behalwe UOVS)

Doktorsgrade

Doctor Legum: LL.D. (Al die universiteite)

Doktor in Wysbegeerte: Ph.D. (UK, Natal, Rhodes, Wits)

Diplomas

Natalse Staatsdienssertifikaat in die Regte (Natal)

Diploma Regsgeleerdheid vir Staatsamptenare: D.R.S. (UOVS)

Staatsdiensdiploma in die Regte (UPE)

Regsdiploma vir Staatsamptenare: R.D.S. (PU vir CHO)

Senior Regsdiploma vir Staatsamptenare: S.R.D.S. (PU vir CHO)

Staatsdienseksamen in die Regte: S.D.R. (UP, Unisa)

Senior Staatsdienseksamen in die Regte (UP, Unisa)

Hoër Diploma in Belastingreg (Wits)

GRADE

Baccalaureus Procurationis: B.Proc. (Al die universiteite behalwe Stellenbosch)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling).

Addisionele vereistes:

Pretoria: 'n Slaagsyfer in Wiskunde op die Hoër Graad òf minstens 40 persent op die Standaardgraad òf 'n slaagsyfer in 'n derde taal.

Randse Afrikaanse Universiteit: 'n Slaagsyfer van minstens 40 persent in Latyn op die Hoër Graad of 'n slaagsyfer in die spesiale kursus in Latyn aan die Universiteit.

Rhodes: 'n Slaagsyfer in Latyn op die Hoër of Standaardgraad.

Witwatersrand: Slaagsyfers op die Hoër Graad in minstens twee van die volgende vakke: Afrikaans, Bantoetale, Biologie, Engels, Frans, Aardrykskunde, Duits, Hebreeus, Geskiedenis, Latyn, Wiskunde, Natuur- en Skeikunde, Fisiologie.

Leergang: Vier jaar voltydse studie of vyf jaar deeltydse studie.

Persone wat Afrikaans op die Hoër graad geslaag het, moet Engels I of Engels Spesiaal neem en dié wat Engels op die Hoër graad geslaag het, moet Afrikaans of Afrikaans en Nederlands I neem. Die leergang behels onder andere ook die volgende vakke: Romeinse Reg, Strafreg, Strafprosesreg, Handelsreg, Bewysreg, Siviele Prosesreg, Staats- en Administratiefreg en twee of drie nie-regskursusse soos bv. Ekonomie, Staatsleer, Geskiedenis.

Geen student word toegelaat om Romeinse Reg I te volg nie tensy hy standaard 10-Latyn geslaag het of op grond van 'n ander eksamen van hierdie vereiste vrygestel is.

Hierdie graad vervang die Prokureursdiploma, die Natalse Sertifikaat in die Regte en die Regsdiploma en verleen ook toelating tot die LL.B.-graad.

Baccalaureus Iuris: B.Iur. of B.Iuris of

Baccalaureus Juris: B.Jur. of B.Juris

(Oranje-Vrystaat, Port Elizabeth, Potchefstroom, Pretoria, Randse Afrikaanse Universiteit, Suid-Afrika)

Toelatingsvereistes: Soos vir B.Proc.

Leergang: Drie jaar voltydse studie of vier jaar deeltydse studie.

Die Universiteit van die Oranje-Vrystaat bied drie rigtings aan, naamlik: Akademiese rigting; Rigting Openbare Diens waarvoor Latyn nie verpligtend is nie; Handelsrigting.

Potchefstroomse Universiteit vir CHO bied ook drie leergange aan, naamlik (i) vir Staatsamptenare waarvoor Latyn nie verpligtend is nie; (ii) met aanvullende Letterevakke; (iii) met aanvullende Ekonomiese vakke.

Die Universiteit van Port Elizabeth bied ook drie leergange aan.

Al die leergange sluit die volgende vakke in: Privaatreg, Handelsreg, Romeinse Reg, Strafrege, Siviele Prosesreg.

Geen student word toegelaat om Romeinse Reg I te volg nie tensy hy standaard 10-Latyn geslaag het of op grond van 'n ander eksamen van hierdie vereiste vrygestel is.

Baccalaureus Legum: LL.B.

Toelatingsvereiste: 'n Baccalaureusgraad of 'n B.Proc.- of B.Iur.-graad.

Leergang: Drie jaar voltydse studie of twee jaar voltydse studie na 'n Baccalaureusgraad wat die vereiste Regsvakke in die leergang ingesluit het.

Drie taalkursusse is vir die LL.B.-graad voorgeskryf: Afrikaans I, Engels I en Latyn I.

DIPLOMAS

Natalse Staatsdienssertifikaat in die Regte (Natal)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Die Sertifikaat kan deur lede van die Staatsdiens oor drie jaar gevolg word.

Die Sertifikaat word deur die Staatsdienskommissie erken as gelyk aan die Staatsdiens-eksamen in die Regte.

Diploma Regsgeleerdheid vir Staatsamptenare: D.R.S. (Oranje-Vrystaat)

Staatsdiensdiploma in die Regte (Port Elizabeth)

Regsdiploma vir Staatsamptenare: R.D.S. (Potchefstroom)

Toelatingsvereistes: 'n Standaard 10-sertifikaat of 'n sertifikaat van voorwaardelike vrystelling uitgereik aan kandidate uit vreemde lande.

Leergang: Drie jaar voltydse of vier jaar deeltydse studie.

Die Diplomas word deur die Raad vir die Erkenning van Regseksamens erken as gelyk aan of hoër as die Staatsdienseksamens in die Regte.

Senior Regsdiploma vir Staatsamptenare: S.R.D.S. (Potchefstroom)

Toelatingsvereistes: Regsdiploma vir Staatsamptenare of 'n B.Juris-graad vir staatsamptenare of 'n graad of diploma wat deur die Raad vir die Erkenning van Regseksamens as gelykwaardig gesertifiseer word.

Leergang: Twee jaar.

Die Diploma word deur die Raad vir die Erkenning van Regseksamens erken as gelyk aan of hoër as die Senior Staatsdienseksamen in die Regte.

Staatsdienseksamen in die Regte (Pretoria, Suid-Afrika)

Toelatingsvereiste: 'n Standaard 10-sertifikaat of 'n sertifikaat van voorwaardelike vrystelling van matrikulاسie uitgereik aan studente uit vreemde lande.

Leergang: Drie jaar.

Die leergang behels onder andere die volgende kursusse: Siviele Prosesreg, Romeinse Reg (Suid-Afrika) of Romeins-Hollandse Reg (Pretoria), Uitleg van Wette, Handelsreg, Strafrege.

Senior Staatsdienseksamen in die Regte (Pretoria, Suid-Afrika)

Toelatingsvereiste: 'n Student moet geslaag het in die Staatsdienseksamen in die Regte of 'n ander gelykwaardige eksamen.

Leergang: Twee jaar.

Hoër Diploma in Belastingreg (Witwatersrand)

Toelatingsvereistes: 'n Persoon wat in besit is van óf 'n LL.B.- of B.Proc.-graad óf 'n goedgekeurde akademiese of professionele kwalifikasie, óf 'n prokureur is.

Leergang: Twee jaar deelydse studie.

BEROEPSDIENS

In die RSA behels die regsprofessie, afgesien van die rigtings in die Staatsdiens, twee vertakings, naamlik dié van advokate en dié van prokureurs. Niemand kan gelyktydig as advokaat en prokureur praktiseer nie. Dit is egter moontlik vir 'n persoon wat oor die regte kwalifikasies beskik, om van die een na die ander rigting oor te skakel.

- Advokate vervul twee hoof funksies: Die lei van kriminele en siviele sake in die Hooggeregshof en ander howe en die verskaffing van advies ten opsigte van wetlike probleme. Aangesien die publiek nie regstreeks met hulle kan onderhandel nie, verkry die advokate hul professionele werk deur bemiddeling van prokureurs. Uit die geledere van senior advokate word die regters gewoonlik aangestel. Voornemende advokate dien nie 'n tydperk as leerklere uit nie en daar is ook nie vir hulle 'n ander professionele eksamen om te slaag nie. Hulle moet slegs 'n LL.B.-graad ná 'n eerste graad (B.A., B.Com., B.Proc. of B.Iur.) behaal.

- Prokureurs onderhandel met lede van die publiek, verteenwoordig en tree op namens kliënte, verskyn in landdroshof, maar nie in die Hooggeregshof nie. Alhoewel hulle met velerlei aangeleenthede kan te doen kry, bestaan daar die neiging by prokureurs om ook in die een of ander rigting te spesialiseer. Die meeste van hulle praktiseer op hul eie of in vennootskap met ander. Hulle kan ook, deur verdere eksamens af te lê, kwalifiseer as notaris en aktevervaardigers. 'n Persoon hoef dus nie noodwendig 'n goeie openbare spreker te wees of daarvan te hou om in die hof op te tree om 'n suksesvolle prokureur te wees nie. Baie prokureurs wat aan die toppunt van die beroep staan, verskyn selde in die hof.

Anders as in die geval van die advokaat, moet 'n voornemende prokureur benewens die regskwalifikasie wat aan 'n universiteit verwerf word, ook 'n tydperk as leerklere by 'n praktiserende prokureur uitdien en daarna in 'n professionele praktiese eksamen slaag. (Die B.Proc. en LL.B.-grade is sedert 1971 die enigste grade wat vir die toelating van prokureurs erken word.) Die minimum kwalifikasie om 'n leerkontrak te kan sluit, is 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling). 'n Persoon wat aanvanklik slegs oor hierdie kwalifikasie beskik, moet 'n leertydperk van vyf jaar uitdien, terwyl diegene met 'n B.Proc. of LL.B.-graad 'n leertydperk van twee jaar moet dien.

- In die Staatsdiens: In die RSA, soos ook elders, is die owerheidsgesag ingedeel in die wetgewende gesag (die parlement), die uitvoerende gesag (die staatsdiens) en die regsprekende gesag (die howe). Die Departement van Justisie is verantwoordelik vir die uitoefening van die regsprekende gesag en hiervoor bestaan daar die landdroshowe, streek-howe en die verskillende afdelings van die Hooggeregshof.

. Landdroste en Regsassistente (Staatsaanklaers): Landdroste het twee hoof funksies om te vervul, naamlik die regterlike funksie wat in die hof verrig word, en dié van distriksadministrasie wat in 'n kantoor behartig word. Die landdroshof moet sowel aankla as bereg en derhalwe word die landdroos bygestaan deur 'n Aanklaer (Regsassistent). Die Staatsaanklaer se primêre funksies is om namens die Prokureur-generaal in alle strafsake in die hof op te tree. Sy veelvuldige pligte verskaf ook die nodige agtergrond en opleiding vir latere aanstelling op die regbank (as landdroos). Landdroste en Regsassistente moet oor regskwalifikasies beskik. Die minimum vereiste vir 'n Regs-assistent is die Staatsdienseksamen in die Regte en dit is ook die minimum vereiste vir vordering tot landdroos. Kandidate kan eerstens direk na skool 'n graad in die Regte behaal en daarna tot die Departement toetree. Tweedens kan hulle na skool in 'n landdroos-kantoor aangestel word alwaar hulle dan algemene klerklike werk doen terwyl hulle hul studie deelyds voortsit. Watter weg ook al gevolg word, is die geleentheid vir die aspirant-landdroos om regskwalifikasies te verkry die volgende:

- a. Diegene met of sonder Matrikulasievystelling kan die Staatsdienseksamen in die Regte en daarna die Senior Staatsdienseksamen in die Regte aflê. (Geen vereiste t.o.v. Latyn.) Eersgenoemde is die minimum vereiste vir vordering tot landdroos.
- b. Kandidate wat oor Matrikulasievystelling beskik maar nie Latyn as skoolvak het nie, kan die B.Iuris-graad vir Staatsamptenare behaal.
- c. Kandidate wat oor Matrikulasievystelling beskik en ook Latyn as skoolvak het, kan inskryf vir enige graad- of diplomakursus in die Regte.

Sodra kandidate oor die vereiste regskwalifikasies beskik, word hulle as Regsassistente aangestel. Bekwame persone kan hierna vorder tot die verskillende range van Landdroos, waarvan Hooflanddroos die hoogste is.

. Regsadviseur: Regsadviseurs word uit die geledere van Staatsadvokate in die Afdeling Regsadviseurs van die Prokureur-generaal aangestel met pligte soos die opstel van wette vir die Parlement, regsadvies aan alle Staatsdepartemente, nasien van regulasies, ordonnansies ens. Sommige is weer verbonde aan die verskillende Provinsiale Administrasies en die Administrasie van Suidwes-Afrika. Die houër van 'n Baccalaureus-graad plus 'n LL.B.-graad kom in aanmerking vir aanstelling en kan vorder tot Hoofregsadviseur.

. Staatsadvokaat: Die Departement van Justisie bied aan persone wat die LL.B.-graad behaal het, 'n interessante en uitdagende loopbaan as Staatsadvokaat. Hierdie beamptes moet die belange van die Staat op wette-regtelike gebied behartig en is verbonde aan die Afdeling van die Prokureur-generaal. Daar is 'n Prokureur-generaal verbonde aan elke Provinsiale Afdeling van die Hooggeregshof. Die Staatsadvokaat wat verdienstelike werk lewer, kan vorder tot Senior Staatsadvokaat, Adjunk-Prokureur-generaal, Prokureur-generaal en Hoofregsadviseur.

. Staatsprokureur: Die Staatsprokureursafdeling van die Departement van Justisie funksioneer soos 'n gewone prokureursfirma behalwe dat sy kliënte uit Staatsinstansies bestaan en nie private individue is nie. Die belangrikste funksie van die Staatsprokureur is om die belange van die Staat te beskerm deur namens alle Staatsdepartemente en Administrasies in siviele sake en namens amptenare wat in hul amptelike hoedanigheid aangespreek word, op te tree. Staatsprokureurs kan hul regskwalifikasies op dieselfde wyse as prokureurs in private praktyke verkry. Leerkontrakposte in die Departement is egter beperk en kandidate moet soms hul beurt afwag.

. Bantoesakekommissaris: Dit is die persoon wat die regeringsbeleid aan die Bantoebevolkingsgroepe moet verduidelik, die Bantoe se regsgeskille moet besleg, klagtes moet aanhoor en hulle van raad moet dien. As sodanig is die Bantoesakekommissaris in

n besondere vertrouensposisie en rus daar groot verantwoordelikhede op hom. Die minimum vereiste vir aanstelling as 'n Assistent-Bantoesakekommissaris is die B.Iuris-graad of die Staatsdienseksamen in die Regte. Die Departement van Bantoe-administrasie en -ontwikkeling maak ruim voorsiening om hierdie kwalifikasies ná indienstrede op 'n deeltydse of voltydse studiegrondslag te behaal. Vir sommige hoër posisies word 'n LL.B.-graad of die Senior Staatsdienseksamen in die Regte vereis. Kandidate kan uiteindelik vorder tot Spesiale Graad Hoofbantoesakekommissaris, terwyl hoër kwalifikasies vir salarisdoeleindes erken en prestasie na waarde beloon word.

. Meester van die Hooggeregshof: Die taak van die Weesheerafdeling van die Departement van Justisie, of te wel die Meester van die Hooggeregshof, is om te waak teen wanpraktyke wat ten doel het om legatarisse, erfgename en skuldeisers hul regmatige deel te ontnem. Die werk is hoogs gespesialiseerd, verantwoordelik en vertroulik van aard. Spesiale opleidingskursusse word deur die departement vir weeshere aangebied. Regskwalifikasies is egter 'n vereiste vir vordering tot hoër range soos Assistentmeester van die Hooggeregshof, Meester van die Hooggeregshof en Hoofmeester van die Hooggeregshof.

. Buitelandse diensbeampte (Diplomaat): Kyk p. 67.

Vir meer besonderhede in verband met opleiding, diensvoorwaardes en so meer, word voornemende regsgeleerdes verwys na Die Vereniging van Wetsgenootskappe van die RSA, Posbus 1428, Pretoria, 0001. Daar kan ook geskakel word met die Departement van Justisie of die Staatsdienskommissie.

SOSIALE WETENSKAPPE/MAATSKAPLIKE WERK

Universiteite: Al die universiteite in die Republiek van Suid-Afrika

Grade

Baccalaureus in Sosiale Wetenskappe: B.Soc.Sc. (UK, Natal, Rhodes)

Baccalaureus Societatis Scientiae: B.Soc.Sc. (UOVS)

Baccalaureus in Sosiale Wetenskappe in Maatskaplike Werk: B.Soc.Sc.(M.W.) (UK, Rhodes)

Baccalaureus Societatis Scientiae Maatskaplike Werk: B.Soc.Sc.(M.W.) (UOVS)

Baccalaureus Artium in Maatskaplike Werk: B.A.(M.W.) (UPE, Wits)

Baccalaureus Artium (Maatskaplike Werk): B.A.(M.W.) (PU vir CHO)

Baccalaureus in Lettere en Wysbegeerte in Maatskaplike Werk: B.A.(M.W.) (UP)

Baccalaureus in die Lettere en Wysbegeerte in Maatskaplike Werk: B.A.(M.W.) (RAU)

B.A. in Maatskaplike Werk (US)

Baccalaureus Artium in die Sosiale Wetenskappe: B.A.(S.W.) (Unisa)

Honneursgrade

Honneurs-Baccalaureus in Sosiale Wetenskappe: B.Soc.Sc.(Hons.) (UK, Rhodes) of B.Soc.Sc.Hons. (Natal)

Honneurs-Baccalaureus Societatis Scientiae: B.Soc.Sc.(Hons.) (UOVS)

Honneurs-Baccalaureus in Sosiale Wetenskappe in Maatskaplike Werk: B.Soc.Sc.(M.W.) (Hons.) (UK)

Honneurs-Baccalaureus Societatis Scientiae Maatskaplike Werk: B.Soc.Sc.(Hons.)(M.W.) (UOVS)

.Baccalaureus Artium Honores: B.A.Hons. (UPE)

Baccalaureus Honores in Lettere en Wysbegeerte in Maatskaplike Werk: B.A.(M.W.)(Hons.) (UP)

Honneurs-B.A. in Maatskaplike Werk (US)
Honneurs-B.A. in Maatskaplike Werk (rigting Geneeskundige Maatskaplike Werk) (US)
Honneurs-Baccalaureus Artium in die Sosiale Wetenskappe: Hons.-B.A.(S.W.) (Unisa)

Magistergrade

Magister in Sosiale Wetenskappe: M.Soc.Sc. (UK, Natal, Rhodes)
Magister in Publieke Administrasie: M.Pub.Ad. (UK)
Magister Societatis Scientiae: M.Soc.Sc. (UOVS)
Magister Societatis Scientiae Maatskaplike Werk: M.Soc.Sc.(M.W.) (UOVS)
Magister Artium: M.A. (UPE, PU vir CHO)
Magister in Lettere en Wysbegeerte in Maatskaplike Werk: M.A.(M.W.) (UP)
Magister in die Lettere en Wysbegeerte in Maatskaplike Werk: M.A.(M.W.) (RAU)
M.A. in Maatskaplike Werk (US)
M.A. in Maatskaplike Werk (rigting Geneeskundige Maatskaplike Werk) (US)
Magister Artium in die Sosiale Wetenskappe: M.A.(S.W.) (Unisa)
Magister Artium in Maatskaplike Werk: M.A. (Maatskaplike Werk) (Wits)

Doktorsgrade

Doktor in die Wysbegeerte: Ph.D. (UK, Natal, Rhodes, Wits)
Doktor in Sosiale Wetenskappe: D.Soc.Sc. (UK, Natal, Rhodes)
Doctor Societatis Scientiae: D.Soc.Sc. (UOVS)
Doctor Societatis Scientiae Maatskaplike Werk: D.Soc.Sc.(M.W.) (UOVS)
Doctor Philosophiae: D.Phil. (UPE, PU vir CHO, US, Unisa)
Doktor in Wysbegeerte: D.Phil (UP)
Doktor in die Lettere en Wysbegeerte: D.Litt. et Phil. (RAU)

Diplomas

Diploma in Sosiale Wetenskappe (Maatskaplike Werk) (UK)
Diploma in Maatskaplike Werk (UOVS, UPE, PU vir CHO, Rhodes, US, Unisa)
Gevorderde Diploma in Psigiatriese Maatskaplike Werk (UK)
Nagraadse Diploma in Maatskaplike Werk (Natal)
Gevorderde Diploma in Maatskaplike Werk (UOVS, UPE)
Diploma in Sosiale Studies (Rhodes)

GRADE

Baccalaureus in Sosiale Wetenskappe: B.Soc.Sc. (Kaapstad, Natal, Rhodes)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie. Die leergang bestaan uit nege of tien kursusse na gelang van die universiteit.

Studente kies die kursusse uit vakke soos Sosiologie, Ekonomiese Geskiedenis, Sosiale Antropologie, Geskiedenis, Ekonomie, Sielkunde en Wiskunde.

Aan die Universiteit van Kaapstad moet studente drie kursusse in Sosiologie volg.

Studente aan die Universiteit van Natal wat maatskaplike werkers wil word, volg drie kursusse in Maatskaplike Werk en Sielkunde of Sosiologie.

Baccalaureus Societatis Scientiae: B.Soc.Sc. (Oranje-Vrystaat)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie. Die leergang bestaan uit minstens elf kursusse. Twee van die volgende vakke moet hoofvakke wees: Sosiologie, Bedryfsosiologie, Sielkunde, Kriminologie.

Baccalaureus in Sosiale Wetenskappe in Maatskaplike Werk: B.Soc.Sc.(M.W.) (Kaapstad)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie. Die leergang bestaan uit nege kursusse en word soos volg saamgestel: Sosiologie III, Maatskaplike Werk III, Sielkunde II en 'n kursus in Engels of Afrikaans of 'n Bantoetaal of Publieke Administrasie I.

Studente moet ook die voorgeskrewe praktiese werk doen.

Baccalaureus Societatis Scientiae Maatskaplike Werk: B.Soc.Sc.(M.W.) of

Baccalaureus Artium in Maatskaplike Werk: B.A.(M.W.) of

Baccalaureus in Lettere en Wysbegeerte in Maatskaplike Werk: B.A.(M.W.) of

Baccalaureus in Sosiale Wetenskappe in Maatskaplike Werk: B.Soc.Sc.(M.W.) of

B.A. in Maatskaplike Werk of

Baccalaureus Artium in die Sosiale Wetenskappe: B.A.(S.W.)

(Oranje-Vrystaat, Port Elizabeth, Pretoria, Rhodes, Stellenbosch, Suid-Afrika)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie of vier jaar deeltydse studie (Pretoria).

Die leergang bestaan gewoonlik uit 10 of elf kursusse en behels drie kursusse in Maatskaplike Werk en drie kursusse in Sosiologie of Sielkunde. Ander kursusse word uit vakke vir die gewone B.A.-graad gekies.

Sekere universiteite sluit ook Kriminologie by die leergang in.

Studente moet gewoonlik praktiese maatskaplike werk verrig by 'n organisasie wat 'n opgeleide maatskaplike werker in diens het.

Baccalaureus Artium (Maatskaplike Werk): B.A.(M.W.) of

Baccalaureus in die Lettere en Wysbegeerte in Maatskaplike Werk: B.A.(M.W.) of

Baccalaureus Artium in Maatskaplike Werk: B.A.(Maatskaplike Werk)

(Potchefstroom, Randse Afrikaanse Universiteit, Witwatersrand)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Vier jaar voltydse studie.

Die leergang bestaan uit twaalf of dertien kursusse en behels Maatskaplike Werk IV, Sosiologie III en/of Sielkunde III saam met ander kursusse gekies uit vakke vir die gewone B.A.-graad.

Die Universiteit van die Witwatersrand vereis ook 'n dissertasie oor 'n goedgekeurde onderwerp in die vierde studiejaar.

DIPLOMAS

Diploma in Sosiale Wetenskappe (Maatskaplike Werk) of

Diploma in Maatskaplike Werk

(Kaapstad, Oranje-Vrystaat, Port Elizabeth, Potchefstroom, Rhodes, Stellenbosch)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Drie jaar voltydse studie.

Die leergang is dieselfde as vir die graad B.Soc.Sc.(M.W.) of vir die graad B.A.(M.W.) na gelang van die universiteit wat die Diplomakursus aanbied.

Diploma in Maatskaplike Werk (Suid-Afrika)

Toelatingsvereiste: 'n Graad met slaagsyfers in minstens Sosiologie I of Sielkunde I.

'n Student wat in Sosiologie II en III en/of Sielkunde II en III geslaag het, neem nie 'n ander kursus(se) in die plek daarvan nie.

Leergang: Twee jaar.

Gevorderde Diploma in Psigiatrisiese Maatskaplike Werk (Kaapstad)

Toelatingsvereiste: 'n Honneursgraad in Psigiatrisiese Maatskaplike Werk of 'n erkende gelykwaardige kwalifikasie.

Leergang: Die kursus duur minstens een halfjaar en behels voorgeskrewe veld- en kliniese praktyk.

Nagraadse Diploma in Maatskaplike Werk (Natal)

Toelatingsvereiste: Die graad B.Soc.Sc.

Leergang: Een jaar voltydse of twee jaar deeltydse studie.

Dié Diploma is gelyk aan 'n Honneursgraad in Maatskaplike Werk.

Gevorderde Diploma in Maatskaplike Werk (Oranje-Vrystaat)

Toelatingsvereiste: 'n Erkende Universiteitsdiploma in Maatskaplike Werk.

Leergang: Een jaar voltydse studie.

Die leergang is dieselfde as vir die graad B.Soc.Sc.(Hons.) in Maatskaplike Werk.

Gevorderde Diploma in Maatskaplike Werk (Port Elizabeth)

Toelatingsvereiste: 'n Erkende graad of diploma in Maatskaplike Werk of gelykwaardige kwalifikasies.

Leergang: Een jaar. Die leergang behels vier van die vyf Honneursvraestelle in Maatskaplike Werk.

Diploma in Sosiale Studies (Rhodes)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Twee jaar voltydse studie.

Die leergang behels onder andere kursusse in Sosiologie, Sielkunde en Maatskaplike Werk.

Die Diploma bied net algemene opleiding in die Sosiale Wetenskappe aan.

BEROEPSDIENS

Maatskaplike werk het te doen met die doeltreffende maatskaplike funksionering van die mens binne en buite die gesin, in groepe en in die gemeenskap. Benewens die hantering van die gewone probleme wat hulle op individuele en gesinsvlak voordoën, soos onder andere huweliksprobleme, aannemings, dwelmverslaafdheid en ander persoonlike probleme, staan die maatskaplike werker voor die uitdaging om te help om oplossings te vind vir vraagstukke van persoonlike en maatskaplike aanpassing wat volkere, en by name die jeug, vandag bedreig. Die Maatskaplike Werker stel sig dus ten doel om mense uit alle lae en groepe van die samelewing te help om hulself te help, om hulle weer 'n betekenisvolle rol in die samelewing te laat vervul deur hulle in die normale maatskaplike en ekonomiese diensstruktuur in te skakel. Drie primêre metodes word aangewend om die werk te behartig, naamlik gevallewerk, maatskaplike groepwerk en gemeenskapswerk. Afgesien dus van besondere persoonlikheidseienskappe, moet die maatskaplike werker ook oor professionele opleiding (graad of diploma) beskik wat hom sal toerus vir die eise van hierdie gespesialiseerde beroep.

Die Staatsdiens is tans die grootste enkele werkgewer vir mans en dames wat hulle in die sosiale wetenskappe bekwaam het. Die werksaamhede dek so 'n breë terrein dat daar voorsiening gemaak is vir 'n groot aantal hoë vakkundige poste. Die Departemente wat met welsyn- en verwante dienste gemoeid is, is dié van Volkswelsyn en Pensioene, Bantoe-administrasie en -ontwikkeling en Kleurlingbetrekkings en Rehoboth-aangeleenthede. Ander instansies wat maatskaplike dienste lewer of waar maatskaplike werk sekondêr aan die hoofdoel is, is byvoorbeeld die SA Nasionale Raad Insake Alkoholisme en Afhanklikheid van Verdowingsmiddels, die CMA, hospitale, munisipaliteite, die gevangeniswese, die Spoorweë, die Weermag, die Poswese, kindersorgverenigings, huweliksbyuro's, die myne, Yskor, Sasol en ander groot nywerheidsondernemings. Belangrike poste in persoonneelbestuur word tans deur maatskaplike werkers gevul, terwyl persone met die nodige kwalifikasies en ervaring doseerposte aan universiteite kan bekom. Die vak Maatskaplike Werk is nie 'n geslote vak net vir die beroep van maatskaplike werk nie. As vak vir feitlik enige B.A.-studierigting is dit van besondere waarde vir predikante, verpleegsters, onderwysers, sielkundiges, sosioloë en so meer.

Kyk ook Sosiologie, p. 73 en ander Sosiale Wetenskappe onder B.A.

SPRAAKHEELKUNDE EN OUDILOGIE/LOGOPEDIE

Universiteite: Kaapstad, Natal, Pretoria, Witwatersrand

Grade

Baccalaureus Scientiae (Logopedie): B.Sc.(Logopedie) (UK)

Baccalaureus in Lettere en Wysbegeerte in Spraakheelkunde en Oudiologie: B.A.(Log.) (UP)

Baccalaureus Artium in Spraak- en Gehoorterapie: B.A.(Spraak- en Gehoorterapie) (Wits)

Magistergrade

Magister in Lettere en Wysbegeerte in Spraakheelkunde en Oudiologie: M.A.(Log.) (UP)

Magister Artium: M.A. (Wits)

Doktorsgrade

Doktor in Wysbegeerte: D.Phil. (UP)

Doktor in die Wysbegeerte: Ph.D. (Wits)

Doctor Litterarum: D.Litt. (Wits)

Diplomas

Diploma in Spraakterapie (Logopedie) (Natal)

Diploma vir Terapeute (Buitengewone Onderwys): D.T.B.O. (Unisa) Kyk OPVOEDKUNDE p.212.

GRADE

Baccalaureus Scientiae (Logopedie): B.Sc.(Logopedie) (Kaapstad)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde. Daar word aanbeveel dat Biologie as 'n vak vir die Standaard 10-eksamen geneem moet word.

Leergang: Vier jaar voltydse studie. Die leergang behels die volgende kursusse: Anatomie I, Chemie I, Fonetiek en Linguistiek II, Sielkunde III, Oudiologie II, Spraakpatologie en Terapie IV. 'n Verslag wat gebaseer is op geleide navorsing oor 'n goedgekeurde onderwerp word in die vierde jaar vereis. Studente moet ook praktiese werk doen.

Baccalaureus in Lettere en Wysbegeerte in Spraakheelkunde en Oudiologie: B.A.(Log.)

of

Baccalaureus Artium in Spraak- en Gehoorterapie: B.A.(Spraak- en Gehoorterapie)

(Pretoria, Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Addisionele vereistes:

Pretoria: Kyk p.57.

Witwatersrand: Kyk p.37. 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op die Standaardgraad.

Leergang: Vier jaar voltydse studie.

Die leergang behels die volgende kursusse: Afrikaans en Nederlands I of Engels I; Neurologie van spraak, stem en gehoor; Patologie van die spraak-, stem- en gehoororgane; Spraakwetenskap II; Oudiologie II of III; Sielkunde III; Spraakheelkunde IV.

Studente moet in hul tweede, derde en vierde studiejare praktiese werk doen.

DIPLOMA

Diploma in Spraakterapie (Logopedie) (Natal)

Toelatingsvereistes: 'n Baccalaureusgraad met Spraakleer en Drama as 'n hoofvak of 'n gelykwaardige kwalifikasie.

Leergang: Twee jaar voltydse of drie jaar deeltydse studie.

Die leergang behels die volgende kursusse: Anatomie en Fisiologie, Neurologie, Spraakpatologie en Terapie II.

'n Kandidaat moet Sielkunde I, II en III en Sosiologie I of Sosiale Volkekunde I voltooi òf voordat hy vir die kursus inskryf òf terwyl hy vir die Diploma studeer.

BEROEPSDIENS

Daar bestaan 'n steeds groeiende bewuswording van die belangrikheid van hierdie beroep wat deur mans en dames beoefen kan word. Anders as in die geval van die Spraakkuns (soos aangetref in die studierigting Spraakleer en Drama) waardeur gepoog word om normale spraak op 'n hoër peil te bring, word spraakterapie toegepas op persone met stem-, spraak- en gehoorversteurings of -afwykings. Kommunikasie-afwykings wat deur die Spraakterapeut behandel word, is byvoorbeeld spraakgebreke wat ontstaan as gevolg van gehoorgebreke, moeilikhede met bepaalde klanke, hakkels, leesmoeilikhede, die gesplete verhemelte en breinbeserings wat die spraak nadelig beïnvloed, stemafwykings (byvoorbeeld heesheid), afwykings wat ontstaan as gevolg van sielkundige probleme, ensovoorts.

Die gekwalifiseerde spraakterapeut behoort geen probleme te ondervind om 'n pos volgens aanleg en belangstelling te bekom nie, en die beroep kan beoefen word byvoorbeeld deur -

- in diens te tree by 'n provinsiale onderwysdepartement of die Departement van Nasionale Opvoeding (in sommige gevalle kan 'n onderwyserskwalifikasie en/of onderwyservaring vereis word);
- diens in hospitale of hospitaalklinieke waar saamgewerk word met oor-, neus- en keelartse, die neuroloë, kinderartse, plastiese chirurge en psigieters;
- 'n aanstelling in 'n spraak-, stem- en gehoorkliniek aan 'n universiteit;
- 'n eie kliniek en private praktyk;
- 'n betrekking as oudioloog in die SA Weermag om byvoorbeeld die gehoor van vlieëniers te ondersoek.

'n Groot mate van persoonlike bevrediging kan uit spraakterapie as beroep verkry word. Om iemand te help om 'n plek in die samelewing te herwin is 'n ervaring wat groot vreugde verskaf; om hom of haar te help om normaalweg te kommunikeer, is inderdaad die moeite werd.

SPRAAKLEER EN DRAMA

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Potchefstroom, Pretoria, Rhodes, Stellenbosch, Witwatersrand

Die Universiteit van die Witwatersrand bied ook twee kwalifiserende kursusse in Geskiedenis van Drama aan vir die B.A.-graad.

Grade

Baccalaureus Artium met twee kursusse in Drama: B.A. (UK)

Baccalaureus Artium met Spraakleer en Drama as 'n hoofvak: B.A. (Natal)

Baccalaureus Artium (Dramakunde en Toneelkunde): B.A.(Dramakunde en Toneelkunde) (UOVS)

Baccalaureus Artium met Spraak- en Vertolkingskunde of Toneelkunde as hoofvakke: B.A. (PU vir CHO)

Baccalaureus in Lettere en Wysbegeerte in Drama: B.A.(Drama) (UP)

Baccalaureus in Drama: B.Dram. (US)

Baccalaureus Artium in Dramakunde: B.A.(Dramakunde) (Wits)

Honneursgrade

Honneurs-Baccalaureus Artium: B.A.Hons. of Honns.B.A. (Natal, PU vir CHO)

Honneurs-Baccalaureus Artium (Dramakunde en Toneelkunde): B.A.(Hons.)(Dramakunde en Toneelkunde) (UOVS)

Baccalaureus Honores in Lettere en Wysbegeerte in Drama: B.A.(Drama)(Hons.) (UP)

Honneurs-Baccalaureus in Drama: Honneurs-B.Dram. (US)

Magistergrade

Magister Artium: M.A. (Natal, PU vir CHO)

Magister Artium (Dramakunde en Toneelkunde): M.A.(Dramakunde en Toneelkunde) (UOVS)

Magister in Lettere en Wysbegeerte in Drama: M.A.(Drama) (UP)

Magister in Drama: M.Dram. (US)

Doktorsgrade

Doktor in Wysbegeerte: Ph.D. (Natal)

Doctor Litterarum: D.Litt. (UOVS, PU vir CHO)

Doktor in Lettere: D.Litt. (UP)

Doctor Philosophiae: D.Phil. (UP, US)

Diplomas

Voordraersdiploma in Spraakleer en Drama (UK)

Spesialisonderwysersdiploma in Spraakleer en Drama (UK)

Spesialistoneelspelersdiploma in Spraakleer en Drama (UK)

Spesiale Endossement vir Houers van Primêre Onderwyserssertifikate (UK)

Diploma in Toneelopvoering (Natal)

Diploma in Dramakunde en Toneelkunde (UOVS)

Universiteitsdiploma in Spraakleer en Drama: U.D.S.D. (PU vir CHO)

Universiteitsdiploma in Toneelkuns: U.D.T. (PU vir CHO)

Diploma vir Verhoogbestuurders (US)

Diploma in Spesialiseringsonderwys (Spraak en Drama) (US) (Kyk OPVOEDKUNDE p.209.)

Die Universiteit van die Oranje-Vrystaat bied die Hoër Onderwysdiploma (Nie-graads) aan in die rigting Drama- en Toneelkunde. (Kyk OPVOEDKUNDE p. 202.)

GRADE

Baccalaureus in Lettere en Wysbegeerte met twee kursusse in Drama: B.A. (Kaapstad)

Alle B.A.-studente wat vir Drama I wil inskryf, moet eers ten minste een kursus in Engels voltooi.

Studente wat van voorneme is om Drama I en II te volg, moet in hul eerste jaar klasse in die Departement Spraakleer en Drama bywoon.

Kyk Hoofstuk 2, Universiteit van Kaapstad, vir nadere besonderhede aangaande die B.A.-graadkursus.

Baccalaureus in Lettere en Wysbegeerte met Spraakleer en Drama: B.A.

Die Universiteite van Natal en Rhodes bied die graad B.A. met drie kursusse in Spraakleer en Drama aan.

Kyk Hoofstuk 2, Universiteit van Natal en Rhodes-universiteit, vir nadere besonderhede aangaande die B.A.-graadkursusse aan dié universiteite.

Baccalaureus Artium (Dramakunde en Toneelkunde): B.A.(Dramakunde en Toneelkunde)
(Oranje-Vrystaat)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie. Die leergang bestaan uit elf kursusse. Dramakunde en Toneelkunde I, II en III is gelykstaande aan ses kursusse. Die hoofvakke is Afrikaans en Nederlands III of Engels III of Kommunikasiekunde III en Dramakunde en Toneelkunde III.

Baccalaureus Artium met Spraak- en Vertolkingskunde of Toneelkunde: B.A. (Potchefstroom)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie. Studente volg die B.A.-graadkursus met òf Spraak- en Vertolkingskunde òf Toneelkunde as een van die hoofvakke.

Studente wat Toneelkunde as hoofvak neem, moet Spraak- en Vertolkingskunde as tweede hoofvak en ook twee kursusse in Drama neem. Die aanbevole ander hoofvak vir Spraak- en Vertolkingskunde as hoofvak is 'n taal.

Daar sal van studente in die Departement Spraakleer en Drama verwag word om in hul tweede en derde jaar hoogstens twee weke lank praktiese opleiding by een van die Rade vir Uitvoerende Kunste, verkieslik TRUK, te ondergaan.

Studente moet ook op twaalf Saterdag per jaar in hul tweede en derde jaar praktiese Radiowerk by die SAUK in Johannesburg doen.

Kyk Hoofstuk 2, Potchefstroomse Universiteit vir CHO, vir verdere besonderhede aangaande die B.A.-graadkursus.

Baccalaureus in Lettere en Wysbegeerte in Drama: B.A.(Drama) (Pretoria)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook p.57.

Leergang: Drie jaar voltydse studie. Die leergang bestaan uit elf kursusse, wat soos volg saamgestel word: Dramakunde I, II en III; Toneelkunde I, II en III; Spraakkunde I, II en III; en twee kursusse uit 'n groep B.A.-vakke.

Baccalaureus in Drama: B.Dram. (Stellenbosch)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar voltydse studie. Die twee hoofvakke is Drama III (Afrikaans en Engels) en Afrikaans-Nederlands III of Engels III. Ander kursusse is twee kursusse in 'n taal of 'n B.A.-vak en 'n eerstejaarskursus in 'n taal of 'n B.A.-vak.

In hul tweede en derde jaar neem Dramastudente deel aan verhoogwerk, vertolk rolle in die departement se opvoerings en verleen hulp by opvoerings in die Universiteit se teater.

Baccalaureus Artium in Dramakunde: B.A.(Dramakunde) (Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook p. 37.

Leergang: Vier jaar voltydse studie. Die leergang behels onder andere die volgende vakke: Drie kursusse in 'n goedgekeurde taal, twee kursusse in 'n vak of vakke gekies

uit 'n groep B.A.-vakke, Dramateorie en Kritiek III, Geskiedenis van Drama II, Teaterkuns II.

DIPLOMAS

Voordradersdiploma in Spraakleer en Drama (Kaapstad)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n gemiddelde persentasie van minstens 50 persent.

Kandidate wat in besit is van 'n Standaard 10-sertifikaat kan met verloop van die Departementshoof aangeneem word.

'n Student moes besondere begaafdheid as 'n voordraer getoon het. 'n Oudisie met 'n lid van die Departement Spraakleer en Drama word vereis.

Leergang: Drie jaar voltydse studie. 'n Eentalige (Engelsmedium) sowel as 'n Tweetalige leergang word aangebied.

Dit is moontlik vir 'n kandidaat om 'n B.A.-graadkursus saam met die Diploma-kursus oor 'n minimum tydperk van vier jaar te voltooi.

Spesialisonderwysersdiploma in Spraakleer en Drama (Kaapstad)

Toelatingsvereistes: 'n B.A.-graad met minstens twee kursusse in Drama of 'n B.A.-graad met drie kursusse in Engels en 'n kwalifikasie in Spraakleer en Drama of praktiese onderwyservinding en studies.

Leergang: Een jaar voltydse studie.

Spesialistoneelspelersdiploma in Spraakleer en Drama (Kaapstad)

Toelatingsvereistes: 'n B.A.-graad met minstens twee kursusse in Drama of 'n B.A.-graad met drie kursusse in Engels en 'n oudisie met 'n lid van die Departement Spraakleer en Drama.

Leergang: Een jaar.

Spesiale Endossement vir Houers van Primêre Onderwyserssertifikate (Kaapstad)

Toelatingsvereistes: Primêre Onderwyserssertifikaat en 'n Standaard 10-sertifikaat.

Leergang: Spesiale eenjarige kursus. 'n Eentalige sowel as 'n Tweetalige leergang word aangebied.

Diploma in Toneelopvoering (Natal)

Toelatingsvereiste: 'n Baccalaureusgraad met Spraakleer en Drama as 'n hoofvak.

Leergang: Een jaar voltydse of twee jaar deelydse studie.

Diploma in Dramakunde en Toneelkunde (Oranje-Vrystaat)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Drie jaar voltydse studie.

Die hoofvakke is Dramakunde en Toneelkunde en Afrikaans en Nederlands of Engels of Kommunikasiekunde. Die kursusse is dieselfde as dié vir die graad.

Universiteitsdiploma in Spraakleer en Drama: U.D.S.D. (Potchefstroom)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Drie jaar voltydse studie. Die hoofvakke is Spraak- en Vertolkingskunde

en Toneelkunde. Ander kursusse is onder andere Dramakunde I en II, Afrikaans of Afrikaans-Nederlands I of Engels I of Engels IB. Die Diploma kan in Afrikaans of in Afrikaans en Engels verwerf word.

Universiteitsdiploma in Toneelkuns: U.D.T. (Potchefstroom)

Toelatingsvereistes: 'n Goedgekeurde Baccalaureusgraad met Toneelkunde as een hoofvak of die Universiteitsdiploma in Spraakleer en Drama of 'n gelykwaardige kwalifikasie.

Leergang: Een akademiese jaar. Die leergang behels 'n studie in gevorderde Toneelkuns.

Diploma vir Verhoogbestuurders (Stellenbosch)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Twee jaar voltydse studie.

Die leergang behels die volgende kursusse: Afrikaans I, Spesiale Engels, Verhoogbestuur I en II, Klassieke Kultuur I.

BEROEPSDIENS

Dramakunde as vak is suiwer literêr, dit wil sê 'n teoretiese kursus wat net soos ander kursusse belangstelling verg maar geen besondere aanleg vir toneelspel nie. Spraakleer (-leer) asook Toneelkunde is teoreties-praktiese kursusse waarvoor studente benewens belangstelling, ook oor 'n bruikbare stem en 'n sterk mate van speeltalent moet beskik. (Baie studente het sluimerende talente en moet nie by voorbaat ontmoedig word nie.)

Oor die algemeen is die doel van hierdie studierigtings om byvoorbeeld taalonderwysers (mits aan die regte vakkombinasie voldoen word), toneelspelers, joernaliste, radio-omroepers en radio- en beeldradiospelers behoorlik vir hulle taak toe te rus. Die teater bied byvoorbeeld verskeie rigtings soos dié van akteur, direkteur, ontwerper, verhoogdirekteur, ens. In dié verband bied die Rade vir Uitvoerende Kunste van die vier provinsies besondere geleenthede. In diens van die SAUK ontvang opgeleide persone verdere opleiding in radiokunde en omroepwerk, waarna hulle kan optree byvoorbeeld as omroepers, programorganiseerders en produksie- en spelleiers, na gelang van hul opleiding, persoonlikheid, stem, skeppende vaardigheid, organisasievermoë en algemene bekwaamheid. Vir belangstellende en talentvolle persone is daar geleentheid om deel te neem aan radio- en televisiedramas.

Sommige van die rigtings vereis spesialisasie en hiervoor word ruim voorsiening deur die universiteite gemaak.

STADS- EN STREEKBEPANNING

Universiteite: Kaapstad, Natal, Potchefstroom, Pretoria, Stellenbosch, Witwatersrand

Grade

Baccalaureus Artium et Scientiae (Beplanning): B.Art. et Scien.(Bepl.) (PU vir CHO)

Baccalaureus in Stads- en Streeksbeplanning: B.Sc.(S. en S.) (UP)

Baccalaureus Scientiae in Stads- en Streekbeplanning: B.Sc.(S.S.) (Wits)

Magistergrade

Magister in Stads- en Streekbeplanning: M.S.S.B. (UK)

Magister in Stadsbeplanning en Stedelike Ontwerp (UK)

Magister Scientiae in Stads- en Streekbeplanning: M.Sc. S.S. (Natal)

Magister Artium et Scientiae (Beplanning): M.Art. et Scien.(Bepl.) (PU vir CHO)

Magister in Stads- en Streeksbeplanning: M.Sc.(S. en S.) (UP)

Magister in Stads- en Streekbeplanning: M. in Stads- en Streekbeplanning (US)

Magister Scientiae in Stads- en Streekbeplanning: M.Sc.(S.S.) (Wits)

Doktorsgrade

Doktor in Wysbegeerte: Ph.D. (UK, Natal, Wits)

Doktor in Stads- en Streeksbeplanning: D.Sc.(S. en S.) (UP)

Doctor Philosophiae: D.Phil. (PU vir CHO, US)

Doktor in Stads- en Streekbeplanning: D.S.S. (Wits)

Doctor Scientiae in Stads- en Streekbeplanning: D.Sc.(S.S.) (Wits)

Diplomas

Diploma in Stads- en Streekbeplanning (UK)

Diploma in Stadsbeplanning en Stedelike Ontwerp (UK)

Diploma in Stads- en Streekbeplanning

(Hierdie Diplomakursus sal 'n aanvang neem sodra die nodige reëlings aan die Universiteit van Natal getref kan word.)

GRADE

Baccalaureus Artium et Scientiae (Beplanning): B.Art. et Scien. (Bepl.) (Potchef=stroom)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Standaardgraad.

Leergang: Minstens vier jaar voltydse studie.

'n Kandidaat moet in minstens agtien kursusse slaag. Die twee hoofvakke is Stadsbeplanning IV en Streekbeplanning IV. Die ander kursusse is onder andere die volgende: S.A. Administratiewe en Beplanningswetgewing; Streekontledingsmetodes; Geografie III òf Ekonomie III òf Sosiologie III; Statistiese Metodes; Ingenieurswese vir Beplanning.

'n Kandidaat moet ook in sy finale studiejaar 'n bevredigende skripsie oor 'n goedgekeurde onderwerp indien.

Baccalaureus in Stads- en Streekbeplanning: B.Sc.(S. en S.) (Pretoria)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook p.164.

Leergang: Vier jaar voltydse studie. 'n Kandidaat moet in agtien kursusse slaag en 'n skripsie in die vierde studiejaar indien. Die leergang sluit onder andere die volgende kursusse in: Stadsbeplanning IV, Streekbeplanning IV, Ingenieurswese vir Beplanners, Beplanningsreg, Ekonomie III of Sosiologie III, Wiskunde I, Geografie I.

Baccalaureus Scientiae in Stads- en Streekbeplanning: B.Sc.(S.S.) (Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer op die Hoër Graad of minstens 60 persent op die Standaardgraad in Wiskunde en in een van die volgende vakke: Biologie, Natuur- en Skeikunde, Fisiologie.

Leergang: Vier jaar voltydse studie. Studente moet gedurende die universiteitsvakansies praktiese werk doen en aan voorgeskrewe besoeke en toere deelneem. Die leergang behels onder andere die volgende kursusse: Stads- en Streekbeplanningpraktyk IV, Stads- en Streekbeplanningteorie IV, Stads- en Streekbeplanningsreg, Geografie vir Beplanners, Ekonomie I, Sosiologie I, Geografie I, Wiskunde I.

Kandidate moet in die vierde studiejaar 'n skripsie indien.

Magister in Stads- en Streekbeplanning: M.S.S.B. (Kaapstad)

Toelatingsvereiste: 'n Erkende graad van 'n goedgekeurde inrigting.

Leergang: Twee jaar voltydse studie.

Magister in Stadsbeplanning en Stedelike Ontwerp (Kaapstad)

Toelatingsvereiste: 'n Graad in Argitektuur van enige erkende inrigting deur die Senaat goedgekeur.

Leergang: Twee jaar voltydse studie.

Magister Scientiae in Stads- en Streekbeplanning: M.Sc. S.S. (Natal)

Toelatingsvereistes: 'n Graad in Argitektuur, Siviele Ingenieurswese of Landmeetkunde, of 'n graad met 'n goedgekeurde standaard in Ekonomie, Geografie of Sosiologie.

Leergang: Drie jaar deeltydse studie.

M. in Stads- en Streekbeplanning (Stellenbosch)

Toelatingsvereistes: 'n Kandidaat moet in besit wees van een van die volgende kwalifikasies:

- 'n B.A.-graad met minstens een van die volgende as hoofvak: Geografie A, Ekonomie, Sosiologie, Bedryfseconomie
- 'n B.Sc.-graad met minstens een van die volgende as hoofvak: Geografie B, Geologie, Wiskunde
- 'n B.Sc.-graad in die Landbou (Landbou-ekonomie)
- 'n B.Com.-graad
- 'n B.Econ.-graad
- 'n B.Admin.-graad
- 'n B.Ing.-graad (Siviel)
- 'n B.Sc.-graad in Bosbou
- 'n Baccalaureusgraad in Argitektuur
- 'n Baccalaureusgraad in Landmeetkunde.

Leergang: Twee jaar voltydse of drie jaar deeltydse studie.

DIPLOMAS

Diploma in Stads- en Streekbeplanning (Kaapstad)

Toelatingsvereistes: 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) of enige ander bevredigende Standaard 10-sertifikaat; en 'n diploma of professionele kwalifikasie goedgekeur deur die Senaat.

Leergang: Twee jaar voltydse studie.

Diploma in Stadsbeplanning en Stedelike Ontwerp (Kaapstad)

Toelatingsvereistes: 'n Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) of enige ander bevredigende Standaard 10-sertifikaat; en 'n diploma of professionele kwalifikasie in Argitektuur goedgekeur deur die Senaat.

Leergang: Twee jaar voltydse studie.

Diploma in Stads- en Streekbeplanning (Natal)

Toelatingsvereistes: 'n Professionele kwalifikasie in Argitektuur, Siviele Ingenieurswese of Landmeetkunde.

Leergang: Drie jaar deelydse studie.

BEROEPSDIENS

Stads- en Streekbeplanning is een van die professies wat in die moderne tyd al hoe belangriker word. Ook in Suid-Afrika het daar in die afgelope tyd 'n baie sterk vraag na opgeleide beplanners ontstaan, onder andere vanweë die feit dat baie van die stede en groter dorpe die stadium bereik het waar stedelike hernuwing, dit wil sê die vervanging van ou en ondoelmatige geboue en ontoereikende padstelsels deur nuwes, noodsaaklik geword het. Hierbenewens verg die sametrekking van bevolking by groeipunte deeglike toekomsbeplanning wat volledige opnames sal behels van hulpbronne, die evaluasie daarvan en navorsing oor die beste benutting daarvan in die totale besettingspatroon. Die beplanner dien in 'n groot mate as skakel tussen argitek en ingenieur, tussen ekonoom en sosioloog, tussen publieke belange en die nywerheid.

Die meerderheid van die huidige beplanners is in diens van die groter munisipaliteite, terwyl ongeveer een derde verbonde is aan die Staatsdepartemente van Beplanning en die Omgewing, Gemeenskapsbou en Bantoe-administrasie en -ontwikkeling. Die res is in diens van die vier Provinsiale Administrasies of praktiseer privaat. Vir die siviele ingenieur, argitek of landmeter is bykomende opleiding in beplanning van besonder groot waarde, en dit kan lei tot senior poste, veral in die Staatsdiens. Ook vir 'n pos as dosent aan 'n universiteit sal nagraadse studie vereis word. Akademiese poste bestaan ook aan sommige kolleges vir gevorderde tegniese onderwys.

TANDHEELKUNDE

Universiteite: Pretoria, Stellenbosch, Witwatersrand

Grade

Baccalaureus in Tandheelkunde: B.Ch.D. (UP) of B.D.S. (Wits)

Baccalaureus in die Tandheelkunde: B.Ch.D. (US)

Baccalaureus Scientiae in Mondbiologie: B.Sc.(Mondbiologie) (Wits)

Honneursgraad

Baccalaureus Honores in Tandheelkunde: B.Ch.D.(Hons.) (UP)

Magistergrade

Magister in Tandheelkunde: M.Ch.D. (UP) of M.D.S. (Wits)

Magister in die Tandheelkunde: M.Ch.D. (US)

Magister in Tandheelkundige Wetenskappe: M.Dent. (UP, Wits)

Magister in Natuurwetenskappe in Tandheelkundige Wetenskappe: M.Sc. in Tandheelkundige Wetenskappe (US)

Doktorsgrade

Doktor in Tandheelkunde: D.Ch.D. (UP)

Doktor in die Tandheelkunde: D.Ch.D. (US)

Doktor in die Wysbegeerte (Odontologie): Ph.D.(Odont.) (US)

Doktor in die Wysbegeerte in Tandheelkunde: Ph.D.(Dent.) (Wits)

Doctor Scientiae in Tandheelkunde: D.Sc.(Dent.) (Wits)

Diplomas

Diploma in Mondhigiëne (UP, US, Wits)

Nagraadse Diplomas

Diploma in Tandheelkundige Volksgesondheid: D.T.V.G. (UP)

Diploma in Tandheelkunde: Dip.Dent.Gen. (UP)

Diploma in Kaak-, Gesigs- en Mondchirurgie (Wits)

Diploma in Mondpatologie (Wits)

Diploma in Ortodonsie (Wits)

Diploma in Periodonsie en Mondgeneeskunde (Wits)

Diploma in Prostodonsie (Wits)

Hoër Diploma in Tandheelkunde (Wits)

GRADE

Die grade in Tandheelkunde aan die universiteite kan by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad geregistreer word.

Elke student in Tandheelkunde moet by die Raad geregistreer wees vir 'n tydperk van vier jaar voordat hy geregtig is op registrasie as tandarts. Studente moet aan die begin van hulle tweede studiejaar aansoek doen om geregistreer te word.

Baccalaureus in Tandheelkunde: B.Ch.D. of B.D.S. of

Baccalaureus in die Tandheelkunde: B.Ch.D. (Pretoria, Stellenbosch, Witwatersrand)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievrystelling).

Addisionele vereistes:

Pretoria: Kyk p. 164.

Stellenbosch: Slaagsyfers in Wiskunde en Natuur- en Skeikunde op die Standaardgraad.

Witwatersrand: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 60 persent op die Standaardgraad en 'n slaagsyfer in Biologie of Natuur- en Skeikunde op die Hoër of Standaardgraad.

Leergang: 5½ jaar voltydse studie. Studente doen praktiese en kliniese werk in die tandheelkundige hospitaal verbonde aan die betrokke universiteit.

Die eerste jaar bestaan uit pre-tandheelkundige vakke, te wete: Chemie, Fisika, Biologie en Anatomie en Histologie (Pretoria) of Wiskunde (Stellenbosch) of Mikro-anatomie (Witwatersrand).

Die ander voorgeskrewe vakke is onder andere die volgende: Anatomie, Fisiologie, Patologie of Patologiese Anatomie, Interne Geneeskunde, Chirurgie, Anesthesiologie, Farmakologie. Die vakke vir die laaste drie semesters behels Herstellende Tandheelkunde, Prostetika, Mondpatologie, Kaak-, gesigs- en mondchirurgie, Ortodonsie, Mondgeneeskunde en Periodonsie.

Baccalaureus Scientiae in Mondbiologie: B.Sc.(Mondbiologie) (Witwatersrand)

Toelatingsvereistes: Soos vir die B.D.S.-graad.

Leergang: Vier jaar voltydse studie. Die leergang behels Deel I en Deel II. Die kwalifiserende kursusse vir Deel I duur drie jaar en is dieselfde as dié vir die eerste drie jaar van die leergang vir die B.D.S.-graad. Die kwalifiserende kursus vir

Deel II is Mondbiologie.

Hierdie graad is ontwerp vir studente wat 'n beroep in biologiese navorsing en onderwys wil beoefen, veral in die tandheelkundige rigting.

DIPLOMAS

Diploma in Mondhigiëne (Pretoria, Stellenbosch)

Toelatingsvereistes: Standaard 10-sertifikaat met Biologie en/of Natuur- en Skeikunde. Die Universiteit van Stellenbosch gee voorkeur aan studente wat ook Wiskunde geneem het.

Leergang: Twee jaar voltydse studie (Pretoria) of drie semesters voltydse studie (Stellenbosch). Die leergang behels onder andere Anatomie, Fisiologie, Mondpatologie (Pretoria) of Algemene Patologie (Stellenbosch), Tandheelkundige Materiale en Geneesmiddels, Voorkomende en Bevorderende Tandheelkunde, Noodhulp, Mondhigiëne.

Diploma in Mondhigiëne (Witwatersrand)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Een en 'n halfjaar voltydse studie. Die leergang behels Deel I en Deel II. Deel I sluit in Etiek, Algemene Regsleer en Administrasie met betrekking tot Tandheelkundige Praktijk; Beginsels van Mensbiologie; Beginsels van Menslike Siektes. Deel II behels Kliniese Mondhigiëne; Beginsels en Praktijk van Mondradiografie; Opvoeding in Tandheelkundige Volksgesondheid en Voorkomende Tandheelkunde.

Nagraadse diplomas

Diploma in Tandheelkundige Volksgesondheid: D.T.V.G. (Pretoria)

Toelatingsvereistes: Elke kandidaat moet minstens twee jaar lank in besit wees van die B.Ch.D.-graad en moet by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad as tandarts geregistreer wees.

Leergang: Een jaar voltydse of twee jaar deeltydse studie.

Die leergang behels onder andere die volgende eksamenvakke: Mikrobiologie, Parasitologie, Stadsbeplanning en Fisiologie, Sanitasie en Higiëne, Wetgewing en Administrasie, Skoolhigiëne.

Diploma in Tandheelkunde: Dip.Dent.Gen. (Pretoria)

Toelatingsvereiste: Die B.Ch.D.-graad of 'n gelykwaardige kwalifikasie.

Leergang: Drie jaar deeltydse studie.

Kandidate sal hulle in elke studiejaar vir twee tydperke van drie weke elk by die Hospitaal vir Tand- en Mondheelkunde aanmeld vir lesings, kliniese en praktiese onderrig.

Die leergang behels, onder andere, Anatomie, Fisiologie en Patologie in die eerste jaar; en Konserverende Tandheelkunde, Ortodonsie, Mondchirurgie en Radiologie in die tweede en derde jare.

Diploma in Kaak-, Gesigs- en Mondchirurgie (Witwatersrand)

Toelatingsvereistes: 'n Kandidaat moet in besit wees van die B.D.S.-graad of 'n gelykwaardige kwalifikasie en moet by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad as tandarts geregistreer wees.

Leergang: Vier jaar voltydse studie of 'n langer tydperk deeltydse studie, soos die Senaat mag bepaal. Die leergang behels Dele I, II en III.

Diploma in Mondpatologie (Witwatersrand)

Toelatingsvereiste: Soos vir Diploma in Kaak-, Gesigs- en Mondchirurgie.

Leergang: Vier jaar voltydse studie of 'n langer tydperk deeltydse studie, soos die Senaat mag bepaal. Die leergang behels Dele I en II.

Diploma in Ortodonsie (Witwatersrand)

Toelatingsvereiste: Soos vir Diploma in Kaak-, Gesigs- en Mondchirurgie.

Leergang: Drie jaar voltydse studie of 'n langer tydperk deeltydse studie, soos die Senaat mag bepaal. Die leergang behels Dele I, II en III.

Diploma in Periodonsie en Mondgeneeskunde (Witwatersrand)

Toelatingsvereiste: Soos vir Diploma in Kaak-, Gesigs- en Mondchirurgie.

Leergang: Soos vir Diploma in Ortodonsie.

Diploma in Prostodonsie (Witwatersrand)

Toelatingsvereiste: Soos vir Diploma in Kaak-, Gesigs- en Mondchirurgie.

Leergang: Soos vir Diploma in Ortodonsie.

Hoër Diploma in Tandheelkunde (Witwatersrand)

Toelatingsvereiste: Soos vir Diploma in Kaak-, Gesigs- en Mondchirurgie.

Leergang: Een jaar voltydse studie of 'n langer tydperk deeltydse studie, soos die Senaat mag bepaal. Die leergang behels Dele I en II.

BEROEPSDIENS

Die meeste tandartse in die land bevind hulleself in private praktyke. Dit is sekerlik die ideale werksomstandighede, hoewel die hoë koste verbonde aan toerusting en lopende uitgawes steeds in gedagte gehou moet word. Geleenthede bestaan om in vennootskap te tree en die inkomste sal ooreenkomstig die omvang van die praktyk varieër. Tandartse kan ook teen vasgestelde vergoeding by verskillende Staatsdepartemente en ander organisasies in diens tree, soos byvoorbeeld die Onderwysdepartemente van die vier Provinsies wat van tandheelkundige beamptes gebruik maak om skole te besoek; die Departemente Hospitale; groot munisipaliteite; die Staatsdepartemente van Gesondheid en Verdediging; sekere groot nywerhede soos Yskor en die myne; die Administrasie van Suidwes-Afrika, en so meer. Aan sekere universiteite is 'n klein aantal tandartse werk saam as tandheelkundige professore en lektore. Verskeie van hulle onderneem ook navorsing. In Suid-Afrika bestaan daar tans 'n baie groot tekort aan tandartse.

TEOLOGIE

Universiteite: Natal, Potchefstroom, Pretoria, Rhodes, Stellenbosch, Suid-Afrika

Die Universiteite van die Oranje-Vrystaat en Port Elizabeth en die Randse Afrikaanse Universiteit bied ook B.A.-Admissie-leergange aan.

Grade

Baccalaureus Artium: B.A. (Natal)

Baccalaureus Artium (Honneurs): B.A.Hons. (Natal)

Baccalaureus Theologiae: Th.B. (Rhodes) of B.Theol. (Unisa)

Honneurs-Baccalaureus Theologiae: Honns.-B.Theol. (Unisa)

Nagraadse Grade

Potchefstroom

Theologiae Baccalaureus: Th.B.

Theologiae Magister: Th.M.

Theologiae Doctor: Th.D.

Rhodes

Baccalaureus Divinitatis: B.D.

Doctor Philosophiae: Ph.D.

Doctor Divinitatis: D.D.

Suid-Afrika

Baccalaureus Divinitatis: B.D.

Magister Divinitatis: M.Div.

Doctor Divinitatis: D.D.

Diplomas en Sertifikaat

Diploma in Bybelkunde: D.B. (PU vir CHO)

Diploma in Teologie (nagraads) (UP)

Sertifikaat in Godsdienenskennis (Rhodes)

Diploma in Teologie (Rhodes)

Lisensiaat in die Teologie (US)

Laer Diploma in Teologie (Unisa)

GRADE

Baccalaureus Artium: B.A.

Die Universiteit van Natal bied beide Bybelkunde en Teologie aan as hoofvakke waarin twee kwalifiserende kursusse geneem kan word. 'n Kandidaat wat twee kwalifiserende kursusse in een van dié vakke vir sy B.A.-graad voltooi het, kan 'n Honneurskursus in Godgeleerdheid volg.

Kyk Hoofstuk 2: Universiteit van Natal vir nadere besonderhede aangaande die B.A.-graadkursus.

Baccalaureus Theologiae: Th.B. (Rhodes)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Vier jaar voltydse studie. Die leergang sluit die volgende vakke in: Bybelkunde, Sistematiese Teologie, Kerkgeskiedenis, Pastorale Werk, Hellenistiese Grieks of Hebreeus of Wysbegeerte of Geskiedenis.

Dié graad kan oor twee jaar na verkryging van die B.A.-graad geneem word.

Baccalaureus Theologiae: B.Theol. (Suid-Afrika)

Toelatingsvereiste: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling).

Leergang: Drie jaar. Die leergang bestaan uit elf of twaalf kursusse soos volg: Bybelkunde III, Sistematiese Teologie III òf Algemene Kerkgeskiedenis III is die hoofvakke.

Twee kursusse moet voltooi word in een van laasgenoemde twee vakke wat nie as hoofvak gekies word nie. Een kursus moet gekies word uit Engels I, Praktiese Engels, Afrikaans en Nederlands I, Praktiese Afrikaans, en twee kursusse uit Klassieke Hebreeus I, Grieks I of Hellenistiese Grieks I, Latyn I.

Die twaalfde kursus kan een van die volgende wees: Pastorale Teologie, Godsdienswetenskap of 'n derde kursus in Sistematiese Teologie of Algemene Kerkgeskiedenis.

Honneurs-Baccalaureus Theologiae: Hons.-B.Theol. (Suid-Afrika)

Dié graad verleen nie toelating tot die studie vir 'n Magister- of Doktorsgraad nie.

NAGRAADSE GRADE

Theologiae Baccalaureus: Th.B. (Potchefstroom)

Toelatingsvereistes: 'n B.A.-graad. Die volgende kursusse moet voltooi word: Hebreeus II, Grieks II (met inbegrip van Nieu-Testamentiese Grieks), Latyn I, Wysbegeerte II.

'n Student mag nie in sy B.A.-leergang een of meer kursusse van die vak Bybelkunde insluit nie.

'n Student moet ook bewys lewer dat hy 'n bevredigende lees kennis van Duits het.

Leergang: Vier jaar voltydse studie.

Baccalaureus in Teologie: B.D. (Pretoria)

Toelatingsvereistes: 'n Baccalaureusgraad en suksesvolle aflegging van: Afrikaans I; Latyn I of IB of Latyn Spesiaal; Grieks II (insluitende Nieu-Testamentiese Grieks) of Hellenistiese Grieks II; en Hebreeus II.

Afdeling A - Ned. Hervormde Kerk van Afrika vereis 'n Baccalaureusgraad en suksesvolle aflegging van: Wysbegeerte I; Latyn I of IB; Grieks III en Hebreeus II of Grieks II en Hebreeus III.

Leergang: Drie jaar voltydse studie.

Nagraadse kursus (Pretoria)

Hierdie eenjarige kursus is verpligtend vir 'n kandidaat wat hom as predikant van die Ned. Geref. Kerk wil laat oplei.

Baccalaureus Divinitatis: B.D. (Rhodes)

Toelatingsvereistes: 'n Baccalaureusgraad van 'n ander fakulteit, verkieslik 'n B.A.-graad met Sistematiese Teologie II, Bybelkunde II en III, Kerkgeskiedenis II.

Leergang: Twee jaar voltydse studie na 'n B.A.-graad met bogenoemde vakke, anders drie jaar.

Baccalaureus in die Teologie: B.Th. (Stellenbosch)

Toelatingsvereistes: 'n Baccalaureusgraad in 'n ander fakulteit as die Fakulteite van Teologie verwerf. Die volgende vakke moet met welslae afgelê wees: Afrikaans-Nederlands I of Afrikaans I; Hebreeus II en ðf Grieks IIA ðf Grieks IIB of 'n goedgekeurde tweejarige kursus in Hebreeus en in Grieks.

Die vakke Bybelkunde en Kerklike Hulpbetoon moet nie deel van die minimum van tien jaarkursusse in die geval van die B.A.-graad uitmaak nie.

Voornemende evangeliedienaars van die Ned. Geref. Kerk moet vóór toelating tot die B.Th.-kursus, ook 'n Admissie-eksamen by die Admissie-eksamenkommissie van die Ned.

Geref. Kerk met goeie gevolg aflê.

Studente word sterk aangeraai om, met die oog op diens in een van die ondergenoemde afdelings van die Ned. Geref. Kerk, die volgende vakke soos vir elke afdeling aange= dui in die Baccalaureusgraadkursus in te sluit:

- (i) Moederkerk: Sielkunde, Sosiologie en Filosofie
- (ii) Kleurlingsending: Sosiologie en Maatskaplike Werk
- (iii) Bantoesending: Volkekunde, Engels, 'n Bantoetaal en Maatskaplike Werk.

Leergang: Drie jaar voltydse studie. Die leergang behels ses vakke wat almal hoof= vakke is.

Lisensiaat in die Teologie (Stellenbosch)

Studente wat die B.Th.-graad verwerf het, word tot die vierdejaarskursus in die Teo= logie toegelaat ter verkryging van die Lisensiaat in die Teologie.

Die kursus bestaan uit 'n skripsie asook voortgesette studie in die ses vakke wat vir die B.Th.-graad geneem is.

Baccalaureus Divinitatis: B.D. (Suid-Afrika)

Toelatingsvereistes: 'n B.A.- of 'n ander Baccalaureusgraad, en die kandidaat moet

- Latyn I, Klassieke Hebreeus II en of Grieks II of Hellenistiese Grieks II geslaag het of
- sodanige spesiale eksamens in hierdie vakke afgelê het as wat die Senaat mag be= paal:

Met dien verstande dat hoogstens twee van die taalkursusse gelyktydig met bepaalde dele van die B.D.-leergang geneem mag word.

'n Leeskenis van Duits is wenslik.

Leergang: Drie jaar.

DIPLOMAS EN SERTIFIKAAT

Diploma in Bybelkunde: D.B. (Potchefstroom)

Toelatingsvereiste: 'n Graad en/of 'n erkende onderwysersdiploma.

Leergang: Twee jaar deeltydse studie. Klasse word elke jaar op ongeveer 10 Saterdag gegee.

Diploma in Teologie (Pretoria)

Toelatingsvereiste: B.A.-graad; soos vir die B.D.-graad, behalwe dat Latyn nie 'n vereiste is nie.

Leergang: Drie jaar voltydse studie. Die leergang is dieselfde as dié vir die B.D.- graad, met 'n paar wysigings.

Sertifikaat in Godsdienskennis (Rhodes)

Toelatingsvereistes: Volwasse nie-matrikulante wat net twee jaar tot hulle beskikking het om die Universiteit by te woon.

Leergang: Twee jaar voltydse studie. Die Sertifikaat is bedoel om elementêre opleiding aan voornemende predikante, sendelinge en onderwysers te verskaf.

Die leergang bevat die volgende kursusse: Bybelkunde I en II, Kerkgeskiedenis I en II,

Sistematiese Teologie I, Engels of Afrikaans, Sosiologie I of Volkekunde I of Sielkunde I of Wysbegeerte I of Maatskaplike Werk I.

Diploma in Teologie (Rhodes)

Toelatingsvereistes: Volwasse nie-matrikulante wat na die Universiteit vir opleiding gestuur is deur hulle kerklike owerhede.

Leergang: Drie jaar voltydse studie. Die leergang behels dieselfde kursusse as dié van die Sertifikaat in Godsdienstkennis vir die eerste twee jaar. In die derde jaar volg studente Bybelkunde III en Sistematiese Teologie II. Pastorale Werk I of 'n ander goedgekeurde vak word in die eerste jaar gevolg.

Laer Diploma in Teologie (Suid-Afrika)

Toelatingsvereiste: Standaard 10-sertifikaat of 'n gelykstaande sertifikaat.

Leergang: Twee jaar. Die leergang bestaan uit die volgende kursusse: Bybelkunde I en II, Sistematiese Teologie I en II, Algemene Kerkgeskiedenis I, Pastorale Teologie, Godsdienwetenskap en een van: Algemene Kerkgeskiedenis II, Hellenistiese Grieks I, Klassieke Hebreeus I.

BEROEPSDIENS

Meer as in die geval van die meeste ander studierigtings, behoort voornemende studente vooraf duidelikheid te verkry op die vrae wat rondom 'n studie in die Teologie sentreer. Aangesien Suid-Afrika 'n godsdienstevrye land is en die talle kerkgenootskappe feitlik sonder enige beperking toegelaat word om hul werksaamhede voort te sit en uit te brei, en kerkgenootskappe baie van mekaar verskil wat betref organisasie, opleiding en diensvoorwaardes van predikers, en so meer, is dit nie moontlik om samevattende besonderhede oor almal te gee nie. Daar word dus aanbeveel dat belangstellendes self die nodige inligting van gesaghebbendes in hul besondere kerkorganisasies sal inwin.

As gevolg van die snelle bevolkingsaanwas, is dit duidelik dat hierdie 'n terrein met uitdagende moontlikhede is. Ook die meisie, veral die een wat in sendingwerk belangstel, hoef nie te vrees dat sy werkloos sal wees nie.

VEEARTSENYKUNDE

Universiteit: Pretoria

Grade

Baccalaureus in Veeartsenykunde: B.V.Sc.

Magister in Veterinêre Medisyne: M.Med.Vet.

Doktor in Veeartsenykunde: D.V.Sc.

Diplomas

Diploma in Veterinêre Volksgesondheid: D.V.V.G.

Diploma in Veterinêre Medisyne: Dip.Med.Vet.

GRADE

Baccalaureus in Veeartsenykunde: B.V.Sc.

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Kyk ook p. 164.

Leergang: Vyf jaar voltydse studie. Aangesien slegs 'n beperkte aantal kandidate tot die tweede studiejaar toegelaat kan word, vind 'n keuring na aflegging van die eerstejaarseksamens plaas. 'n Kandidaat wat nie gekeur word nie, word toegelaat om vir 'n ander kursus ten opsigte waarvan hy aan die toelatingsvereistes voldoen, in te skryf.

Die eerste studiejaar kan aan enige Suid-Afrikaanse universiteit voltooi word. Eerstejaarsvakke is Chemie, Dierkunde, Fisika, Plantkunde of Wiskunde OF Chemie, Biologiese Wetenskap, Fisika, Wiskunde. Vakke wat in die ander vier jaar geneem word, sluit in, onder andere, Anatomie, Patologie, Fisiologie en Fisiologiese Chemie, Bakteriële Siektes, Pluimveesiektes.

'n Kandidaat moet die twee amptelike tale voldoende magtig wees om die lesings sowel in Engels as in Afrikaans te kan volg. 'n Kandidaat kan kies in watter amptelike taal hy die eksamen wil aflê.

Gedurende universiteitsvakansies moet studente praktiese werk verrig en bewyse ter staving daarvan moet voor die einde van die finale studiejaar by die Registrateur ingedien word.

DIPLOMAS

Diploma in Veterinêre Volksgesondheid: D.V.V.G.

Toelatingsvereistes: 'n Kandidaat moet vir ten minste een jaar in besit wees van die B.V.Sc. of gelykstaande graad, en moet by die Suid-Afrikaanse Veeartsraad as Veearts geregistreer wees.

Leergang: Een akademiese jaar vir voltydse kandidate en twee akademiese jare vir deeltydse kandidate. Die leergang behels Deel I en II. Deel I bestaan uit vyf eksamenvakke, soos byvoorbeeld Mikrobiologie; Parasitologie; Stadsbeplanning en Fisiologie. Deel II sluit onder andere in Wetgewing en Administrasie, Sanitasie en Higiëne, Veterinêre Volksgesondheid.

Diploma in Veterinêre Medisyne: Dip.Med.Vet.

Toelatingsvereiste: Die graad B.V.Sc. of 'n gelykstaande graad.

Leergang: Een jaar voltydse studie. Die leergang bestaan uit drie vakke wat uit 'n aantal vakke gekies moet word bv. Anatomie, Histologie, Fisiologie en Fisiologiese Chemie, Virologie en Virussiektes, Radiologie.

BEROEPSDIENS

Die gekwalifiseerde veearts ondervind normaalweg geen probleme om 'n bevredigende betrekking in een van die vele vertakings van die professie te bekom nie. Intendeel, daar bestaan 'n behoefte aan veeartse met private praktyke, veral op die platteland.

Aangesien veeartsenykunde gemoeid is met die voorkoming en behandeling van diersiektes, spruit die werkgeleenthede van die veearts hoofsaaklik uit sy belangstelling in die volgende vertakings:

- Staatsveeartse in diens van die Departement Landbou-tegniese Dienste. Hulle is basies gemoeid met:
 - . Navorsing op groot en intensiewe skaal by die Navorsinginstituut te Onderstepoort. Hier is geleentheid om in een of meer van tien afdelings te spesialiseer. Werksaamhede sluit ook in die vervaardiging en verspreiding van entstof.
 - . Velddienste en voorligting, wat insluit besoeke aan boere, hulpverlening aan Staatsdepartemente, roetine-laboratoriumpligte en so meer. 'n Staatsveearts word bygestaan deur 'n aantal veeinspekteurs op buiteposte in sy gebied.
- Die private praktisyn, soms ook in vennootskap met ander veeartse, met 'n eie spreekkamer. Sommige van hulle spesialiseer ook en behandel dan slegs een soort dier.
- Veeartse in diens van munisipaliteite om te waak oor openbare gesondheid.
- Veeartse in diens van Landboukoöperasies tot nut en gerief van lede.
- Veeartse in diens van private ondernemings, onder andere vervaardigers van vee-middels en diereprodukte, eienaars van groot vee-stoeterye, pluimveeplase en so meer.
- Daar bestaan ook die moontlikheid van 'n pos as dosent aan die Universiteit van Pretoria.

VERPLEEGKUNDE

Universiteite: Kaapstad, Natal, Oranje-Vrystaat, Port Elizabeth, Potchefstroom, Pretoria, Randse Afrikaanse Universiteit, Stellenbosch, Witwatersrand

Grade

Baccalaureus Scientiae (Verpleegkunde): B.Sc.(Verpl.) (UK)

Baccalaureus in Sosiale Wetenskappe (gekwalifiseer as 'n verpleegster): B.Soc.Sc. (Natal)

Baccalaureus Societatis Scientiae Verpleegkunde: B.Soc.Sc.(Verpl.) (UOVS)

Baccalaureus Artium et Scientiae (Verpleegkunde): B.Art. et Scien.(Verpl.) (PU vir CHO)

Baccalaureus in Verpleegkunde: B.Cur. (UPE, UP)

Baccalaureus in Verpleegkundige Onderrig en Administrasie: B.Cur.(I. et A.) (UPE)

Baccalaureus in Verpleegkunde (Onderrig en Administrasie): B.Cur. (I. et A.) (UP)

Baccalaureus Curationis: B.Cur. (RAU)

Baccalaureus in Verpleegkunde: B.Verpleegkunde (US)

Baccalaureus Scientiae in Verpleegkunde: B.Sc.(Verpleegkunde) (Wits)

Honneursgrade

Baccalaureus in Sosiale Wetenskappe (Honneurs): B.Soc.Sc.Hons. (Natal)

Honneurs-Baccalaureus Societatis Scientiae Verpleegkunde: B.Soc.Sc.(Hons.)(Verpl.) (UOVS)

Honneurs-Baccalaureus in Verpleegkunde: Honns.-B.Verpleegkunde (US)

Magistergrade

Magister in Sosiale Wetenskappe: M.Soc.Sc. (Natal)

Magister Societatis Scientiae Verpleegkunde: M.Soc.Sc.(Verpl.) (UOVS)

Magister Artium: M.A. (PU vir CHO)

Magister in Verpleegkunde: M.Cur. (UP) of M.Verpleegkunde (US)

Magister Scientiae in Verpleegkunde: M.Sc.(Verpleegkunde) (Wits)

Doktorsgrade

Doktor in Wysbegeerte: Ph.D. (Natal, Wits)

Doktor in Sosiale Wetenskappe: D.Soc.Sc. (Natal)

Doctor Societatis Scientiae Verpleegkunde: D.Soc.Sc.(Verpl.) (UOVS)

Doctor Philosophiae: D.Phil. (PU vir CHO)

Doktor in Verpleegkunde: D.Cur. (UP)

Diplomas en Sertifikaat

Diploma in Verpleegkunde (Algemeen, Verloskunde, Psigiatrie) (UOVS)

Na-basiese Diploma in Verpleegkunde (met spesialisasie in Verplegingsadministrasie of Verplegingsonderwys of Volks-, Skool- en Beroepsverpleegkunde) (UOVS)

Universiteitsdiploma in Verpleegkunde: U.D.V. (PU vir CHO)

Universiteitsonderwysdiploma (Verpleegkunde): U.O.D.(Verpleegk.) (PU vir CHO)

Diploma in Verplegingsonderwys (UPE, UP, US, Wits)

Diploma in Verplegingsadministrasie (UPE, UP, Wits)

Sertifikaat in Onkochemoterapie (Verpleegkunde) (UP)

Diploma in Chiropodie (UOVS)

GRADE

Baccalaureus Scientiae (Verpleegkunde): B.Sc.(Verpl.) (Kaapstad)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met 'n slaagsyfer in Wiskunde op die Standaardgraad. Daar word aanbeveel dat Natuur- en Skeikunde, Fisika of Chemie of Biologie 'n vak vir die standaard 10-eksamen moet wees.

Elke kandidaat moet 'n mediese sertifikaat indien en minstens 17 jaar oud wees.

Suksesvolle applikante moet voltydse diens as studentverpleegsters by die Grootte Schuur-hospitaal aanvaar vir 'n proeftyd van twee maande met ingang van Januarie. Aan die einde van die proeftyd vind die finale keuring vir toelating plaas.

Leergang: Vier jaar. Na suksesvolle aflegging van die kursus is die student registreerbaar by die S.A. Verpleegstersraad as 'n Algemene Verpleegster.

Die leergang sluit in die volgende kursusse: Fisika, Biologie, Chemie Spesiaal, Anatomie, Fisiologie, Farmakologie, Menslike Gedrag, Engels Spesiaal of Afrikaans Spesiaal, Volksgesondheid, Verpleegkunde I, II, III en IV.

Praktiese ondervinding in verpleging word uitgevoer in samewerking met die verpleegsters en ander personeel van die Grootte Schuur-hospitaal.

Baccalaureus in Sosiale Wetenskappe: B.Soc.Sc. of

Baccalaureus Societatis Scientiae Verpleegkunde: B.Soc.Sc.(Verpl.) of

Baccalaureus Artium et Scientiae (Verpleegkunde): B.Art. et Scien.(Verpl.) of

Baccalaureus in Verpleegkunde: B.Cur. of B.Verpleegkunde of

Baccalaureus Curationis: B.Cur. of

Baccalaureus Scientiae in Verpleegkunde: B.Sc.(Verpleegkunde)

(Al die bogenoemde universiteite buiten Kaapstad)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikula=

sievystelling) en 'n bewys van inskrywing as studentverpleegster by 'n opleidingshos=
pitaal, goedgekeur deur die S.A. Verpleegstersraad.

Addisionele vereistes:

Natal: Die Departement Hospitaaldienste vereis 'n goeie slaagsyfer in 'n natuurweten=
skapvak.

Port Elizabeth: Wiskunde of Natuur- en Skeikunde sal 'n sterk aanbeveling wees.

Pretoria: Kyk p.164.

Witwatersrand: 'n Slaagsyfer in Wiskunde op die Hoër Graad of minstens 50 persent op
die Standaardgraad.

Leergang: Drie jaar (Oranje-Vrystaat); vier jaar (Natal, Potchefstroom, RAU, Stellen=
bosch, Witwatersrand); vier en 'n halfjaar (Port Elizabeth, Pretoria).

Die hoofvakke is Verpleegkunde en Sielkunde of Sosiologie. Praktiese opleiding vind
plaas by die opleidingshospitaal waar die kandidaat as studentverpleegster ingeskryf
is.

Baccalaureus in Verpleegkundige Onderrig en Administrasie: B.Cur.(I. et A.) of

Baccalaureus in Verpleegkunde (Onderrig en Administrasie): B.Cur.(I. et A.)

(Port Elizabeth, Pretoria)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikula=
sievystelling) en 'n bewys van registrasie as verpleegster/verpleër by die S.A. Ver=
pleegstersraad.

Addisionele vereistes:

Port Elizabeth: Damestudente wat die keusevak Voorkomende en Bevorderende Gesondheid=
sorg II wil volg, moet ook as Vroedvrou geregistreer wees.

Leergang: Drie jaar voltyds of minstens vier jaar deeltydse studie. Die leergang be=
hels onder andere die volgende kursusse: Verpleegkundige Onderrig III, Verpleegkundige
Administrasie III, Sosiologie III of Sielkunde III (Pretoria) of Voorkomende en Bevor=
derende Gesondheidsorg II (Port Elizabeth).

DIPLOMAS EN SERTIFIKAAT

Diploma in Verpleegkunde (Algemeen, Verloskunde, Psigiatrie) (Oranje-Vrystaat)

Toelatingsvereistes: Standaard 10-sertifikaat en 'n bewys van inskrywing as student=
verpleegster by 'n opleidingshospitaal goedgekeur deur die S.A. Verpleegstersraad.

Leergang: 4 jaar voltydse opleiding. Kandidate word as studentverpleegsters by 'n
goedgekeurde hospitaal ingeskryf waar alle praktiese opleiding vir die volle duur van
die kursus plaasvind.

Na-basiese Diploma in Verpleegkunde (met spesialisasie in Verplegingsadministrasie of
Verplegingsonderwys of Volks-, Skool- en Beroepsverpleegkunde) (Oranje-Vrystaat)

Toelatingsvereistes: Standaard 10-sertifikaat en 'n bewys van registrasie as 'n algemene
verpleegster/verpleër of 'n psigiatriese verpleegster/verpleër (in die geval van die
spesialiseringsrigting Volks-, Skool- en Beroepsverpleegkunde word registrasie as al=
gemene verpleegster en vroedvrou vereis) en bewys van twee jaar toepaslike ervaring of
vyf jaar in die geval van Verplegingsadministrasie.

Leergang: Minstens een jaar voltydse studie.

Universiteitsdiploma in Verpleegkunde: U.D.V. (Potchefstroom)

Toelatingsvereiste: Standaard 10-sertifikaat.

Leergang: Vier jaar voltydse opleiding. Die leergang sluit in onder andere die volgende kursusse: Verpleegkunde IV, Toegepaste Psigologie, Toegepaste Farmakologie, Toegepaste Sosiologie, Toegepaste Fisiologie.

Universiteitsonderwysdiploma (Verpleegkunde): U.O.D.(Verpleegk.) (Potchefstroom)

Toelatingsvereistes: 'n Graad in Verpleegkunde wat 'n afsonderlike kursus in Anatomie insluit.

Leergang: Minstens een akademiese jaar.

Diploma in Verplegingsonderwys (Port Elizabeth, Pretoria, Stellenbosch, Witwatersrand)

Toelatingsvereistes:

Port Elizabeth: Standaard 10-sertifikaat en bewys van registrasie as 'n verpleegster/verpleër by die S.A. Verpleegstersraad. 'n Kandidaat wat Verloskunde of Psigiatrisie Verpleegkunde wil neem, moet as Vroedvrou of Psigiatrisie Verpleegster/Verpleër geregistreer wees.

Pretoria: Standaard 10-sertifikaat en die kandidaat moet bewys lewer dat sy/hy geregistreer is as 'n algemene verpleegster/verpleër, of 'n psigiatrisie verpleegster/verpleër. 'n Kandidaat wat Verloskunde wil neem, moet as Vroedvrou geregistreer wees.

Stellenbosch: Standaard 10-sertifikaat; 'n sertifikaat van registrasie as algemene verpleegster by die S.A. Verpleegstersraad; en twee jaar ondervinding as 'n geregistreeerde verpleegster, waarvan een jaar praktiese verplegingsondervinding in die kliniese afdelings van 'n opleidingshospitaal vir verpleegsters moet wees.

Witwatersrand: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling). Die kandidaat moet by die S.A. Verpleegstersraad geregistreer wees as 'n algemene verpleegster en vroedvrou of 'n algemene verpleër of 'n psigiatrisie verpleegster/verpleër met twee jaar ervaring as verpleegster waarvan een jaar in 'n goedgekeurde opleidingsinrigting vir verpleegsters moet wees: Met dien verstande dat 'n kandidaat wat in besit is van 'n B.-graad in Verpleegkunde net een jaar ondervinding as 'n verpleegster in 'n opleidingsinrigting moet opdoen.

Leergang: Een en 'n halfjaar voltydse studie. Aan die Universiteite van Port Elizabeth en Pretoria duur die kursus net een jaar vir kandidate wat in besit is van 'n Baccalaureusgraad in Verpleegkunde.

Diploma in Verplegingsadministrasie (Port Elizabeth)

Toelatingsvereistes: 'n Standaard 10-sertifikaat en 'n bewys van registrasie as 'n algemene verpleegster/verpleër by die S.A. Verpleegstersraad. Vroulike kandidate moet ook as vroedvroue geregistreer wees.

Leergang: Een en 'n halfjaar voltydse studie. Kandidate wat ook as dosente of as openbare gesondheidsverpleegsters/verpleërs geregistreer is, kan die kursus in een jaar voltooi en sal vrygestel word van sekere vakke ooreenkomstig die kwalifikasies wat hulle besit.

Diploma in Verplegingsadministrasie (Pretoria, Witwatersrand)

Toelatingsvereistes: Soos vir die Diploma in Verplegingsonderwys.

Leergang: Een jaar voltydse studie.

Sertifikaat in Onkochemoterapie (Verpleegkunde) (Pretoria)

Toelatingsvereistes: 'n Bewys van registrasie as algemene verpleegster/verpleër en die B.Cur.- of die B.Cur.(I. et A.)-graad of die Dip.Cur. of die Diploma in Verplegings=onderwys.

Leergang: Een semester. Gedurende hierdie tyd moet die kandidaat aan die Departement Kankerchemoterapie van die H.F. Verwoerd-hospitaal as verpleegster verbonde wees.

Diploma in Chiroprapie (Oranje-Vrystaat)

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) en 'n graad of diploma in Verpleegkunde en bewys van registrasie as 'n verpleegster/verpleër.

Leergang: Die Diploma word uitgereik aan kandidate wat 'n voltijdse dienstyd van 18 maande (drie semesters) in 'n hospitaal, deur die Universiteit goedgekeur, bevredigend voltooi het, en 'n eksamen deur die Universiteit voorgeskryf, suksesvol afgelê het.

Die leergang sluit in onder andere Chiroprapie I en II, Ortopediese voettoestande, Chirurgiese voettoestande.

BEROEPSDIENS

Die jong aspirant-verpleegster wat haar vir opleiding en diens aanmeld, koester gewoonlik 'n besondere ideaal. Hierdie ideaal word verweselik wanneer sy haar opleiding met sukses voltooi het. As student kry sy die geleentheid om met alle aspekte van die beroep kennis te maak; as geregistreeerde verpleegster word die verworwe kennis ten volle benut en uitgebrei om 'n naastediens te lewer wat eie aan die wese van die vrou is.

Hoewel die basiese behoeftes van pasiënte onveranderd gebly het, het verpleging, as gevolg van die geweldige wetenskaplike vooruitgang van die geneeskunde, vandag 'n hoogs gespesialiseerde beroep geword en vereis die pligte en verantwoordelikhede van die geregistreeerde verpleegster 'n baie hoë peil van opleiding en vaardigheid. Deur haar omvattende maar tog intensiewe opleiding, wat ook persoonlikheidsvorming behels, verwerf die verpleegster egter bevoegdheid om besluite te neem, om 'n gesonde oordeel te vel en 'n saak wetenskaplik te beredeneer en is sy in staat om aan die hoë eise te voldoen wat 'n dinamiese samelewing aan haar as verpleegster en as individu stel.

Waar die verpleegster ook al werksaam is - in hospitale, in private verpleeginrigtings, in die nywerheid, in klinieke, in skole, in spreekkamers, in die distrik - daar is sy gemoeid met die welvaart en gesondheid van die individu en die gemeenskap oor die algemeen. Haar pligte eindig nie by die verligting van pyn of spesifieke fisieke ongesteldheid van die pasiënt nie. Sy moet ook kan luister en die gekwelde gemoed probeer verstaan; die pasiënt inspireer wanneer sy eie hoop verflou het en hom lei tot aanvaarding en berusting indien daar nie hoop op genesing is nie. Sy moet dus werklik begerig wees om haar medemens te help en te dien. Dit vereis intelligensie, geduld, takt, onselfsugtigheid en simpatieke optrede, maar tog moet sy emosioneel gebalanseerd wees en ferm kan optree indien nodig.

Oor die werksmoontlikhede vir die verpleegster bestaan daar nie twyfel nie. Die diens wat deur gekwalifiseerde verpleegsters gelewer moet word, brei steeds uit as gevolg van meer hospitale en die bevolkingsaanwas. Daar bestaan gevolglik ook ruim geleentheid vir promosie. Hierby het die verpleegster 'n keuse uit een of meer van etlike basiese en na-basiese rigtings waarin sy haar kan bekwaam en ten volle kan uitleef. Die mees algemene werkplek van 'n verpleegster is 'n hospitaal, maar daar is ook heelwat ander terreine van indiensneming. Provinsiale en ander hospitale, onderwysdepartemente, Staatsdepartemente soos dié van Gesondheid en Verdediging, munisipaliteite, geneeshere en spesialiste, nywerheidsorganisasies en so meer, neem almal verpleegsters in diens. Tog bly dit beter en meer ekonomies om mense tuis te verpleeg eerder as om hulle in 'n hospitaal op te neem, en daarom sal die vraag na privaat verpleegsters steeds toeneem.

Verdere inligting oor opleiding en aspekte soos salarisse, diensvoorwaardes, bevoordering, ens. kan op aanvraag verkry word van:

Die Sekretaris, S.A. Verpleegstersvereniging, Posbus 1280, Pretoria, 0001.

Raadpleeg ook Tersiêre Opleiding.

VOEDSELWETENSKAP

Universiteit: Stellenbosch

Grade

Baccalaureus in die Natuurwetenskappe in Voedselwetenskap: B.Sc. in Voedselwetenskap

Honneurs-Baccalaureus in die Natuurwetenskappe in Voedselwetenskap: Hons.-B.Sc. in Voedselwetenskap

Magister in die Natuurwetenskappe in Voedselwetenskap: M.Sc. in Voedselwetenskap

Doktor in die Natuurwetenskappe in Voedselwetenskap: D.Sc. in Voedselwetenskap

Doktor in die Wysbegeerte (Voedselwetenskap): Ph.D.(Voedselwetenskap)

GRAAD

Baccalaureus in die Natuurwetenskappe in Voedselwetenskap: B.Sc. in Voedselwetenskap

Toelatingsvereistes: Matrikulasiesertifikaat of 'n Standaard 10-sertifikaat (Matrikulasievystelling) met slaagsyfers in Wiskunde en Natuur- en Skeikunde op minstens die Standaardgraad.

Leergang: Vier jaar voltydse studie. Die volgende vakke word in die eerste jaar geneem: Chemie, Fisika, Wiskunde, Biologie. Vakke wat in die ander drie jaar geneem word, sluit in, onder andere: Voedselwetenskap III (hoofvak), Chemie III (hoofvak), Voedselabriekmasjiene II, Bakteriologie, Biochemie, Bedryfseconomie.

Studente moet vir minstens twee maande van hul somer- en/of wintervakansies praktiese werk in goedgekeurde voedselabriekes of voedselnavorsingsinrigtings doen.

BEROEPSDIENS

Alhoewel die voedselbedryf die grootste en mees stabiele bedryf in die wêreld is, moet dit steeds tred hou met die snelle aanwas van die wêreldbevolking. Dit is ook een van die bedrywe met die grootste behoefte aan wetenskaplikes en tegnoloë, aangesien die voorsiening van geskikte en gesonde voedsel 'n lewensnoodsaaklikheid is. Ook Suid-Afrika het voedselwetenskaplikes en -tegnoloë dringend nodig. Hulle speel 'n sleutelrol in die moderne voedselnywerheid en is onontbeerlik vir die bedryf van die toekoms, dus ook vir die ontwikkeling en welsyn van die hele land. Die groot verskeidenheid van vervaardigde voedselprodukte wat vandag te koop aangebied word en wat die verbruiker soveel moeite en tyd aan voorbereiding bespaar, is die prestasie van die voedselwetenskap. (Suid-Afrikaners bestee jaarliks meer as R1 600 000 000 aan voedsel.)

In sommige Staatsdepartemente, die SABS, die WNNR en die verskillende Beheerrade bestaan daar 'n besondere vraag na behoorlik opgeleide persone om basiese en toegepaste navorsing op voedsel te onderneem, om probleme van die nywerheid te ondersoek, om voedselanalise te doen en om kwaliteitsbeheer en inspeksiewerk te onderneem, sodat alleen produkte van die beste gehalte bemark word. In die nywerheid self bestaan daar ook talle geleenthede. Vrugte- en groentefabriekes, bakkerye, meulenaars, vervaardigers van graankosse, suiwel- en inmaakfabriekes, vleis- en visfabriekes, lekkergoed- en koel- drankvervaardigers, die vervaardigers en verspreiders van voedselabriekmasjinerie, verpakkingsmateriaal en chemikalieë vir die voedselnywerheid en so meer, het byvoorbeeld almal die dienste van voedselwetenskaplikes en -tegnoloë nodig, en bied aan hulle 'n verskeidenheid van interessante en uitdagende geleenthede in kwaliteitsbeheer, produkontwikkeling, vervaardiging en produksie, tegniese verkope en bestuur. Die Departement

ment van Landbou-tegniese Dienste onderneem navorsingswerk in verband met die preservering van voedsel by die Navorsingsinstituut vir Vrugte en Voedseltegnologie te Stellenbosch. Op Nelspruit word weer koelopbergingsstudies oor sitrus en subtropiese vrugte onderneem.

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“

A P P E N D I C E S - B Y L A E S

A. COMPULSORY ADDITIONAL COURSES AT SOME UNIVERSITIES

University of Port Elizabeth

Philosophy of Science

All B.A. students must complete the semester course in Philosophy of Science. This course must be attended during the fifth semester after the candidate has completed the second-year courses in his major subjects.

Science and Modern Society

All B.Sc. students must satisfactorily attend the above-mentioned course in their third year of study.

Potchefstroom University for CHE

Interfaculty Philosophy

This is a compulsory orientation course for all undergraduates at one lecture a week: for one year in the case of two-year diplomas; two years in the case of diplomas of more than two years' duration and three years for all degree students.

Rand Afrikaans University

Introduction to University Study and Theory of Science

The courses Introduction to University Study and Theory of Science A and B are compulsory additional courses for the curricula of first degrees and lower diplomas in the Faculties of Arts, Science, Economic and Administrative Sciences and Law as well as the curriculum for the C.T.A. without a preliminary B.Com. degree. Introduction to University Study is compulsory for first and second-year students in Mechanical and Civil Engineering. They are, however, exempted from Theory of Science A.

VERPLIGTE ADDISIONELE KURSUSSE AAN SOMMIGE UNIVERSITEITE

Universiteit van Port Elizabeth

Wysbegeerte (Wetenskapsleer)

Alle B.A.-studente moet die semesterkursus Wysbegeerte (Wetenskapsleer) voltooi. Hierdie kursus word in die vyfde semester gevolg, nadat die kandidaat sy twee hoofvakke tot op tweedejaarsvlak voltooi het.

Natuurwetenskap en die Moderne Samelewing

Alle B.Sc.-studente moet die bogenoemde kursus in hul derde studiejaar bevredigend bywoon.

Potchefstroomse Universiteit vir CHO

Interfakultêre Wysbegeerte

Dit is 'n verpligte oriënteringskursus vir alle voorgraadse studente teen een lesperiode per week: vir een jaar in die geval van tweejarige diplomas; twee jaar in die geval van diplomas van meer as twee jaar en drie jaar vir alle graadstudente.

Randse Afrikaanse Universiteit

Inleiding tot die Universiteitswese en Wetenskapsleer

Die kursusse Inleiding tot die Universiteitswese asook Wetenskapsleer A en B is ver-

pligte addisionele kursusse tot eerstegraadleergange en leergange vir laer diplomas in die Fakulteite van Lettere en Wysbegeerte, Natuurwetenskappe, Ekonomiese en Bestuurswetenskappe en Regsgeleerdheid, sowel as tot die leergang vir die S.T.R., sonder 'n voorafgaande B.Com.-graad. Inleiding tot die Universiteitswese is verpligtend vir eerste- en tweedejaarstudente in Meganiese en Siviele Ingenieurswese. Hulle word egter vrygestel van Wetenskapsleer A.

B. USEFUL ADDRESSES

1. UNIVERSITIES

Enquiries should be addressed to the Registrar.

University of Cape Town
Private Bag
RONDEBOSCH
7700

University of Natal
King George V Avenue
DURBAN
4001

OR

The Secretary
University of Natal
P.O. Box 375
PIETERMARITZBURG
3200

Rand Afrikaans University
P.O. Box 524
JOHANNESBURG 2000

Rhodes University
P.O. Box 94
GRAHAMSTOWN
6140

University of Stellenbosch
STELLENBOSCH
7600

University of the Orange Free State
P.O. Box 339
BLOEMFONTEIN
9300

University of Port Elizabeth
P.O. Box 1600
PORT ELIZABETH
6000

Potchefstroom University for Christian
Higher Education
POTCHEFSTROOM
2520

University of Pretoria
Hillcrest
PRETORIA
0002

University of South Africa
P.O. Box 392
PRETORIA
0001

University of the Witwatersrand
Jan Smuts Avenue
JOHANNESBURG
2001

2. COLLEGES FOR ADVANCED TECHNICAL EDUCATION

The Registrar
Cape College for Advanced Technical
Education
P.O. Box 652
CAPE TOWN
8000

The Rector
College for Advanced Technical Education
Private Bag X6011
PORT ELIZABETH
6000

The Registrar
Vaal Triangle College for Advanced
Technical Education
Private Bag X021
VANDERBIJLPARK
1900

The Registrar
Natal College for Advanced Technical
Education
P.O. Box 953
DURBAN
4000

The Registrar
Pretoria College for Advanced Technical
Education
420 Church Street East
PRETORIA
0002

The Registrar
Witwatersrand College for Advanced
Technical Education
P.O. Box 3293
JOHANNESBURG
2000

3. STATE DEPARTMENTS

Unless otherwise stated enquiries should be addressed to the Secretary. The postcode for Pretoria boxes is 0001.

Department of Agricultural Credit and Land Tenure Private Bag X118 PRETORIA	Department of Agricultural Economics and Marketing Private Bag X250 PRETORIA
Department of Agricultural Technical Services Private Bag X116 PRETORIA	Department of Bantu Administration and Development P.O. Box 384 PRETORIA
Department of Bantu Education Private Bag X212 PRETORIA	Department of Coloured Relations and Rehoboth Affairs Private Bag X9058 CAPE TOWN 8000
Department of Commerce Private Bag X84 PRETORIA	The Superintendent Division of Weights and Measures Department of Commerce P.O. Box 431 PRETORIA
Department of Community Development Private Bag X149 PRETORIA	Controller and Auditor-General Department of Controller and Auditor-General P.O. Box 446 PRETORIA
Department of Customs and Excise Private Bag X47 PRETORIA	The Treasury Private Bag X115 PRETORIA
The Commandant-General of the S.A. Defence Force Department of Defence Private Bag X160 PRETORIA	Department of Foreign Affairs Union Buildings PRETORIA 0002
Department of Finance Union Buildings PRETORIA 0002	Department of Health Private Bag X88 PRETORIA
Department of Forestry Private Bag X93 PRETORIA	Department of Indian Affairs Private Bag X92 PRETORIA
Department of Immigration P.O. Box 2072 PRETORIA	The Director Division of Sea Fisheries Department of Industries Private Bag SEA POINT CP 8060
Department of Industries Private Bag X342 PRETORIA	Department of the Interior Private Bag X114 PRETORIA
Department of Information Private Bag X152 PRETORIA	Department of Labour Private Bag X117 PRETORIA
Department of Inland Revenue P.O. Box 402 PRETORIA	The Director Geological Survey Department of Mines Private Bag X112 PRETORIA
Department of Justice Private Bag X81 PRETORIA	
Department of Mines Private Bag X59 PRETORIA	

Department of National Education
Private Bag X122
PRETORIA

The Department of the Prime Minister
Union Buildings
PRETORIA
0002

Office of the Public Service Commission
Private Bag X121
PRETORIA

Department of Social Welfare and Pensions
Private Bag
PRETORIA

Department of Sport and Recreation
Private Bag X269
PRETORIA

Department of Tourism
Private Bag X262
PRETORIA

The Director
Civil Aviation Division
Department of Transport
Private Bag X193
PRETORIA

Department of Water Affairs
Private Bag X313
PRETORIA

Department of Planning and the Environment
Private Bag X213
PRETORIA

Commissioner of Prisons
Department of Prisons
Private Bag X136
PRETORIA

Department of Public Works
Private Bag X65
PRETORIA

Commissioner of the South African Police
Department of the South African Police
Private Bag X94
PRETORIA

Department of Statistics
Private Bag X44
PRETORIA

Department of Transport
Private Bag X193
PRETORIA

The General Manager
South African Railways
Paul Kruger Building
Wolmarans Street
JOHANNESBURG
2001

4. REGIONAL OFFICES OF THE PUBLIC SERVICE COMMISSION

PRETORIA

Room 301
Northvaal Building
Vermeulen Street
PRETORIA
0002
Tel.: 484722

BLOEMFONTEIN

Room 649
H.F. Verwoerd Building
St Andrew Street
BLOEMFONTEIN
9301
Tel.: 71180

JOHANNESBURG

Room 239
Supreme Court Buildings
Von Brandis Street
JOHANNESBURG
2001
Tel.: 228143

CAPE TOWN

Room 426
Monte Carlo Building
Heerengracht
CAPE TOWN
8001
Tel.: 28845

DURBAN

828 West Walk Building
Smith Street
DURBAN
4001
Tel.: 68829

KIMBERLEY

304 Saambou Building
Du Toitspan Road
KIMBERLEY
8301
Tel.: 5612

PORT ELIZABETH

Room 59
Eben Dönges Building
Hancock Street
North End
PORT ELIZABETH
6001
Tel.: 49931

5. PROVINCIAL ADMINISTRATIONS AND THE ADMINISTRATION OF SOUTH-WEST AFRICA

The Provincial Secretary
Provincial Administration of the Cape
of Good Hope
P.O. Box 659
CAPE TOWN
8000

The Provincial Secretary
Provincial Administration of Natal
Private Bag X9037
PIETERMARITZBURG
3200

The Provincial Secretary
Provincial Administration of the Orange
Free State
P.O. Box 517
BLOEMFONTEIN
9300

The Provincial Secretary
Provincial Administration of the Transvaal
Private Bag X64
PRETORIA
0001

The Secretary for South-West Africa
The Administration of South-West Africa
Private Bag X13186
WINDHOEK
9100

6. PROVINCIAL EDUCATION DEPARTMENTS

Enquiries must be addressed to the Director of Education.

Department of Education, Cape of Good
Hope
P.O. Box 13
CAPE TOWN
8000

Natal Education Department
Private Bag X9044
PIETERMARITZBURG
3200

OFS Department of Education
P.O. Box 521
BLOEMFONTEIN
9300

Transvaal Education Department
Private Bag X76
PRETORIA
0001

7. OTHER BODIES AND ORGANIZATIONS

The President
Human Sciences Research Council
Private Bag X41
PRETORIA
0001

The Personnel Officer
Atomic Energy Board
Private Bag X256
PRETORIA
0001

The Chief Engineer: Training
Department of Posts and Telecommunica-
tions
Private Bag X74
PRETORIA
0001

The Personnel Manager
Electricity Supply Commission
P.O. Box 1091
JOHANNESBURG
2000

The Director of Hospital Services
Cape Provincial Hospitals Department
P.O. Box 2060
CAPE TOWN
8000

The Director of Hospital Services
Natal Department of Hospital Services
Private Bag X9051
PIETERMARITZBURG
3200

The Director of Hospital Services
OFS Division Hospital Services
P.O. Box 517
BLOEMFONTEIN
9300

The Director of Hospital Services
Transvaal Department of Hospital Services
Private Bag X221
PRETORIA
0001

The Director
National Institute for Personnel Research
P.O. Box 10319
JOHANNESBURG
2000

The Director
South African Bureau of Standards
Private Bag X191
PRETORIA
0001

The Personnel Manager
South African Coal, Oil and Gas Corporation Limited
P.O. Box 1
SASOLBURG
9570

The Corporative Manager (Personnel)
South African Iron and Steel Industrial Corporation Limited
P.O. Box 450
PRETORIA
0001

The Director: Personnel Administration
South African Broadcasting Corporation
P.O. Box 8606
JOHANNESBURG
2000

OR

The Deputy Director
General Services
P.O. Box 4559
JOHANNESBURG
2000

The Secretary
Council for Scientific and Industrial Research
P.O. Box 395
PRETORIA
0001

NUTTIGE ADRESSE

1. UNIVERSITEITE

Navrae moet aan die Registrateur gerig word.

Universiteit van Kaapstad
Privaatsak
RONDEBOSCH
7700

Universiteit van Natal
King George V-laan
DURBAN
4001

OF

Die Sekretaris
Universiteit van Natal
Posbus 375
PIETERMARITZBURG
3200

Universiteit van die Oranje-Vrystaat
Posbus 339
BLOEMFONTEIN
9300

Universiteit van Port Elizabeth
Posbus 1600
PORT ELIZABETH
6000

Potchefstroomse Universiteit vir
Christelike Hoër Onderwys
POTCHEFSTROOM
2520

Universiteit van Pretoria
Hillcrest
PRETORIA
0002

Randse Afrikaanse Universiteit
Posbus 524
JOHANNESBURG
2000

Rhodes-universiteit
Posbus 94
GRAHAMSTOWN
6140

Universiteit van Stellenbosch
STELLENBOSCH
7600

Universiteit van Suid-Afrika
Posbus 392
PRETORIA
0001

Universiteit van die Witwatersrand
Jan Smuts-laan
JOHANNESBURG
2001

2. KOLLEGES VIR GEVORDERDE TEGNIESE ONDERWYS

Die Registrateur
Kaapse Kollege vir Gevorderde Tegniese
Onderwys
Posbus 652
KAAPSTAD
8000

Die Rektor
Kollege vir Gevorderde Tegniese Onderwys
Privaatsak X6011
PORT ELIZABETH
6000

Die Registrateur
Vaaldriehoekse Kollege vir Gevorderde
Tegniese Onderwys
Privaatsak X021
VANDERBIJLPARK
1900

Die Registrateur
Natalse Kollege vir Gevorderde Tegniese
Onderwys
Posbus 953
DURBAN
4000

Die Registrateur
Pretoriase Kollege vir Gevorderde Tegniese
Onderwys
Kerkstraat-Oos 420
PRETORIA
0002

Die Registrateur
Witwatersrandse Kollege vir Gevorderde
Tegniese Onderwys
Posbus 3293
JOHANNESBURG
2000

3. STAATSDEPARTEMENTE

Tensy anders gemeld moet navrae aan die Sekretaris gerig word.

Die poskode vir Pretoriase posbusse is 0001.

Departement van Arbeid
Privaatsak X117
PRETORIA

Departement van Bantoe-onderwys
Privaatsak X212
PRETORIA

Departement van Binnelandse Inkomste
Posbus 402
PRETORIA

Departement van Bosbou
Privaatsak X93
PRETORIA

Departement van Doeane en Aksyns
Privaatsak X47
PRETORIA

Departement van Finansies
Uniegebou
PRETORIA
0002

Departement van Gemeenskapsbou
Privaatsak X149
PRETORIA

Kommissaris van Gevangenisse
Departement van Gevangenisse
Privaatsak X136
PRETORIA

Die Superintendent
Afdeling Mate en Gewigte
Departement van Handel
Posbus 431
PRETORIA

Departement van Bantoe-administrasie en
-ontwikkeling
Posbus 384
PRETORIA

Departement van Beplanning en die Omgewing
Privaatsak X213
PRETORIA

Departement van Binnelandse Sake
Privaatsak X114
PRETORIA

Departement van Buitelandse Sake
Uniegebou
PRETORIA
0002

Departement van die Eerste Minister
Uniegebou
PRETORIA
0002

Die Tesourie
Privaatsak X115
PRETORIA

Departement van Gesondheid
Privaatsak X88
PRETORIA

Departement van Handel
Privaatsak X84
PRETORIA

Departement van Immigrasie
Posbus 2072
PRETORIA

Departement van Indiërsake
Privaatsak X92
PRETORIA

Departement van Justisie
Privaatsak X81
PRETORIA

Kontroleur en Ouditeur-generaal
Departement van Kontroleur en Ouditeur-
generaal
Posbus 446
PRETORIA

Departement van Landboukrediet en Grond-
besit
Privaatsak X118
PRETORIA

Departement van Mynwese
Privaatsak X59
PRETORIA

Departement van Nasionale Opvoeding
Privaatsak X122
PRETORIA

Departement van Nywerheidswese
Privaatsak X342
PRETORIA

Departement van Openbare Werke
Privaatsak X65
PRETORIA

Kantoor van die Staatsdienskommissie
Privaatsak X121
PRETORIA

Departement van Statistiek
Privaatsak X44
PRETORIA

Departement van Toerisme
Privaatsak X262
PRETORIA

Departement van Vervoer
Privaatsak X193
PRETORIA

Die Direkteur
Afdeling Burgerlugvaart
Departement van Vervoer
Privaatsak X193
PRETORIA

Departement van Volkswelsyn en Pensioene
Privaatsak
PRETORIA

Departement van Inligting
Privaatsak X152
PRETORIA

Departement van Kleurlingbetrekkinge en
Rehoboth-aangeleenthede
Privaatsak X9058
KAAPSTAD
8000

Departement van Landbou-ekonomie en -be-
marking
Privaatsak X250
PRETORIA

Departement van Landbou-tegniese Dienste
Privaatsak X116
PRETORIA

Die Direkteur
Geologiese Opname
Departement van Mynwese
Privaatsak X112
PRETORIA

Die Direkteur
Afdeling Seevisserye
Departement van Nywerheidswese
Privaatsak
SEEPUNT
8060

Departement van Sport en Ontspanning
Privaatsak X269
PRETORIA

Die Kommissaris van die Suid-Afrikaanse
Polisie
Departement van die Suid-Afrikaanse Polisie
Privaatsak X94
PRETORIA

Die Kommandant-Generaal van die Suid-
Afrikaanse Weermag
Departement van Verdediging
Privaatsak X160
PRETORIA

Die Hoofbestuurder
Suid-Afrikaanse Spoorweë
Paul Krugergebou
Wolmaransstraat
JOHANNESBURG
2001

Departement van Waterwese
Privaatsak X313
PRETORIA

4. STREEKKANTORE VAN DIE STAATSDIENSKOMMISSIE

PRETORIA
Kamer 301
Noordvaalgebou
Vermeulenstraat
PRETORIA
0002
Tel.: 48-4722

JOHANNESBURG
Kamer 239
Hooggeregshofgebou
Von Brandisstraat
JOHANNESBURG
2001
Tel.: 22-8143

PORT ELIZABETH

Kamer 59
Eben Dönges-gebou
Hancockstraat
Noordeinde
PORT ELIZABETH
6001

Tel.: 4-9931

KAAPSTAD

Kamer 426
Monte Carlo-gebou
Heerengracht
KAAPSTAD
8001

Tel.: 2-8845

KIMBERLEY

Saambougebou 304
Du Toitspanweg
KIMBERLEY
8301

Tel.: 5612

BLOEMFONTEIN

Kamer 649
H.F. Verwoerd-gebou
St. Andrewstraat
BLOEMFONTEIN
9301

Tel.: 7-1180

DURBAN

West Walkgebou 828
Smithstraat
DURBAN
4001

Tel.: 6-8829

5. PROVINSIALE ADMINISTRASIES EN DIE ADMINISTRASIE VAN SUIDWES-AFRIKA

Die Provinsiale Sekretaris
Provinsiale Administrasie van die Kaap
die Goeie Hoop
Posbus 659
KAAPSTAD
8000

Die Provinsiale Sekretaris
Provinsiale Administrasie van Natal
Privaatsak X9037
PIETERMARITZBURG
3200

Die Provinsiale Sekretaris
Provinsiale Administrasie van die Oranje-
Vrystaat
Posbus 517
BLOEMFONTEIN
9300

Die Provinsiale Sekretaris
Provinsiale Administrasie van die Transvaal
Privaatsak X64
PRETORIA
0001

Die Sekretaris van Suidwes-Afrika
Die Administrasie van Suidwes-Afrika
Privaatsak X13186
WINDHOEK
9100

6. PROVINSIALE ONDERWYSDEPARTEMENTE

Navrae moet aan die Direkteur van Onderwys gerig word.

Departement van Onderwys Kaap die
Goeie Hoop
Posbus 13
KAAPSTAD
8000

Natalese Onderwysdepartement
Privaatsak X9044
PIETERMARITZBURG
3200

OVS Onderwysdepartement
Posbus 521
BLOEMFONTEIN
9300

Transvaalse Onderwysdepartement
Privaatsak X76
PRETORIA
0001

7. ANDER LIGGAME EN ORGANISASIES

Die President
Raad vir Geesteswetenskaplike Navorsing
Privaatsak X41
PRETORIA
0001

Die Personeelbestuurder
Elektrisiteitsvoorsieningskommissie
Posbus 1091
JOHANNESBURG
2000

Die Direkteur van Hospitaaldienste
Natale Departement van Hospitaaldienste
Privaatsak X9051
PIETERMARITZBURG
3200

Die Direkteur van Hospitaaldienste
Transvaalse Departement van Hospitaal=
dienste
Privaatsak X221
PRETORIA
0001

Die Personeelbeampte
Raad op Atoomkrag
Privaatsak X256
PRETORIA
0001

Die Personeelbestuurder
Suid-Afrikaanse Steenkool-, Olie- en
Gaskorporasie Beperk
Posbus 1
SASOLBURG
9570

Die Sekretaris
Wetenskaplike en Nywerheidsnavorsings=
raad
Posbus 395
PRETORIA
0001

Die Korporatiewe Bestuurder (Personeel)
Suid-Afrikaanse Yster en Staal Indus=
triële Korporasie Beperk
Posbus 450
PRETORIA
0001

Die Hoofingenieur: Opleiding
Departement van Pos- en Telekommunikasiewese
Privaatsak X74
PRETORIA
0001

Die Direkteur van Hospitaaldienste
Hospitaaldepartement van Kaapland
Posbus 2060
KAAPSTAD
8000

Die Direkteur van Hospitaaldienste
OVS Afdeling Hospitaaldienste
Posbus 517
BLOEMFONTEIN
9300

Die Direkteur
Nasionale Instituut vir Personeelnavorsing
(NIPN)
Posbus 10319
JOHANNESBURG
2000

Die Direkteur
Suid-Afrikaanse Buro vir Standaarde
Privaatsak X191
PRETORIA
0001

Die Hoof: Personeeladministrasie
Suid-Afrikaanse Uitsaaikorporasie
Posbus 8606
JOHANNESBURG
2000

OF

Die Adjunk-direkteur
Algemene Dienste
Posbus 4559
JOHANNESBURG
2000

C. LIST OF ABBREVIATIONS

A.E. & C.I.	African Explosives and Chemical Industries Ltd
AEB	Atomic Energy Board
CMA	Christelike Maatskaplike Raad
CSIR	Council for Scientific and Industrial Research
Escom	Electricity Supply Commission
HSRC	Human Sciences Research Council
IDC	Industrial Development Corporation of South Africa Ltd

IRS	Information and Research Services (CSIR)
ISCOR	South African Iron and Steel Industrial Corporation Ltd
MRC	South African Medical Research Council
NIPR	National Institute for Personnel Research (CSIR)
PHOSCOR	Phosphate Development Corporation Ltd
SAAU	South African Agricultural Union
SABC	South African Broadcasting Corporation
SABS	South African Bureau of Standards
SASOL	South African Coal, Oil and Gas Corporation, Ltd
SOECON	Southern Oil Exploration Corporation (Pty) Ltd
<u>Tertiary Training</u>	Tertiary training outside universities and career opportunities (See Bibliography.)

LYS VAN AFKORTINGS

A.S. en C.N.	Afrikaanse Springstowwe en Chemiese Nywerhede Bpk.
CMR	Christelike Maatskaplike Raad
Evkom	Elektrisiteitsvoorsieningskommissie
FOSKOR	Fosfaat Ontginningskorporasie Bpk.
IND	Inligtings- en Navorsingsdienste (WNNR)
MNR	Suid-Afrikaanse Mediese Navorsingsraad
NIPN	Nasionale Instituut vir Personeelnavorsing (WNNR)
NOK	Nywerheidontwikkelingskorporasie van Suid-Afrika Bpk.
RAK	Raad op Atoomkrag
RGN	Raad vir Geesteswetenskaplike Navorsing
SABS	Suid-Afrikaanse Buro vir Standaarde
SALU	Suid-Afrikaanse Landbou-unie
SASOL	Suid-Afrikaanse Steenkool-, Olie- en Gaskorporasie Beperk
SAUK	Suid-Afrikaanse Uitsaaikorporasie
SOEKOR	Suidelike Olie Eksplorasiekorporasie (Edms) Beperk
<u>Tersiêre Opleiding</u>	Tersiêre opleiding buite die universiteit en beroepsgeleenthede (Kyk Bibliografie.)
WNNR	Wetenskaplike en Nywerheidsnavorsingsraad
YSKOR	Suid-Afrikaanse Yster en Staal Industriële Korporasie Beperk

D. BIBLIOGRAPHY - BIBLIOGRAFIE

(These publications, inter alia, may be consulted to obtain further information. Hierdie publikasies kan, onder andere, geraadpleeg word om verdere inligting te verkry.)

HSRC PUBLICATIONS - RGN-PUBLIKASIES

IN-17	STIMIE, C.M., COETZEE, C.J.S. and GEGGUS, C. Directory of research organizations in the human sciences in South Africa. 1972.
IN-17	STIMIE, C.M., COETZEE, C.J.S. <u>en</u> GEGGUS, C. Gids van navorsingsorganisasies in die geesteswetenskappe in Suid-Afrika. 1972.
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- DIRECTORY of Scientific and Technical Periodicals published in South Africa/Gids van Wetenskaplike en Tegniese Tydskrifte in Suid-Afrika uitgegee. 1974.

YEARBOOKS of universities, 1974.
JAARBOEKE van universiteite, 1974.

INFORMATION and guidance brochures published by universities.
INLIGTING- en voorligtingsbrosjures deur universiteite uitgegee.

BROCHURES, pamphlets etc. made available by government and private bodies.
BROSJURES, pamflette ens. wat deur staats- en private instansies beskikbaar gestel is.

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