THE FACULTY OF SCIENCE

Undergraduate Student Handbook

2019

Welcome from the Dean

Welcome to Rhodes University and the Science Faculty and welcome back to all returning students.

Rhodes University and the Science Faculty offer a wide range of opportunities, both academic and other, and in partnership with you we will provide an outstanding education in your chosen field. The Science Faculty is amongst the strongest in the country. Our staff are highly qualified and 90% have a doctoral degree. Most are actively engaged in research and you will study under lecturers who are themselves generating new knowledge. Thirteen of our Staff have been awarded the Vice-Chancellor's Distinguished Teaching Award and twenty-seven have been awarded the Vice-Chancellor's Research Award.

But there is much more to our University than just the education we offer. You will be part of a large, diverse and multicultural society that offers a wide range of cultural and sporting activities and numerous opportunities to develop your leadership skills. You are encouraged to embrace this diversity and to make the most of the opportunities on offer. Your years at University should be amongst the best of your life and the secret is to find a balance between commitment to your studies and commitment to your extra-mural activities.

The Science Faculty Office is staffed by a full time Dean, two part-time Deputy Deans and full time Administrative Officer. Our offices are in the old Schönland Building which forms the front of the Botany Department. Should you have any concerns about your degree or courses, or if there is anything else that you wish to discuss, please come and see the Dean. Make an appointment by e-mailing the Administrative Officer at scisec@ru.ac.za or calling on (046) 603 7232. Alternatively call in at the offices. We believe that we have a role to play in ensuring that your years at Rhodes are a success and we look forward to working with you.

Dean of Science: Professor Tony Booth; Schönland Building, email: dean.science@ru.ac.za; (046) 603 7232

Deputy Deans of Science: Professor Jo Dames; Department of Biochemistry and Microbiology, email j.dames@ru.ac.za; and Mrs Joyce Sewry; Department of Chemistry, email j.sewry@ru.ac.za

CONTENTS

LEADERSHIP

Dean and Deputy Deans

		
Prof Tony Booth Dean: Faculty of Science Room 11 Botany Building	**Mrs Joyce Sewry** Deputy Dean: Faculty of Science Department of Chemistry Room F38 Chemistry Building	**Prof Jo Dames** Deputy Dean: Faculty of Science Department of Biochemistry and Microbiology Room 215 Mycorrhizal Research Laboratory

Heads of Departments

		
Prof Earl Prinsloo Head: Biotechnology Innovation Centre Room 11 Botha House	**Prof Susi Vetter** Head: Department of Botany Room G016 Botany Building	**Prof Rui Krause** Head: Department of Chemistry Room S2 Chemistry Building

		
Prof Alfredo Terzoli Head: Department of Computer Science Room 105 Hamilton Building	**Prof James Gambiza** Head: Department of Environmental Science Room 7009 Environmental Science Building	**Prof Ian Meiklejohn** Head: Department of Geography Room 26 Geography Building
		
Prof Jock Harmer Head: Department of Geology Room 54 Geology Building	**Dr Swantjie Zschernach** Head: Human Kinetics and Ergonomics Room:10 Human Kinetics and Ergonomics Building	**Prof Warwick Sauer** Head: Ichthyology and Fisheries Science Room 1 Ichthyology & Fisheries Building
		

Prof Denis Pollney Head: Mathematics (Pure and Applied) Room 11 Mathematics Department	**Prof Makaiko Chithambo** Head: Physics and Electronics Room 34 Physics and Electronics Building	**Mr Jeremy Baxter** Head: Statistics Room 7031 New Arts Block

	
Prof William Froneman Head: Zoology and Entomology Room Life Sciences Building	**Lusanda Klaas** Faculty Officer Room 11 Botany Building

This handbook is designed to help new and returning undergraduate students plan their degrees, by explaining the rules governing degrees, giving advice on how to choose courses, and explaining the many terms and strange words that students have to learn as they start academic life. All of this information is also available on our web site and on the web sites of our departments. We encourage you to read this handbook and become familiar with our rules.

Returning Students: Notes and reminders

BSc2 students: **You are strongly encouraged to register for three year-long level 2 courses in 2019.** The reason for this is that it allows you a little more flexibility going into third year and if you fail one level 2 course, you may still be able to complete in three years.

BSc3 students: Ensure that you register for sufficient courses to complete your degree. Note that you may take a **maximum of 6 credits** in your final year.

BScF2 students: You may register for **six semester courses** that preferably form **three full courses only. Augmented courses** will be available in Cell Biology and Earth Science in the first semester.

Curriculum approval for Returning second year and third year students

Students who have correctly completed the pre-registration form will have their Registration Confirmation Form which will be handed to you when you get your new student card, marked as **curriculum approved**. If this applies to you, **you do not need to see the Dean** at Curriculum Approval.

However, if your form is not marked curriculum approved, OR if you wish to change a subject then you MUST attend Curriculum approval at the times indicated below.

Summary of Key dates and times

EVENT	**First Years**	**Second Years**	**Third Years + Honours**
Orientation week	3 - 8 February: **Attend all events**	N/A	N/A
Curriculum approval **Eden Grove Blue**	Friday 8 Feb 09h00 – 13h00	Saturday 9 February 09h00-12h00	Friday 8 Feb 13h00 – 17h00
Lectures start	Monday 11 Feb	Monday 11 Feb	Monday 11 Feb
Pracs start	Monday 18 Feb	Monday 18 Feb	Monday 18 Feb
Last date for curriculum change	**Friday 22 Feb**	**Friday 22 Feb**	**Friday 22 Feb**

The Faculty of Science and the Degrees We Offer

The Faculty of Science is a grouping of 14 academic departments which teach subjects such as Physics, Zoology and Chemistry, which are normally taken only in Science degrees. Some of the departments offer courses which may also form part of an arts degree (such as Geography and Environmental Science) and others offer courses that may also form part of a commerce degree (such as Mathematical Statistics).

The Departments in the Science Faculty

Botany	Biochemistry & Microbiology
Chemistry	Biotechnology Innovation Centre
Environmental Science	Computer Science
Geology	Geography
Ichthyology & Fisheries Science	Human Kinetics & Ergonomics
Physics & Electronics	Mathematics
Zoology & Entomology	Mathematical Statistics (Statistics)

The Science Faculty offers **TWO undergraduate DEGREES, an Extended Studies Programme and an Honours Degree.**

* The **BSc** (Bachelor of Science) is the usual first degree in the Faculty and requires a minimum of three years of study after school. A wide range of subjects, most of which are scientific in nature, can be studied in order to qualify for this degree.

* The **BSc (InfSys or BScS)** (Bachelor of Science Information Systems) is a 3 year degree intended for students who wish to become computer specialists in a commercial environment. It has a more rigid curriculum than the ordinary BSc degree.

* The **BScF** – (Extended Studies Programme).This programme is taken by students whose background has not adequately prepared them for the first year of a BSc, but who we believe will be able to complete a degree over four years. These students spend two years as BScF students after which they join the BSc students and graduate with a BSc.

* The **BSc (Hons)** - (Bachelor of Science with Honours). This degree follows a BSc or BScS and students study one of the subjects taken in the final year of the BSc, but in far greater detail. The usual entrance requirement is that students must have obtained at least a second class pass (60% or more) in this subject in the ordinary degree.

University Structure: Departments, Faculties and Senate

The University structure is a hierarchy, the foundation of which is the academic departments. As a student, you will work within a number of departments, be taught by their staff and be governed by their particular rules. Although the departments are situated at the base of the hierarchy, the academic departments are at the heart of the University. A department is staffed by *Professors, Associate Professors, Senior Lecturers and Lecturers*. One of these, almost always a Professor, is *Head of Department* and is responsible for providing leadership. Related departments are grouped into *Faculties*, of which there are six at Rhodes University.

Faculties at Rhodes and their core Departments

<table>
<tr><th>Faculty of Science</th><th>Faculty of Humanities</th><th>Faculty of Commerce</th></tr>
<tr><td rowspan="3">Biochemistry & Microbiology
Biotechnology Innovation Centre
Botany
Chemistry
Computer Science
Environmental Science
Geography
Geology
Human Kinetics & Ergonomics
Ichthyology & Fisheries Science
Mathematics
Physics & Electronics
Statistics
Zoology & Entomology</td><td rowspan="3">School of Languages (Afrikaans and Netherlandic Studies, African languages, Chinese, Classics, French, German)
Anthropology
Drama
English
English Language & Linguistics
Fine Art
History
Journalism & Media Studies
Music & Musicology
Philosophy
Political & International Studies
Psychology & Organizational Psychology
Sociology & Industrial & Economic Sociology</td><td>Accounting
Economics & Economic History
Information Systems
Management</td></tr>
<tr><td>Faculty of Pharmacy
Various subjects specific to the B Pharm Degree</td></tr>
<tr><td>Faculty of Education
Education</td></tr>
<tr><td>Faculty of Law
Law</td><td></td><td></td></tr>
</table>

Each department is responsible for its own teaching and research and may have a specific set of rules that will affect you. Overall governance is provided by the Science Faculty Board which includes all teaching staff in the departments plus some support and research staff and some student representatives. The Faculty is led by the *Dean* supported by two *Deputy Deans*.

The rules for all degrees are in the *University Calendar*, and the Science rules may be found at http://www.ru.ac.za/diaryanddates/. In cases of dispute it is the Senate's interpretation of the rules as stated in the Calendar which carries weight. This handbook attempts to explain the situation more simply. If, after reading it, you have queries regarding the rules, ask the Administrative Officer, the Dean, or a Deputy Dean.

Planning Your Academic Career at Rhodes

This is your most important task during Orientation Week.

Introduction and background information

A great deal of assistance in curriculum planning will be available to you during orientation week in the form of orientation talks and consultation sessions and we STRONGLY ENCOURAGE you to attend all of these sessions and make the most of the assistance. Spending some time at the start considering exactly what it is you would like to study is a huge investment for the future. Get it right and the next three years will be a wonderful academic experience.

Your curriculum for first year (and beyond) is one part of a much more important consideration, being career development as a whole. We urge you to read the career guidance booklet and to engage with the issues that it raises from the outset of your time here.

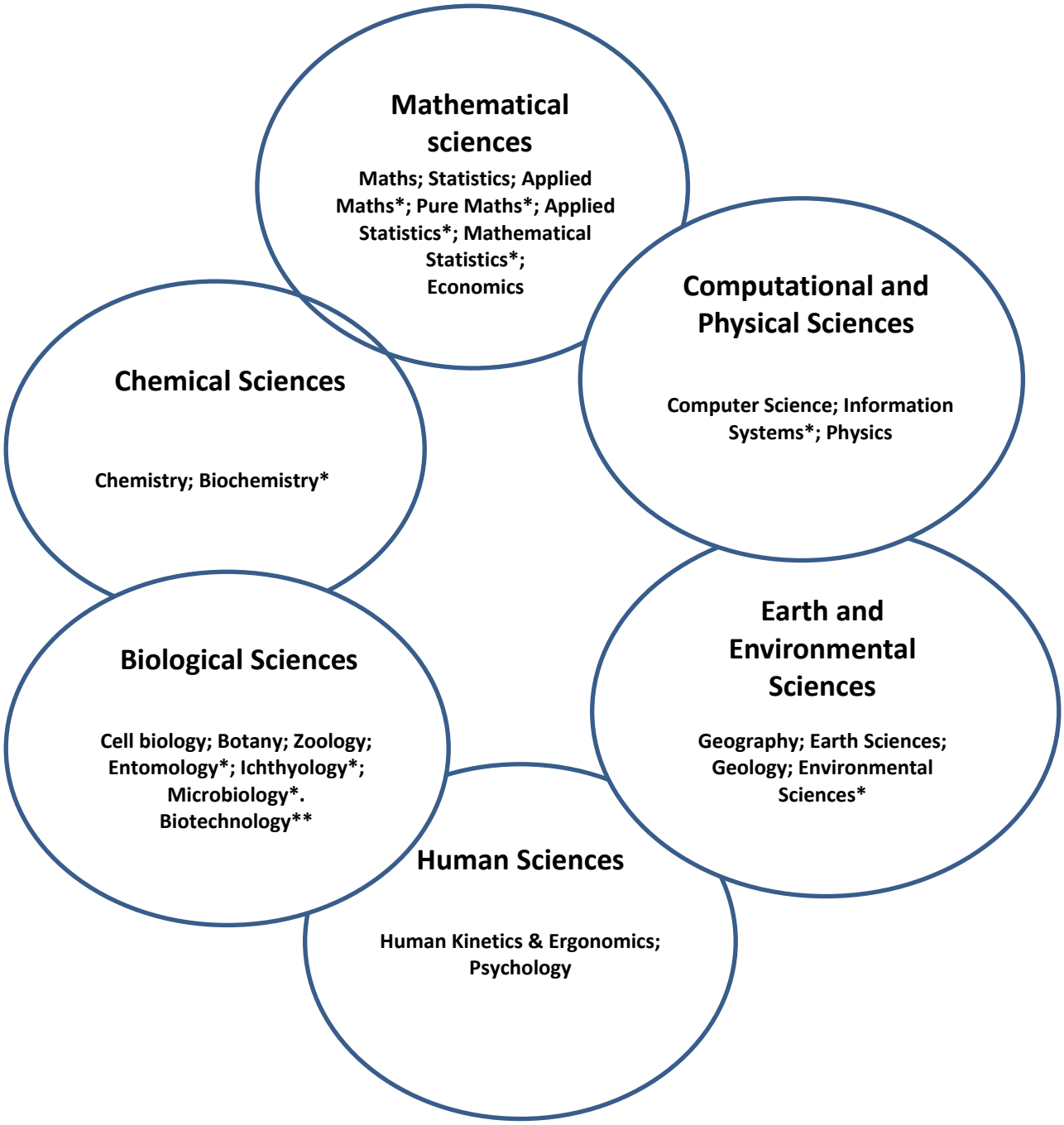
The Subjects within the Sciences

The Science Faculty offers a diverse range of courses that are considered to be sciences. These can be grouped so that subjects that seem to be fairly closely related are placed together and adjacent groups are similar. This is shown in the diagram on page 7.

It is possible to structure a curriculum so that most of your subjects come from a single group. Of course, some people have an interest right across the spectrum and it is also possible to structure a curriculum to include a wide and diverse range of subjects.

We must stress that setting out to complete a Science degree is not primarily about getting a job, although armed with a BSc (or, even better, a BSc(Honours) degree), you will certainly be better prepared to get a challenging and fulfilling job in many areas, especially (but not only) scientific ones, than if you do not have a degree. Our goal is to provide a broad based, formative education in science that can be used as a springboard for your particular career. Of course, we can structure curricula to suit some careers and you will be provided with guidance in this regard during orientation week.

The subjects taught within the Science Faculty. Closely related subjects are grouped together and adjacent groups are similar. Subjects marked* are taught in second and third year only. Biotechnology is taught from Honours up. Psychology is often taken with HKE but is not a science subject (see pg. 14).


Mathematical sciences
Maths; Statistics; Applied Maths*; Pure Maths*; Applied Statistics*; Mathematical Statistics*; Economics
Computational and Physical Sciences
Computer Science; Information Systems*; Physics
Chemical Sciences
Chemistry; Biochemistry*
Earth and Environmental Sciences
Geography; Earth Sciences; Geology; Environmental Sciences*
Biological Sciences
Cell biology; Botany; Zoology; Entomology*; Ichthyology*; Microbiology*. Biotechnology**
Human Sciences
Human Kinetics & Ergonomics; Psychology

Course structure and the structure of an academic year

The academic year is divided into two semesters (halves), each of which is terminated by a series of exams (June for the first semester and November for the second semester).

The science faculty offers courses with a range of different structures and purposes and it is important to understand the differences:

1. **Year-long courses that comprise two semesters.** Here, the full course covers an academic year but it is made up of two separate semesters. An example would be first year chemistry made up of CHE 101 and CHE 102. Or, first year geography made up of EAR 101 and GOG 102. These courses are the basic building blocks of your degree and IMPORTANTLY, DO lead to higher level (second and third year) study in the subject. Exams are written at the end of BOTH semesters and a pass earns one credit per semester passed (two semester-credits in total). In some cases (BUT NOT ALL) it is possible to do just one of the semesters, and so a student may do EAR 101 but not GOG 102 or MAT 1C1 and not MAT 1C2. **NOTE however that it is rarely possible to do the second semester without having done the first.**

2. **Single semester, stand-alone courses.** These courses are one semester in length, **DO NOT** lead to higher level study and are typically designed to **provide ancillary or supporting knowledge and skills**. They may be taught in either semester. Examples would include the Introduction to ICT course (CSC 1L1), the electronics course (PHY 1E2), the statistics course (STA 1D) and MAT 1S. Exams are written at the end of the semester and a pass earns one semester-credit.

   Stand alone courses that are taught in the second semester (STA 1D, PHY 1E2, CSC 112 and ECO 102) have no prerequisites. However, ECO 102 normally forms part of a whole year's study of Economics. *Note that this is different from the situation with the second semester of a year-long course (for example GOG 102) for which there **is** a prerequisite (EAR 101).*

3. **Not all subjects are taught in all three years and some are taught in second and third year only.** So, for example, Chemistry, Geography, Human Kinetics & Ergonomics and others are taught in all three years, while Ichthyology, Microbiology, Mathematical Statistics and others are taught in second and third year.

How to understand course codes: All courses are identified by a code that comprises three letters, a space and three numbers. The three letters indicate the subject (BOT, botany; CHE, chemistry; MIC, microbiology and so on). The three numbers indicate the year and semester (101, first year and first semester; 102, first year and second semester; 302, third year and second semester and so on). There are a few exceptions to this and these will be pointed out later. (See page 14 for a full list.)

The structure of a curriculum in the Science Faculty

Important general ideas

The structure of your BSc is mainly governed by your choice of what are called the ***major subjects*** (the subjects that you plan to take in your second and third years) and, we expect you to have some idea of what these will be by the time you arrive at the university. We encourage you to **build your degree on your academic strengths**, and in such a way that you will develop a real passion for what you are doing, and also have your eyes opened to all sorts of possibilities that you might have originally dismissed.

It is important to stress here, and it will be repeated later, that while we encourage you to develop your curriculum based on your planned major subjects **this does not mean that you cannot change your mind**. If you select your first year subjects carefully, they will give you access to many different subjects in second and third year and a change of direction will be possible.

The curriculum structure varies depending on the degree (BSc or BScS) and the selected major subjects and these differences are described below.

(A) The Classic BSc over 3 years

In the classic BSc, **both major subjects are Science subjects** (discussed further later; pg 14) and the degree is taken over **three years.** To complete the degree you **require 18 semester-credits** of which at least **4 must be at third year level** (your two majors) and **8 must be non-initial** (not first year level).

In the first year you will take 8 semester courses, at least 6 of which should belong to year-long courses as defined on page 8. The remaining 2 semester courses may be ancillary courses such as STA 101 or CSC 1L1 but may also be part of a year-long course. The selection of subjects to take at first year level may seem intimidating and further guidance is given a little later in this handbook.

In your second year you will take six semester-credits which will typically be three, year-long second year courses such as MAM 2, HKE 2, BOT 2 and so on.

In your third year, you will take just your two major subjects (MAT 3, HKE 3), each comprising two semesters of work (for example MAT 301 and MAT 302).

Two examples of the classic BSc are shown below. The first is for someone with an interest in the biological and earth sciences.

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 1	CEL 101	ZOO 101	CSC 1L1	BOT 102	CHE 101	CHE 102	EAR 101	GOG 102
Year 2	ZOO 201	ZOO 202	ENT 201	ENT 202	CHE 201	CHE 202		
Year 3	ZOO 301	ZOO 302	ENT 301	ENT 302				

NOTE:

1. CEL 101 is a common first semester for zoology 1 and botany 1.
2. EAR 101 is a common first semester for geography 1 and geology 1.
3. CHE 1 is required to major in ZOO and ENT.
4. BOT 102 is required to major in ZOO and ENT.
5. CSC 1L1 is a computer literacy course taught in the first semester.
6. ZOO 101 is taught in the second semester.

In this example, the same first year subjects could have been followed at second year level by botany 2, microbiology 2, biochemistry 2, ichthyology 2, geography 2 or environmental science 2. With the chosen second year subjects, you could take any combination of zoology, entomology and chemistry at third year level.

This second example is for someone with an interest in the mathematical and physical sciences.

Year 1	MAT 1C1	MAT1C2	STA 101	STA 102	PHY 101	PHY 102	CSC 101	CSC 102
Year 2	MAM 201	MAM 202	MST 202	MST 202	PHY 201	PHY 202		
Year 3	MAT 301	MAT 302	MST 301	MST 302				

NOTE:

1. The same first year subjects could have been followed at second year by computer science 2, information systems 2.
2. MAM 2 (maths & applied maths 2) is required to major in Physics
3. MAT 1C (MAT 1C1 & MAT 1C2) is the required first year course for MST3

An important point from both examples is to select first year subjects so as to give as much choice as possible going into second year.

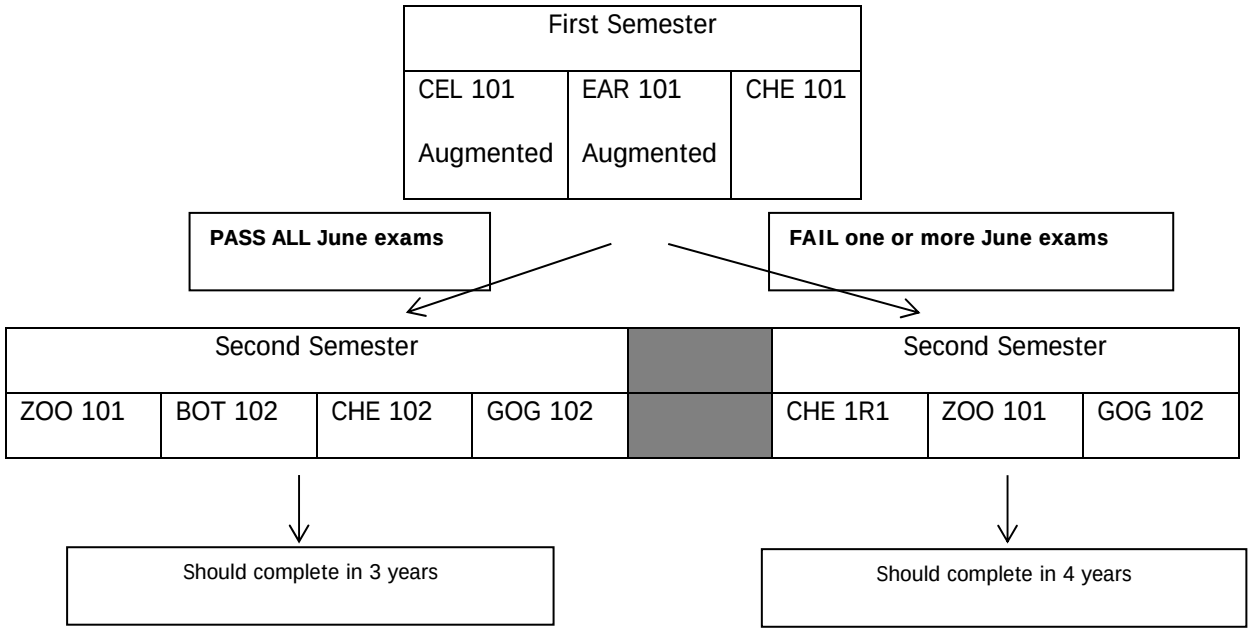
(B) The Classic BSc over 4 years

Some students do not complete their degrees within the minimum three-year period. Indeed, it is the policy of the Science Faculty to encourage some students with low final school exam scores, or those who do very badly in June exams, to take their degrees over four years. When a degree is structured over four years, the aim is to spend two years obtaining ten semester-credits for first year level subjects, followed by a third year studying the major subjects at the second year level, and the fourth year completing the major subjects at the third year level.

Our ability to offer carefully structured flexible curricula has been increased by the appointment of staff who now provide additional support (augmentation) in CEL 101, EAR 101 and CHE 101.

Students with an interest in any of the biological, earth and chemical sciences and who are put into a flexible, four-year degree will take three courses in the first semester, with additional support. If these

are passed in June, an additional course could be added and the degree completed in three years. If a course is failed in June, then the degree will be spread over four years.



These curricula must be developed in conjunction with the Dean.

(C) The BSc with a non-science major

So far we have discussed degrees in which both major subjects are sciences. It is possible in a BSc to have **ONE** major as a non-science subject, but in such cases, the degree **must comprise at least 20 semester-credits.**

Here are just two **examples**, both involving a non-science subject as one of the majors. A degree majoring in Legal Theory and Biochemistry might be planned over three years as follows:

Year 1	LAW 1	LAW 1	CHE 101	CHE 102	CEL 101	ZOO 101	PHY 1E1	BOT 102
Year 2	LAW 2	LAW 2	BCH 201	BCH 202	CHE 201	CHE 202	STA 101	STA 102
Year 3	LAW 3	LAW 3	BCH 301	BCH 302				

NOTE: CHE 1 is the prerequisite for BCH 2

Courses:

Year 1	PSYCHOLOGY 1	HKE 101	HKE 102	CEL 101	ZOO 101	CHE 101	CHE 102
Year 2	PSYCHOLOGY 2	HKE 201	HKE 202	BCH 201	BCH 202	CSC 101	BOT 102
Year 3	PSYCHOLOGY 3	HKE 301	HKE 302				

NOTE: Psychology 1 is taught twice a day, once in the morning and once in the afternoon. The morning lecture clashes with Geography 1 (EAR 101 and GOG 102) which means that

the afternoon lectures have to be used which then clash with pracs. Consequently, students who wish to take Psychology 1 MAY NOT do so in combination with Geography 1.

(D) The BSc(InfSys) degree (BScS)

This degree is unique to Rhodes and isintended for students who wish to become computer specialists in technical, commercial or industrial environments. The normal degree structure consists of 20 semester-credits spread over three years. The curriculum is more restricted than for an ordinary BSc, and include combinations of subjects which cannot be taken in an ordinary BSc. The following semester-credits are always needed:

First and second years

1. Computer Science (CSC 101+102, CSC 201+202)
2. Introduction to Information Systems (CSC 112)
3. Information Systems (INF 201+202)
4. Economics or Management (ECO 101+102 or MAN 101+102)
5. Accounting (ACC 101+102 or ACC 112)
6. Statistics (STA 1D or STA 101 or STA 102, or MST 201+202 if STA 102)
7. Mathematics (MAT 1C1 or MAT 1C1 & MAT 1C2)
8. Electronics Literacy (PHY 1E2).

The curriculum for the first 3 years for is as follows:

Year 1	CSC 101	CSC 102	ACC 101	ACC 102/ 112	MAN 101	MAN 102	ECO 101	ECO 102	MAT 1C1	CSC 112
Year 2	CSC 201	CSC 202	INF 201	INF 202	STA 101	PHY 1E2				
Year 3	CSC 301	CSC 302	Second Major							

Students are required to obtain at least 8 of these 10 semester-credits in their first year, and may be required to transfer to another degree if they do not do so. In addition, students who do not obtain at least 60% for CSC 102 will be advised to change to a BCom degree and not to attempt to major in Computer Science.

Third year BSc(InfSys)

Computer Science 3 is a compulsory major subject. The other major subject is usually Information Systems 3, but may also be one of Accounting, Applied Statistics, Economics, Mathematical Statistics, Management, or Mathematics, **depending on the subject choices made in second year**. In the example given above only INF 3 is possible.

NOTE: CSC may be taken as a major subject in an ordinary BSc for students who do not have an interest in the commerce subjects that are required in the BSc(S).

(E) The BScF

Students accepted into the Extended Studies Programme take a fixed set of courses in their first year before moving into the remainder of the degree in their second year. These courses are Computer Skills 1S, Mathematics 1F, and Introduction to Science Concepts and Methods (ISCM). Students who pass them all satisfactorily will earn 4 semester-credits towards the BSc degree. In second year (BScF2) students will register for six semester courses, all of which must be part of year long courses. Where augmented versions of a course are offered, these MUST be taken by BScF2 students.

One example of a BScF curriculum (**20 semester-credit degree**)

Year 1	MAT 1F	MAT 1F	CSC 1S	CSC 1S	ISCM 1	ISCM 1
Year 2	EAR 101	GOG 102	CEL 101	BOT 102	CHE 101	CHE 102
Year 3	GOG 201	GOG 202	ENV 201	ENV 202	BOT 201	BOT 202
Year 4	GOG 301	GOG 302	ENV 301	ENV 302		

MAT 1F and CSC 1S both count for a single semester credit each. ISCM counts for 2 semester-credits.

You have now seen the basic structure of the various degrees awarded by the Science Faculty. The exact details of which subjects you can take and which ancillary subjects are required are governed by a set of rules with which you must be familiar. These are covered in the next section.

Your Own Degree Structure in Detail

This is governed by a number of rules which vary from one degree to another and on your choice of major subjects.

The subjects that can be taken in a BSc degree fall into one of two groups: Group A (the science subjects) and Group B (the "other" subjects).

Group A Subjects

Subject (* = non major) (2 = two-year major)		
2 Applied Mathematics	MAP	301, 302
2 Applied Statistics	AST	301, 302
2 Biochemistry	BCH	201, 202, 301, 302
Botany	BOT	102, 201, 202, 301, 302
* Cell Biology	CEL	101
Chemistry	CHE	101, 102, 201, 202, 301, 302
Computer Science	CSC	IS, 1L1*, 112*, 101, 102, 201, 202, 301, 302, 303
* Earth Science	EAR	101
Economics	ECO	101, 102, 201, 202, 311 – 318
* Electronics Literacy	PHY	1E2
2 Entomology	ENT	201, 202, 301, 302
2 Environmental Science	ENV	201, 202, 301, 302
Geography	GOG	102, 201, 202, 301, 302
Geology	GLG	102, 201, 202, 301, 302
Human Kinetics & Ergonomics	HKE	101, 102, 201, 202, 301, 302
2 Ichthyology	ICH	201, 202, 301, 302
* Introductory Molecular Biology	IMB	201, 202 (= BCH 210 & MIC 202)
Mathematics	MAT	1L*, 1S*, 1C1, 1C2, 301, 302
Mathematics & Applied	MAM	201, 202
Mathematics	MST	201, 202, 301, 302 (must also have STA 102)
2 Mathematical Statistics	MIC	201, 202, 301, 302
2 Microbiology	PHY	101, 102, 1E1*, 1E2*, 201,202, 301, 302
Physics	STA	101, 102, 1D
* Statistics	TOF	1
* Theory of Finance	ZOO	101, 201, 202, 301, 302
Zoology		

Group B is made up of all other subjects taught at Rhodes, most of which fall more naturally into degrees offered in other faculties. These include:

Accounting, Afrikaans and Netherlandic Studies, Anthropology, Art (in various options), Chinese Studies, Classical Civilization, Commercial Law, Drama, English, English Language and Linguistics, French, German, Greek, History, History and Appreciation of Music, Industrial Sociology, Information Systems, isiXhosa, Journalism & Media Studies, Latin, Legal Theory, Management, Music (in various options), Organizational Psychology, Philosophy, Politics, Psychology, Sociology.

(A) The classic BSc degree *(3 year degree, 18 semester-credits, both majors from Group A)*

Your subjects will fit into the classic 3 year BSc grid a copy of which is below and additional blanks are on page 31.

Blank curriculum template for classic BSc

	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2
Year 1								
Year 2								
Year 3								

The key steps in developing your curriculum for a classic BSc are as follows:

1. **Identify your likely major subjects.** Major subjects are chosen primarily according to your personal and career interests. **Note that while we ask you to choose major subjects now, there will always be room for a change of choice IF you select courses carefully**. *For this reason, your first-year courses should normally all be ones that can lead to potential major subjects.*

   A wide choice of combinations is allowed in choosing the two major subjects for the degree. However, not all combinations are possible - some are ruled out because of timetable clashes. Check for clashes using the online clash checker (http://scifac.ru.ac.za/wwwtime/timetable.php) or the timetables on pages 55-57.

2. If your majors are taught over three years, you will be able to enter the same subject into the blank grid for all three years. If it is taught over two years, enter the subject onto the grid for years two and three.
3. If your subject/s are taught over two years, there will be at least one required subject at first year level. Find out what this is (see table on page 19) and enter it on the grid. For example, to take Entomology 2, you must pass first-year biology (CEL 101, ZOO 101 and BOT 102) and Chemistry 1 (CHE 101 and CHE 102).
4. No matter whether your majors are taught over two or three years, it is likely that there will be other required ancillary subjects (= **prerequisites**) that must be taken. For example, to major in Zoology you must pass Chemistry 1; to major in Physics, you must pass Maths 1 and Maths & Applied Maths 2. Find out what these required subjects are (see table on page 18) and enter them onto the grid. Note that in some cases, these must be passed BEFORE PROGRESSING TO THE NEXT LEVEL. In other cases, they must be COMPLETED BEFORE THE DEGREE IS AWARDED.
5. The choice of major subjects with their ancillary subjects will determine at least eight, usually twelve, and frequently more of the semester-credits, courses and subjects needed to make up the curriculum for your degree. The remaining subjects should be chosen to **support** this choice. A sensible first-year curriculum will leave options for some changes of direction at the end of first (or even second) year. A bad choice, or one that tries to go for "soft options", can lead to wasted fees and frustration later on.

   Select courses to give as much flexibility as possible going into second and third year.

6. **It is possible to include up to 4 semester credits (not your major subjects) in the classic BSc from those offered by a *single department* in Group B.** The restriction to a single department from Group B is significant - it means, for example, that you cannot obtain credit in a mixture of uncorrelated courses from among the many that are on offer in various Faculties. But it does mean that you can take, for example, two years of Anthropology in a BSc majoring in Environmental Science and Geography.

(B) The classic BSc over 4 years (for students with low school leaving points or those who do badly in June of year 1)

If you have been registered for this degree, make a point of discussing your curriculum with the Dean **BEFORE** the day of curriculum approval. You will be **governed by the same rules** discussed for the classic BSc, the major difference being that you will undertake a reduced load in your first year.

You will take 3 courses in your first semester and then depending on results in June, either increase or reduce the load for the second semester (see pg. 11). For the purpose of planning, identify three year long courses and enter them into the first year of the grid.

You will then take second year subjects in your third year and complete the degree in your fourth year.

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 1						
Year 2						
Year 3						
Year 4						

(C) The BSc degree with a non-science major (3 year degree, one major from Group A and one major from Group B)

In this case, **your entire degree must be made up of at least 20 semester-credits**.

Apart from the semester-credits needed to obtain the one major subject from Group B itself, **you may not count credit for any other courses chosen from this group, with two exceptions**:

1. If the major subject from Group B also has a prerequisite among the subjects in that group, credit may be obtained for that ancillary (this happens, for example, in the case of a Management major, which requires that a student also gets credit for Accounting 1; Economics 1 and MAT 1C or TOF and STA 1D).
2. If you major in Music, Ethnomusicology or Instrumental Music Studies you are allowed to obtain 8 semester-credits in subjects offered in the Department of Music.

The key steps to develop a curriculum for this degree are very similar to those outlined above BUT you will use a slightly different grid (see example below and page 31).

Blank curriculum template for 20 credit BSc

Year 1								

Year 2								
Year 3								

The 20 semester-credits are typically achieved by taking 8 in first year and 8 in second year and concentrating on the majors only in third year. It is however possible to attempt an extra semester or two in first year and this opportunity will be offered to students who have done particularly well at school.

Note the following additional rules

Psychology 1 may be taken in a BSc **only** if you really intend to major in the subject. This is because there are enormous numbers of BA and BSocSci students taking Psychology as essential parts of their degrees, and so the number of places in Psychology available to BSc students is severely limited.

Psychology 1 is taught twice a day, once in the morning and once in the afternoon. The morning lecture clashes with Geography 1 (EAR 101 and GOG 102) which means that the afternoon lectures have to be used which then clash with practicals. Consequently, students who wish to take Psychology 1 MAY NOT do so in combination with Geography 1.

The university timetable is drawn up to try to allow the most commonly occurring subject combinations. In practice this means that BSc students who wish to major in a Group B subject might find that it is very difficult to arrange their curricula to fit into the minimum three year period.

(D) The BSc(InfSys) degree

The structure of this degree has been fully described in the previous section (pg 13) and there is very little flexibility in terms of subject choice. (Grids on page 32)

The following tables will help you plan your curriculum.

Table showing some suggested supporting courses. Note these are NOT required subjects.

Major Subject	**Useful complementary first year courses**
Applied Mathematics	Computer Science, Physics
Applies Statistics	Statistics, Mathematics, Computer Science
Biochemistry	Computer Science
Botany	Geography, Zoology
Computer Science	Physics, Statistics, Mathematics (MAT 1C1 is required)
Environmental Science	Broad range selected from Chemistry, Botany, Geography, Geology, Zoology, Statistics, Economics
Geography	Botany, Zoology, Economics, Geology, Information Systems
Geology	Physics, Mathematics, French 1, Zoology
Human Kinetics & Ergonomics	Chemistry, Zoology, Statistics
Ichthyology	Botany, Geography, Zoology, Entomology
Mathematical Statistics	Statistics, Computer Science, Mathematics
Physics	Computer Science, Chemistry, Statistics
Zoology	Entomology, Botany, Statistics, Ichthyology

Courses offered in both semesters

In 2014 there will be no courses offered in both semesters. Statistics 101 (in the first semester) is very similar to Statistics 1D (in the second semester) but STA 1D is really intended only for Commerce students.

Other constraints

Some subjects overlap and you are not allowed to obtain credit in more than one of them:

Computer Science 101	CSC 1L1
Computer Science 1S	CSC 1L1
CSC 1L1	CSC 112
Applied Statistics 3	Mathematical Statistics 3
Physics 101	Physics 1E1
Psychology 2	Organizational Psychology 2
Psychology 3	Organizational Psychology 3
Statistics 101	Statistics 1D
Maths 1C	Maths 1S*
Maths 1F	Maths 1S

*A student who already has a credit for MAT 1C may not get credit for MAT 1S. A student with MAT 1S may then enrol for MAT 1C and get credit.

Table of major science subjects, showing corresponding first year courses and prerequisites that should be taken in first year. + = prerequisite MUST be passed before progressing to the next year.

Major subject	Corresponding first year course	2nd year	3rd year	Prerequisites (normally taken in first year but required before degree will be awarded) (School maths requirement if relevant)
Applied Mathematics	MAT 1C1 + MAT 1C2	MAM 2	MAP 3	None (Must have Maths at >60% on NSC or equivalent)
Applied Statistics	MAT 1C1 + MAT 1C2 STA 102	MST 2	AST 301 AST 302	None (Must have Maths at >60% on NSC or equivalent)
Biochemistry	CHE 101 + CHE 102	BCH 2	BCH 3	None
Botany	CEL 101 + BOT 102	BOT 2	BOT 3	CHE 1, ZOO 101
Chemistry	CHE 101 + CHE 102	CHE 2	CHE 3	MAT 1C, or MAT 1C1 / MAT1S + STA 1D/102
Computer Science	CSC 101 + CSC 102	CSC 2	CSC 3	MAT 1C1 or MAT 1C (Must have Maths at >60% on NSC or equivalent)
Economics	ECO 101 + ECO 102	ECO 2	ECO 3	none
Entomology	CEL 101 + ZOO 101	ENT 2	ENT 3	CHE 1, BOT 102
Environmental Science	EAR 101 + GOG 102	ENV 2	ENV 3	ONE of BOT 1, GLG 1, ZOO 1, ANT 1, ECO 1 (must be passed BEFORE starting ENV 2)
Geography	EAR 101 + GOG 102	GOG 2	GOG 3	none
Geology	EAR 101 + GLG 102	GLG 2	GLG 3	CHE 101 + 1 other credit from CHE 102, MAT 1C1 or PHY 101, MAT 1S, STA101. STA 1D
Human Kinetics & Ergonomics	HKE 101 + HKE 102	HKE 2	HKE 3	none
Ichthyology	CEL 101 + ZOO 101	ICH 2	ICH 3	CHE 1, BOT 102 plus MAT 1C or MAT 1C1/1S/TOF1 and one credit from STA 101, 102, 1D, CSC 101, 102, 112
Information Systems	CSC 112	INF 2	INF 3	None
Mathematics	MAT 1C1 + MAT 1C2	MAM 2	MAT 3	None (Must have Maths at >60% on NSC or equivalent)
Mathematical Statistics	MAT 1C1 + MAT 1C2 STA 102	MST 2	MST 3	None (Must have Maths at >60% on NSC or equivalent)
Microbiology	CEL 101 + BOT 102 OR ZOO101 + CHE 1	MIC 2	MIC 3	CHE 1
Physics	PHY 101 + PHY 102	PHY 2	PHY 3	MAT 1C**+** & MAM 2**+** (taken in 2nd year) (Must have Maths at >60% on NSC or equivalent)
Zoology	CEL 101 + ZOO 101,	ZOO 2	ZOO 3	CHE 1, BOT 102

Table of some major *non-science* subjects, showing corresponding first year courses and prerequisites that are normally taken in first year. Speak to the Dean if you plan to take a different non-science subject as your second major.

Major subject	Corresponding first year course	2nd year	3rd year	Required ancillary (normally taken in first year)
Anthropology	ANT 1	ANT 2	ANT 3	none
Journalism	JRN 1 (2 semester course)	JRN 2	JRN 3	none
Legal Theory	Law 1 (2 semester course)	LAW 2	LAW 3	none
Management	MAN 101 + MAN 102	MAN 2	MAN 3	ACC 1, ECO 1 and MAT 1C or TOF & STA 1D
Music (in various forms)	MUS 1 ETH 1 IMS 1	MUS 2 ETH 2 IMS 2	MUS 3 ETH 3 IMS 3	none
Psychology	PSY 1 (2 semester course)	PSY 2	PSY 3	none
Organizational Psychology	PSY 1 (2 semester course)	ORG PSY 2	ORG PSY 3	none

Practical exercise - plan your degree

Armed with the information from the preceding sections, you should now be able to draw up your own three or four year curriculum.

Firstly, a summary of some VERY important general principles:

- Build your curriculum around your planned majors.
- Select a group of first year subjects that allows **maximum** choice in second year and which allows for a change in planned majors.
- At least six of your eight first year semesters should belong to year-long courses.
- Select ancillaries that support your planned majors and avoid easy options.
- In the 4-year BSc, you will take only three courses in the first semester and either three or four in the second. Assume that you will be successful in June and plan now for three year long courses plus an additional course for the second semester.
- **Unless** you plan to major in a subject from Group B, you should not consider taking a subject from this group in your first year, because this restricts the options that can be taken in second year, and can lead to problems later on. An exception to this would be IF the Group B course is a sensible ancillary to your majors.

1. Now, select the CORRECT blank template (see pages 31-34 of this handbook).
2. Fill in your major subjects in the last row (Year 3). Then fill in the corresponding second year subjects in Year 2 and the corresponding first year subjects in the row marked Year 1. **IF** your major is a two year subject then you must ensure that you include the required subjects in first year to get into the second year. i.e. CHE 1 for BCH 2.
3. Find out what the prerequisites are for your major subjects (see Table on page 19) and fill these in on your template.

By following the above three steps, you will have filled in more than half of the semester-courses required. There will probably be two to four blank semesters in first year and two in second year.

4. Now choose other subjects that will complement those already chosen, so as to make up the required semester-credits for the degree. Remember to select first year semesters that give maximum options going into second year AND take three second year subjects in Year 2.

Now review what you have done and check for the following:

i. Are there any clashes? Use the timetables (pages 54 – 58; or in the Calendar, or use the timetable checker at **http://scifac.ru.ac.za/wwwtime/timetable.php)** to make sure that these combinations of subjects will be possible. If not, either choose other major subjects, or come to discuss the problem with the Dean. We will not allow students with clashes to register.
ii. Do you have at least three year-long courses in first year?
iii. Have you chosen sensible ancillaries?
iv. Does your curriculum allow room for change?
v. Of the 18 or 20 semester-credits required for a degree, 8 must be "non-initial" (that is, second or third year semester-credits), and at least 6 must be first year semester-credits. The others may be first, second or third year level semester-credits. *However, you are strongly advised to include 6 second year semester-credits wherever possible.*
vi. If you have included subjects from Group B, are they all from the same department and are there no more than 4 semesters?
vii. If one of your majors is from Group B, will you have 20 semester-credits after three years?
viii. If one of your majors is from Group B, are all of your other semester-credits from Group A?
ix. If your degree is BSc (Inf Sys) have you included all the required semester-credits?

Changes in 2019 and Further Points to Note

General: Rewrites and remarks are no longer allowed at Rhodes. See the new version of the rule G27 in the Calendar.

Points to Note (changes from 2013 and earlier)

Computer Science

1. Introduction to ICT (CSC 1L) is only offered in the first semester as CSC 1L1
2. CSC 101 is NO LONGER the prerequisite for INF 2
3. Introduction to Information Systems (CSC 112) is the prerequisite for INF 2 and is taught in the second semester

Information Systems

CSC 101 is NO LONGER the prerequisite for INF 2. Students wishing to major in INF 2 MUST take CSC 112.

Maths

1. MAT 1P has been replaced by MAT 1S which is taught in the first semester. MAT 1S is a maths course for science students who do not plan to continue with maths. MAT 1F is an extended version of MAT 1S but taken over a full year.
2. At third year level, the maths modules now have individual course codes. Students MUST register for the courses they intend to take.

Subject	Module name	Semester	Code
Maths	**Complex analysis (MAT & MAP)**	2	MAM 311
	Algebra	2	MAT 311
	Real analysis	1	MAT 313
	Topics in mathematics	1	MAT 315
Applied Maths	**Complex analysis (MAP & MAT)**	2	MAM 311
	Numerical analysis	2	MAP 311
	Dynamical systems	1	MAP 312
	Partial differential equations	1	MAP 314

Physics

Physics 1E1. The content has changed to meet the needs of students planning to major in HKE. PHY 1E1 is an appropriate ancillary course for any student in the Science Faculty who passed physical science at school.

BScS

Because CSC 112 has been introduced as a prerequisite for INF 2, the first year must include BOTH CSC 101 and CSC 112.

Psychology 1 and Geography 1

In a BSc, students may not combine Psychology 1 with Geography 1. The PSY 1 lectures are given once in the morning and once in the afternoon. The morning slot clashes with the GOG 1 slot and this forces the PSY 1 lectures into the afternoons which then clash with science practicals.

CSC 303

is only available for students who have passed CSC 2 and who are in third year. Note that it **does not replace** either CSC 301 or CSC 302. If you are interested in this course, speak to the Head of Department.

Mathematical Statistics

Statistics 102 and 60% or higher in MST 2 and is required for entry to MST 3.

Journalism 1 and 3

are now taught in the afternoons and will clash with science practicals. A joint science major with Journalism is NOT impossible but you will have to leave your practicals on Monday, Wednesday and Thursday for one period.

A special curriculum is recommended to those students who may be thinking of careers in Bioinformatics (see the specimen curricula in the next section).

An important consideration if you wish to practice as a registered Natural Scientist

If you wish to follow certain scientific careers in South Africa, you should be aware that some of these may require you to be registered as a "Professional Natural Scientist" with a body known as the South African Council for Natural Scientific Professions. Registration is effectively only possible if at least 50% of your BSc curriculum consists of "natural sciences". In order to qualify for Professional Registration under current legislation (SACNASP) affecting all practising and consulting natural scientists, students are encouraged to include at least two of the following subjects in their first year: chemistry, physics, mathematics and/or a biological science.

For most students this will not be a problem but a first year of Geography, Economics, Anthropology and Computer Science, followed by Majors in Geography, Environmental Science and Anthropology may be problematic. If in doubt, speak to the Dean.

Specimen Curricula

This section gives some further examples of curricula. It must be stressed that these are not the only ones possible!

The first few curricula should appeal to biologists and life scientists. Here, for example, is a classic biological one combining Botany and Zoology:

Year 1	Biology CEL 101		Zoology ZOO 101		Physics PHY 1E1		Botany BOT 102		Chemistry CHE 101	CHE 102	Geography EAR 101	GOG 102
Year 2	Zoology ZOO 201	ZOO 202			Botany BOT 201	BOT 202			ENT 201	ENT 202		
Year 3	Zoology ZOO 301	ZOO 302			Botany BOT 301	BOT 302			← Major subjects			

Very often biologists specialize. Here is a curriculum with the aim of specializing in the study of insects (Entomology). Note that the choice of second year subjects allows for a change of direction when the majors are finally chosen:

Year 1	Biology CEL 101	Zoology ZOO 101	Statistics STA 101	Botany BOT 102	Chemistry CHE 101	CHE 102	Geography EAR 101	GOG 102
Year 2	Zoology ZOO 201	ZOO 202	Entomology ENT 201	ENT 202	Microbiology MIC 201	MIC 202		
Year 3	Zoology ZOO 301	ZOO 302	Entomology ENT 301	ENT 302	← Major subjects - could also be ZOO+MIC or MIC+ENT			

The next one shows a possible combination of Microbiology and Biochemistry, a strong combination for those interested in Biotechnology. (Biotechnology as a subject is only offered at the Honours, Masters or PhD level, after a BSc degree has been obtained with Biochemistry and/or Microbiology.) As you can see, the second year has prepared the student for a wider choice of majors if so desired:

Year 1	Chemistry CHE 101	CHE 102	Statistics STA 101	Botany BOT 102	Biology CEL 101	Zoology ZOO 101	Comp Sci CSC 101	CSC 102
Year 2	Biochemistry BCH 201	BCH 202	Microbiology MIC 201	MIC 202	Zoology ZOO 201	ZOO 202		
Year 3	Biochemistry BCH 301	BCH 302	Microbiology MIC 301	MIC 302	← Major subjects – could also be ZOO+BCH or ZOO+MIC			

Another biological speciality would be to study marine life, and fishes in particular (Ichthyology). Here's one possible degree curriculum planned with this in mind:

Year 1	Maths MAT 1S	Zoology ZOO 101	Chemistry CHE 101	CHE 102	Biology CEL 101	Botany BOT 102	Statistics STA 101	STA 102
Year 2	Zoology ZOO 201	ZOO 202	Ichthyology ICH201	ICH 202	Botany BOT 102	BOT 202		
Year 3	Zoology ZOO 301	ZOO 302	Ichthyology ICH 301	ICH 302	← Major subjects – could also be ZOO+BOT or ICH-BOT			

But perhaps one would like to pursue Ichthyology with an eye on Environmental Science as an alternative?

Year 1	Biology CEL 101	Zoology ZOO 101	Geography EAR 101	GOG 102	Chemistry CHE 101	CHE 102	Maths MAT 1S	Botany BOT 102
Year 2	Zoology ZOO 201	ZOO 202	Ichthyology ICH 201	ICH 202	Environmental Science ENV 201	ENV 202	Comp Sci CSC 101	
Year 3	Zoology ZOO 301	ZOO 302	Ichthyology ICH301	ICH 302	← Major subjects – could also be ZOO+ENV or ICH+ENV			

A common theme in the previous curricula is that Chemistry has formed a part of all of them - it is impossible to study life sciences without a good background in Chemistry. A strong combination is to specialise in both Chemistry and Biochemistry. A major in Chemistry is best supported by courses in Physics and Maths as well:

Year 1	Biology CEL 101	Zoology ZOO 101	Chemistry CHE 101	CHE 102	Physics PHY 1E1	PHY 1E2	Mathematics MAT 1C1	MAT 1C2
Year 2	Biochemistry BCH 201	BCH 202	Chemistry CHE 201	CHE 202	Microbiology MIC 301	MIC 202		
Year 3	Biochemistry BCH 301	BCH 302	Chemistry CHE 301	CHE 302	← Major subjects – could also be MIC+BCH or CHE+MIC			

Here's a curriculum that is a classic combination of Physics and Chemistry. Physical Science is highly quantitative, so this curriculum has computational and mathematical back up as well:

Year 1	Physics PHY 101	PHY 102	Chemistry CHE 101	CHE 102	Mathematics MAT 1C1 MAT 1C2	Computer Science CSC 101 CSC 102
Year 2	Physics PHY 201	PHY 202	Chemistry CHE 201	CHE 202	Maths &Applied Maths MAM 201 MAM 202	
Year 3	Physics PHY 301	PHY 302	Chemistry CHE 301	CHE 302	← Major subjects – could also be PHY+MAP or CHE + MAP or MAT	

Students with an interest in astrophysics should consider a curriculum such as this.

Year 1	Physics PHY 101	PHY 102	Statistics STA 101	STA 102	Mathematics MAT 1C1 MAT 1C2	Computer Science CSC 101 CSC 102
Year 2	Physics PHY 201	PHY 202	CSC 201	CSC 202	Maths &Applied Maths MAM 201 MAM 202	
Year 3	Physics PHY 301	PHY 302	MAT 301	MAT 302	← Other Major subjects – could be CSC or applied maths	

Physics can also be combined with Geology, leading to a career as a Geophysicist:

Year 1	Physics PHY 101	PHY 102	Geology EAR 101	GLG 102	Chemistry CHE 101	CHE 102	Mathematics MAT 1C1 MAT 1C2
Year 2	Physics PHY 201	PHY 202	Geology GLG 201	GLG 202	Maths & Applied maths MAM201 MAM 202		
Year 3	Physics PHY 301	PHY 302	Geology GLG 301	GLG 302	← Major subjects – could also be PHY+MAT or GLG+MAT		

Of course Geology can also be sensibly combined with Geography:

Year 1	Geography EAR 101	GOG 102	Statistics STA 101	Geology GLG 102	Chemistry CHE 101	CHE 102	Economics ECO 101	ECO 102
Year 2	Geography GOG 201	GOG 202	Geology GLG 201	GLG 202	Chemistry CHE 201	CHE 202		
Year 3	Geography GOG 301	GOG 302	Geology GLG 301	GLG 302	← Major subjects			

Finally, Geology and Economics can be taken together to give a good foundation for those wishing to become mineral economists.

Year 1	Economics ECO 101	ECO 102	Geology EAR 101	GLG 102	Chemistry CHE 101	CHE 102	Mathematics MAT 1C1 MAT 1C2
Year 2	Economics ECO 201	ECO 202	Geology GLG 201	GLG 202	Chemistry CHE 201	CHE 202	
Year 3	Economics ECO 301	ECO 302	Geology GLG 301	GLG 302	← Major subjects		

Economics might also combine profitably with Geography and Environmental Science, leading, perhaps, to a more "people" oriented degree than the last one:

Year 1	Economics ECO 101	ECO 102	Geography EAR 101	GOG 102	Biology CEL 101	Botany BOT 102	Anthropology ANT 1 – all year
Year 2	Economics ECO 201	ECO 202	Geography GOG 201	GOG 202	Environmental Science ENV 201 ENV 202		
Year 3	Economics ECO 301	ECO 302	Geography GOG 301	GOG 302	← Major subjects – could also be ECO+ENV or GOG+ENV		

Here is a curriculum that shows a combination of Geography and Environmental Science.

Year 1	Geography EAR 101	GOG 102	Anthropology 1 ANT 1 – all year		Biology CEL 101	Botany BOT 102	Chemistry CHE 101	CHE 102
Year 2	Geography GOG 201	GOG 202	ENV 201	ENV 202	Botany BOT 201	BOT 202		
Year 3	Geography GOG 301	GOG 302	ENV 301	ENV 302	← Major subjects – could also be ENV+BOT or GOG + BOT			

Other Environmental Science curricula can be viewed on the programme's web page:

http://www.ru.ac.za/environmentalscience/studying/

Computer Science (CSC) is a popular and challenging subject. Here is a very strong combination for the technically oriented, who might wish to become experts in computers and in electronics:

Year 1	Physics PHY 101	PHY 102	CSC 101	CSC 102	Mathematics 1 MAT 1C1 MAT 1C2	Statistics STA 101	Electr. PHY 1E2
Year 2	Physics PHY 201	PHY 202	CSC 201	CSC 202	Maths &Applied Maths MAM 201 MAM 202		
Year 3	Physics PHY 301	PHY 302	CSC 301	CSC 302	← Major subjects – could also be PHY+MAP or MAP+CSC		

There will be many career openings for people with expertise in computing and also in statistics. The following curriculum attempts to provide that:

Year 1	Computer Sci. CSC 101	CSC 102	Statistics STA 101	STA 102	Physics PHY 101	PHY 102	Mathematics 1 MAT 1C1 MAT 1C2
Year 2	Computer Sci. CSC 201	CSC 202	Math. Stats MST 201	MST 202	Information Systems INF 201 INF 202		
Year 3	Computer Sci. CSC 301	CSC 302	Mathematical Statistics MST 301 MST 302		← Major subjects		

Another burgeoning field is that of Bioinformatics. The curriculum below prepares students for careers in the bioinformatics sector, and provides a suitable foundation for the course work MSc in Bioinformatics that is offered at Rhodes.

Year 1	Chemistry CHE 101 CHE 102	Comp. Science CSC 101 CSC 102	Mathematics MAT 1C1 MAT 1C2	Statistics STA 101 STA 102	Biology CEL 101
Year 2	Biochemistry BCH 201 BCH 202	Comp. Science CSC 201 CSC 202	Maths or Math Stats 2 MAM 2 or MST 2		
Year 3	Biochemistry BCH 301 BCH 302	Comp. Science CSC 301 CSC 302	Microbiology MIC 202	← Major subjects – could also be BCH+MST or BCH+MAT	

Of course, you might be less interested in computers and programming than in more fundamental aspects of mathematics and statistics - in which case majors in these subjects would go well together:

Year 1	Mathematics 1 MAT 1C1 MAT 1C2	Statistics STA 101 STA 102	Computer Science CSC 101 CSC 102	Physics PHY 101 PHY 102
Year 2	Maths & Applied maths MAM 201 MAM 202	Mathematical Statistics MST 201 MST 202	Information Systems INF 201 INF 202	
Year 3	Mathematics MAT 301 MAT 302	Mathematical Statistics MST 301 MST 302	← Major subjects	

It is possible to do a BSc with an enormous amount of mathematical content (and some Physics, which is closely related to Applied Mathematics). Here's how:

Year 1	Mathematics MAT 1C1 MAT 1C2	Statistics STA 101 STA 102	Physics PHY 101 PHY 102	Computer Science CSC 101 CSC 102
Year 2	Maths & Applied maths MAM 201 MAM 202	Mathematical Statistics MST 201 MST 202	Physics 2 PHY 201 PHY 202	
Year 3	Applied Mathematics MAP 301 MAP 302	Math 3 MAT 301 MAT 302	← Major subjects	

Some people prefer working with people or animals to working with machines or mathematics. Perhaps your interest is in Human Kinetics and Ergonomics - to study how the body functions:

Year 1	Biology CEL 101	Zoology ZOO 101	Human Kinetics & Ergo. HKE 101 HKE 102	Chemistry CHE 101	CHE 102	PHY 1E1 STA 1D
Year 2	Zoology ZOO 201	ZOO 202	Human Kinetics & Ergo. HKE 201 HKE 202	CSC101	BOT 102	
Year 3	Zoology ZOO 301	ZOO 302	Human Kinetics & Ergo. HKE 301 HKE 302	← Major subjects		

Human Kinetics and Ergonomics is quite often combined with Psychology. Here is a curriculum that does just that. Because Psychology is a "Group B" subject, this degree requires a **total of 20 semester-credits**:

Year 1	Psychology PSY 1 all year	Human Kinetics & Ergo. HKE 101 HKE 102	Biology CEL 101	Zoology ZOO 101	Chemistry CHE 101 CHE 102
Year 2	Psychology PSY 2 – all year	Human Kinetics & Ergo. HKE 201 HKE 202	Biochemistry 2 BCH 201 BCH 202		Statistics STA 101 STA 102
Year 3	Psychology PSY 3 – all yer	Human Kinetics & Ergo. HKE 301 HKE 302	← Major Subjects		

Another "Group B" subject that many scientists find very appealing is Music, and in recent years there have been quite a number of students who have combined Music with Physics, Maths and/or Computer Science. Here's one way in which it might be done - but remember that Music could be combined with other sciences too. Instrumental Studies 1 is a practically based course given in the Department of Music and Musicology, which includes the study of a major instrument, a minor instrument *or*

ensemble, and the musical literature of the major instrument. **Note that a maximum of 8 semester credits in music are allowed in a BSc and the degree has a total of 20 credits.**

Year 1	Music MUS 1 – all year	Computer Science CSC 101 CSC 102	Physics PHY 101 PHY 102	Mathematics MAT 1C1 MAT 1C2
Year 2	Music MUS 2 – all year	Computer Science CSC 201 CSC 202	Physics PHY 201 PHY 202	Instrumental Studies – all year
Year 3	Music MUS 3 – all year	Computer Science CSC 301 CSC 302	← Major subjects	

In recent times several students have combined Legal Theory with Science, rather than only with Humanities or Commerce, and gone on to acquire the initials "BSc LLB" after their names before following specialised careers in Law. Here is a curriculum that might appeal to those who wish to become experts in Environmental Law:

Year 1	Legal Theory 1 Introduction Foundation	Biology CEL 101	Zoology ZOO 101	Physics PHY 1E1	Botany BOT 102	Chemistry CHE 101 CHE 102
Year 2	Legal Theory 2 Various courses	Environmental Science ENV 201 ENV 202		Botany BOT 201 BOT 202		Geography EAR 101 GOG 102
Year 3	Legal Theory 2 Various courses	Environmental Science ENV 301 ENV 302		← Major subjects – could also be LAW + BOT		

The BSc (InfSys) degrees rather more prescribed in what one can and cannot take. How a curriculum might be planned is best understood with reference to the following examples. The first shows a classic three year BSc (InfSys) with the standard Computer Science major combined with the very popular Information Systems major.

Year 1	Computer Science CSC 101 CSC 102	Accounting ACC 101 ACC 102	MAT 1C1	CSC 112	Management MAN 101 MAN 102	Economics ECO 101 & ECO 102
Year 2	Computer Science CSC 201 CSC 202	Info. Systems INF 201 INF 202	Statistics STA 101	Electronics PHY 1E2		
Year 3	Computer Science CSC 301 CSC 302	Info. Systems INF 301 INF 302	← Major subjects			

The second shows that the second major in the BSc (InfSys) degree can be Accounting - provided that the student elects to take Accounting in the first two years of study:

Year 1	Computer Science CSC 101 CSC 102	Accounting ACC 101 ACC 102	MAT 1C1	CSC 112	Management MAN 101 MAN 102	Economics ECO 101 ECO 102
Year 2	Computer Science CSC 201 CSC 202	Accounting ACC 201 ACC 202	Statistics STA 101	Electronics PHY 1E2	Information Systems INF 201 INF 202	
Year 3	Computer Science CSC 301 CSC 302	Accounting Acc. 3 all year	← Major subjects			

NOTE: additional courses must be taken to allow a second major other than INF.

Use the blank templates below to plan your curriculum

Three year Classic BSc degree (18 credits)

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 1								
Year 2								
Year 3					← Major subjects			

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 1								
Year 2								
Year 3					← Major subjects			

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 1								
Year 2								
Year 3					← Major subjects			

The BSc with a non-science major (20 credits)

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 1								
Year 2								
Year 3					← Major subjects			

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 1								
Year 2								
Year 3					← Major subjects			

Three year BSc (InfSys) degree (20 credit degree)

Note:
In BScS, the second major is often INF 3 but may be one of a number of other subjects (see pgs 12-13). If you plan to have for example ACC 3 as a major this subject must obviously be included in your second year. This is likely to require that you include additional courses in second year

Year 1	CSC 101	CSC 102	ACC 101	ACC 102	ECO 101	ECO 102	MAN 101	MAN 102	MAT 1C1	CSC 112
Year 2	CSC 201	CSC 202	INF 201	INF 202	STA 101	PHY 1E2				
Year 3	CSC 301	CSC 302			← Major subjects					

Year 1	CSC 101	CSC 102	ACC 101	ACC 102	ECO 101	ECO 102	MAN 101	MAN 102	MAT 1C1	CSC 112
Year 2	CSC 201	CSC 202	ACC 201	ACC 202	STA 101	PHY 1E2				
Year 3	CSC 301	CSC 302	ACC 3		← Major subjects					

Year 1	CSC 101	CSC 102	ACC 101	ACC 102	ECO 101	ECO 102	MAN 101	MAN 102	MAT 1C1	
Year 2	CSC 201	CSC 202	INF 201	INF 202						
Year 3	CSC 301	CSC 302			← Major subjects					

Four year BSc degree (3 full subjects in first year)

For students with low entry points. Make a point of discussing this with the Dean.

You will take two years to complete a full first year (at least 10 credits)

You may be able to complete three majors over four years

If you do well in June of year one you may be able to complete the degree in 3 years.

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2		Sem 2
Year 1								extra
Year 2								
Year 3								
Year 4					← Major subjects			

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2		Sem 2
Year 1								extra
Year 2								
Year 3								
Year 4					← Major subjects			

	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2		Sem 2
Year 1								extra
Year 2								
Year 3								
Year 4					← Major subjects			

BSc (F)

Planning chart for Extended Studies Programme Students **(4 years)**

Year 1	Intro. to Science Concepts & Methods		Computer Skills 1S		Mathematics 1L	
	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 2						
Year 3						
Year 4					← Major subjects	

Note year 2 of BScF should be three full year subjects (i.e. CHE 1, GOG 1, ZOO 1, MAT 1 etc) and **NOT** a set of single semester credits

Year 1	Intro. to Science Concepts & Methods		Computer Skills 1S		Mathematics 1L	
	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 2						
Year 3						
Year 4					← Major subjects	

Year 1	Intro. to Science Concepts & Methods		Computer Skills 1S		Mathematics 1L	
	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Year 2						
Year 3						
Year 4					← Major subjects	

Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1					
Period 2					
Period 3					
Period 4					
Period 5					
Period 6					
Lunch					
Period 7					
Period 8					
Period 9					
Period 10					

Period 1: 07:45 to 08:30 Period 2: 08:40 to 09:25
Period 3: 09:35 to 10:20 Period 4: 10:30 to 11:15
Period 5: 11:25 to 12:10 Period 6: 12:20 to 13:05
Period 7: 14:15 to 15:00 Period 8: 15:10 to 15:55
Period 9: 16:05 to 16:50 Period 10: 17:00 to 17:45

Periods 7 - 9 are in the afternoon, and are used for practical sessions. Some second and third year practical sessions extend over periods 5 - 9 (Biochemistry, Botany, Chemistry, Entomology, Geology, Microbiology, and Physics).

Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1					
Period 2					
Period 3					
Period 4					
Period 5					
Period 6					
Lunch					
Period 7					
Period 8					
Period 9					
Period 10					

Timetable for BScF

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1		ISCM 1			MAT 1F
Period 2	MAT 1F	ISCM 1	ISCM 1	ISCM 1	
Period 3	(CSC 1S	MAT 1F	ISCM 1	ISCM 1	(CSC 1S)
Period 4	(CSC 1S)		MAT 1F		(CSC 1S)
Period 5	ISCM 1	(CSC 1S)	(CSC 1S)	MAT 1F	ISCM 1
Period 6	ISCM 1	(CSC 1S)	(CSC 1S)	MAT 1F	ISCM 1
Period 7	ISCM 1		MAT 1F	(CSC 1S)	
Period 8	ISCM 1		MAT 1F	(CSC 1S)	
Period 9	ISCM 1			(CSC 1S)	
Period 10				(CSC 1S)	

(Students attend 3 double periods of CSC 1S; the distribution of students to these classes is only decided after registration.)

Curriculum Approval

First year students:

Guidance is available from Monday 4th February through to Thursday 7th February as an integral part of Orientation Week. All first-time students are ***required*** to take advantage of this guidance. Details of when and where the sessions are held can be found in the Orientation Week Handbook, and will be clarified as the week proceeds.

The formal curriculum approval for students who are enrolled for Science degrees follows their administrative registration, and takes place as follows:

Please take careful note of these times and come to sign up at the correct time. Regardless of what your friends or others may tell you, ***ALL first year Science undergraduate students are required to have their curriculum approved by the Dean in person.*** *You cannot take a short cut because you might have filled in a preregistration form.*

Place: Eden Grove BLUE Lecture Theatre

Times: First year students: **Friday 8th February 09h00 - 13h00**

At curriculum approval you **must:**

* Collect a form from the assistants containing your previous academic record. In the case of first year students this will simply record your NSC levels.

* Present your 2019 student identity card as proof that you have paid your fees, completed your administrative registration, and been accepted at the University.

* Check your proposed curriculum with one of the staff on duty at the computers and seek guidance on any aspects of this that are still causing you concern. Your courses will be entered on the student record system.

* Have your proposed curriculum approved by the Dean or Deputy Dean.

After curriculum approval is complete you should familiarize yourself with the details of when and where your first class meetings will be held. Make a point of visiting the departments in which you will be studying, if you have not already done so. Make sure that you look at the course notice boards. Take note of important information on them, such as pertain to venues, textbooks, and the need to sign up with each department. Although, technically, all curriculum approval is centralized, some departments also require you to hand in your name to a Departmental Secretary or to a Course Coordinator.

The first class meetings in all (and especially in first year) subjects start on Monday 11th February. Find out where they are held and make sure that you are there!

Returning second year and third year students

Students who have correctly completed the pre-registration form will have their Registration Confirmation Form which will be handed to you when you get your new student card, marked as **curriculum approved**. If this applies to you, **you do not need to see the Dean** at Curriculum Approval.

However, if your form is not marked curriculum approved, OR if you wish to change a subject then you MUST attend Curriculum approval at the times indicated below.

Second year students:	**Saturday**	**9th**	**February**	**09h00**	**-**	**13h00**
Third year students:	**Friday**	**8th**	**February**	**13h00**	**-**	**17h00**

Arrangements for practical classes, Tutorials and Lectures

It is important to note that as an individual student, you CANNOT decide on which day you will do a particular practical, or which of alternate lecture slots you should attend. This will be done for you during the first part of the first week of term.

The information collected at curriculum approval will be used as input to allocate students not just to practicals but also to lecture slots and possibly even tutorials. This exercise is only completed early the following week. You should watch Departmental notice boards keenly for details of your particular allocations. The information will also be posted on the Faculty web site: follow the link from the home page at **http://www.ru.ac.za/facultyofscience/**.

First year practical classes start in the **second** week after registration, which is on Monday 18th February. Do *not* make any assumptions as to what your practical timetable will be - it can only be drawn up when the final numbers of students in each subject are known, and all the combinations of subjects taken (hence the timetable varies from year to year).

Practicals for second and third year students will start in the first week.

Changes in registration

Frequently students change their mind about the courses that they wish to take, or wish to change degree or even Faculty. You are encouraged to think very carefully about your curriculum *before* curriculum approval, so as to minimize disruption, confusion, and, most importantly, the problems that could arise if you miss the all important first few classes in any subject. If you find that you do need to make a change, please note that:

Changes made during first two weeks should be approved and discussed with the Dean in person. *Science students may not change curricula by logging onto ROSS or by visiting the Student Bureau.*

Changes that involve starting a new first-semester course will NOT be allowed after 5pm February 22nd*. Changes that involve starting a new second-semester course may be made at any time before the second week of the second semester.* However, you may *drop* a course at any time up until the last day of lectures in the relevant semester but this is done after consultation with the Dean.

Dropping a course should be regarded as a fairly drastic thing to do; please consult the Dean or Deputy Dean, and your Head of Department about this! ***In the Faculty of Science dropping a course or changing your curriculum in any way can only be done by visiting the Dean or Deputy Dean in person - not by using ROSS or sending e-mail to people, or by visiting the Student Bureau.***

Lectures, Practicals, Tutorials, Seminars, Tests, Examinations

Courses in the University, and in particular in the Faculty of Science, are given through a mixture of the following:

* **Lectures**: Most science courses have one lecture each day, which you are expected to attend. The lecture is the main vehicle used to put across course material. It takes a variety of forms depending on class size, the level of the course and the preference of the lecturer. It may be a formal address on an aspect of the subject or it may be a much more interactive discussion in which you the student are expected to participate. Material covered in lectures is seldom "revised", as it would be at school. Students are well advised to take notes of what is said, so that they can study these after the lecture is over.

* **Self Study:** It is very unlikely that you will gain a full understanding of the subject from just the lectures. It is VERY LIKELY that you will have to do some home work of one sort or another. This may be prescribed by the lecturer or may take the form of self initiated study in which you (alone or with a group of friends) revises the work covered.

* **Practicals**: Virtually all Science departments stress the value and necessity of conducting experiments in laboratory situations. For these the class may be divided into smaller groups, because few departments have a single laboratory large enough to house the entire class, or the funds to provide equipment for all the members to use simultaneously. Once the experiments have been done, students are usually expected to prepare reports on their findings. These are then assessed, and the marks form part of the student's **class record** for the year.

You are strongly urged to attend and to complete all your practical assignments. Not only is this compulsory for the purposes of earning a "DP certificate" - but often the most valuable learning experiences occur in the labs, where you get to know the staff and fellow students far better than in formal lectures.

* **Tutorials**: A lecture tends to be characterized by the lecturer doing all the talking, although most lecturers welcome questions during or after a lecture, provided that these are relevant to the material being discussed. In tutorials, on the other hand, the class is usually divided into smaller groups, each one under the supervision of a staff member or senior graduate student. Problems are usually posed some time before the tutorial commences; students are expected to have tried to solve them before the group meets, and the tutorial then takes the form of a discussion of the problems, with every member of the group encouraged to participate. Not all departments have tutorials

* **On-line material**: An increasing number of courses provide access to learning material using on-line computer systems (RU-Connected).

* **Seminars**: A seminar is also less formal than a lecture. It is often conducted by one of the members of the group discussing a particular topic that he or she has prepared. The other members of the group

are then invited to discuss the presentation - they will not, usually, have done as much preparation of their own beforehand.

* **Tests**: Departments hold regular tests to allow staff and students to measure their progress and understanding. Marks for tests usually form a component of the student's overall assessment for credit (**class record**), and attendance at tests is compulsory.

* **Test Marks**: will be kept by Departments but also in the Dean's office. Expect the Dean to contact you if you fail tests in several subjects.

* **Examinations**: The most crucial part of the assessment of a student is, of course, done through formal examinations. These are held in June and November, and it is impossible to obtain credit for a course unless you write them.

* **Final Assessment**: The final mark that you achieve will be a combination of your class record mark and you exam marks. The way these marks are combined will vary between departments and you will hear about this in lectures.

Most courses in the Faculty of Science involve four or five lectures per week, with possibly one or two tutorial periods, and in many cases one practical session. First year courses are limited to one practical session, four lectures and one tutorial or test per week.

Academic Status, Exclusions and Probation

Read these very important rules carefully as they will affect some of you in a negative way.

Academic Status

A BSc (all BSc degrees) student is classified as a "first year student" until six semester-credits are obtained, and is classified as a "third year student" only when registered for at least one third-year course - which is possible only after at least ten semester-credits have been gained.

You will NOT be allowed to start on a second-year course unless you have obtained at least six first-year semester-credits. Every year a small group of students appeal loudly against this rule (which does not apply in all faculties), but experience has shown that students who cannot obtain six semester-credits in their first year will simply be incapable of completing second year courses. In addition, timetable complications inevitably arise, and the degree structure ends up in a serious mess.

You should also note that a major subject cannot be taken along with more than two other courses. Some students who have done poorly think that they can mop up an enormous number of outstanding semester-credits in their final year, but, again, experience has shown that attempts to do so always end in complete disaster, and so there is now a strict ruling against allowing a student to become overloaded. **You can take a maximum of 6 semester credits courses in your final year.**

Exclusions

The University has a rule that is applied to students whose academic results are unsatisfactory, whereby they may be "**excluded**", and prevented from registering at Rhodes in a subsequent year. This is the rule known as "G.7", and in the case of the Science Faculty, it specifies that:

- You must have four semester-credits by the end of your first year of study;
- You must have eight semester-credits by the end of your second year of study;
- You must have twelve semester-credits by the end of your third year of study, and of these, four at least must be second-year or third-year credits;
- Besides this, you must make "satisfactory progress", which typically means that you should pass at least half of your courses each year - so passing four subjects well in your first year and then failing everything in second year means that you will have a total of eight semester-credits by the end of second year, but will not have made satisfactory progress.
- You may not take longer than five years to complete the degree.
- If you are enrolled on the Extended Studies Programme, at the end of the Foundation year of study you must have passed all courses with an average of 60% in the courses read in order to qualify for entry into mainstream courses in the following year.
- Students who perform very badly in June of year 1 may be advised to withdraw.

How are exclusions decided?

After the examinations have been marked, the situations of students who do not satisfy Rule G.7 are considered very carefully by the Dean and the Deputy Deans. They look at as many factors as they can - such as how they had performed in previous examinations, whether they were carrying full loads of courses, **whether advice had been given to such students earlier about reducing courses, whether this advice had been taken**, or whether they had earned all their DP certificates.

At the end of the year, the Dean and Deputy Dean submit recommendations on each student to a special meeting of the Faculty Board for their comment and approval. At the meeting, members of staff often ask for other factors to be considered - perhaps drawing attention to students who have performed badly because of having problems or illnesses earlier in the year.

Exclusion from the University is a last resort for the Dean and such decisions are NOT taken lightly.

If you repeatedly perform badly - in particular, if you fail to meet Rule G.7 at the end of your second or third year at Rhodes University, or if you have been excluded or on probation before - you will be treated with less sympathy.

Appeals against exclusion

If you are excluded, an exclusion letter will be sent to you by the Registrar. You then have the right to appeal against your exclusion, *in writing, either on the prescribed form or by completing and submitting a web-based form*, to the Registrar who will then discuss the case with the Dean, who, in turn, may recommend to the Registrar that you be readmitted "on probation". Since the cases have been very carefully considered by the Dean (and by the Board in December), the decision to exclude is usually, but not always, upheld. If you can provide a good motivation, the request may succeed, but in our experience, the motivations put forward are usually very weak. *Attention is drawn to the need to appeal in writing - verbal and telephonic appeals are unacceptable.*

Academic Probation

First time entering students who have earned three semester-credits in their first year with near misses in their other subjects - typically have an average of about 48% or so – may be allowed to have a second attempt at completing their first year "on probation" - meaning that if they do not achieve at least eight semester-credits by the end of the next year then they will definitely be excluded. Similarly, a student who passes first year, and fails everything in second year at, say, the 48% level, might be readmitted on probation because satisfactory progress is not being made. Students who have already taken four years, but still not completed their degrees, are automatically put on probation. Terms of probation will be decided by the Dean in discussion with the student.

More Rules and Legalese

This section attempts to summarize the various rules that apply to obtaining credit for Science degrees.

* **Assessment**

At the discretion of the Department, an undergraduate student's performance is assessed either

- entirely at the end of the academic year (no examples in the Science Faculty but this may apply to you if you chose a subject from the Humanities Faculty)
- 50% in June and 50% in November (aggregated 2-credit year-long courses; e.g. CEL 101 & BOT 102; HKE 201 & HKE 202; applies to most courses in the Science Faculty)
- entirely in June or November, when the course is finished (1-credit single semester courses; *e.g.* CSC 1L1 or CSC 112; MAT 1S)

"Assessment" here means the incorporation of class and practical records, as well as written examinations. The implication is that departments will, where applicable, compute a composite mark at the end of each semester. This form of continual assessment requires you to work consistently through the year. Do this well and you increase your chance of getting a good final mark. Where assessment is subject to external examination, June assessments should be regarded as provisional, since external examiners usually perform all their duties at the end of the year.

* **Full Credit**

Credit for any course requires that you score an overall mark of at least 50%. Passes are graded into Class 1, 2A, 2B or 3, which equate to marks of at least 75%, 70%, 60% or 50% respectively.

We stress that marks for practical and tutorial work tests and essays often count directly towards a student's result for a course as a whole. Details of contributions of class record to examination results, and of the number of examinations for each course are usually posted on Departmental notice boards or supplied to students in course handouts.

* **Aggregate credit**

In all subjects offered at a given level as a pair of semester-credit courses, if both semester-credits are not obtained, an aggregate of 50% in the pair may still be deemed equivalent to credit in a full 2-credit "aggregate pass" for that subject. **Credit for an aggregate pass also requires that you have met**

any adequate performance subminima imposed for each constituent. If you do not obtain credit in both components, but meet the requirements of an aggregate pass, you will have your academic transcript amended to show that an aggregated continuing credit (ACR) or aggregated non-continuing credit (NCR) has been achieved in the appropriate subject, as the case may be. However, note that credit will not be given for an aggregate course in *addition* to credit for one or more of its semester-credit components, and that if you do not achieve an aggregate pass, credit in any semester-credit course you have passed can still count towards the degree.

* Aggregated credit can only be given for components of a subject taken within a single academic year, and the calculation of aggregated credit will normally take place in December. This means that such credit will be based on the marks scored in June and November (or November and November if a supplementary for a June examination is written in November). You will not normally be able to get aggregated credit by combining marks for EAR 101 taken in 2009 and GOG 102 taken in 2011, for example.

* Aggregate course credit can only be given for two semester-credit courses offered within a single subject, except in Botany 1 (which is composed of an aggregate of semester-credit courses in Cell Biology and Botany), Zoology 1 (which is composed of an aggregate of semester-credit courses in Cell Biology and Zoology), Geography 1 (which is composed of an aggregate of semester-credit courses in Earth Science and Geography), Geology 1 (which is composed of an aggregate of semester-credit courses in Earth Science and Geology), and Physics 1E (which is composed of Physics 1E1 and Electronics Literacy 1E2).

* **DP certificates**

In most departments there is a minimum attendance and performance requirement, certainly for practical work, often including attending and writing all tests and essays. Before you are allowed to write the examination in a course, you must earn a DP ("Duly Performed") certificate. Such certificates are never actually issued in paper form, as it happens, so don't ask to see one! "Losing a DP" is the term given to being forbidden from continuing in a course, or from writing the examination, usually because you have not attended classes satisfactorily, or have done particularly badly in tests and assignments. This is viewed in a very serious light by the Board of the Faculty when considering your progress through the system. All Departments are free to set their own attendance and other requirements in this regard. A list of these should be issued to students in the Department, or published on the departmental notice boards. **Make sure that you understand these requirements, and make sure that you satisfy them, so as to prevent a lot of anguish and heartache later in the year.**

* **Adequate performance**

For any credit bearing course, the department offering it, and other departments requiring it, may publish a subminimum mark, which, if achieved, constitutes "adequate performance" in the course for the purposes of registration prerequisite requirements for later courses in such departments.

Such marks may vary between semesters, but will not normally be lower than 40% in the case of non-initial courses, or 35% in initial courses. Where departments impose such subminima on courses in their own subjects - for example where registration for GOG 202 requires adequate performance in GOG 201 - care is taken to set these at realistic levels, especially in the case of non-initial courses, where supplementaries are not normally offered.

* **Prerequisites and registrations**

At the discretion of a Department, prerequisite requirements may be imposed before you may register for a particular course. Similarly, such requirements may be imposed before you finally obtain credit for a given course.

Credit requirements will usually be stricter than registration requirements, which might stipulate "adequate performance" in an ancillary subject (or even at a lower level in the same subject) rather than "credit".

At the start of the year you would normally register for both components of a semesterized subject, unless you make it clear that you intend taking only one of the semester courses to obtain a single semester-credit, or to complete the outstanding component of a semesterized subject.

You may be allowed to register at any time until the end of the second week of the second semester for semester-courses held in the second semester in subjects for which you have not previously been registered (provided that you will meet the registration requirements for such courses). Such registrations will be at the discretion of the Dean, in consultation with the Head of the Department concerned. **Note that there are only a few such courses.**

* **Deregistration after July**

If you fail to perform adequately in the first semester of a subject, you will probably have your registration for any second semester component of that subject cancelled. For subjects that are not semesterized, this is taken to mean cancelling registration for the course as a whole that is, "losing a DP in June".

These decisions may sometimes be reversed, on appeal through the Head of Department to the Dean, who remains the final arbiter; the intention being to allow for an assessment of "overall performance" before a decision is reached.

* **Concessions**

As already noted, some subjects have strict rules about prerequisite ancillaries, and failure in an ancillary can in some cases hold up a student's major subject(s) for a year. In some cases relaxations of these rules are allowed, with the special permission of the Board of the Faculty, if the Heads of the Departments involved are willing to support the application. The onus is on the student to apply. This is done by discussing the matter with the Dean of Science at curriculum approval.

If you are repeating a course, you may find that the department will excuse you from attending some (or all) of the lectures and practicals. This is known as "getting an extended DP", but **this practice is not recommended.**

* **Supplementary examinations and Re-writes**

The pass mark for all courses in Science is 50%. Students who earn marks between 35% and 49% in first year subjects in June or between 45% and 49% in November are often (*but not automatically*) recommended by their Departments to be allowed to write a re-write examination in November (for courses narrowly failed in June) or a supplementary (Supp) exam in February (for courses narrowly failed in November), before the next year begins. The June qualifying mark is often lower than the November mark to accommodate students who might still be adjusting to the University environment in

their first semester. Occasionally the November qualifying mark is set below the norm of 45%, although it is usually above the June level. **The marks required to earn a re-write or a supp differ between departments; see tables on pages 61-74 for your departments.**

Sometimes an aggregate mark of 48% or 49% in both components of a first or second year course will earn you a "non-continuing pass". In such cases, credit will be given, but you may not proceed to the next level course in that particular subject unless you reattend and pass the course, or, in some first year subjects, write a supplementary examination. In first year, such supplementaries *are* automatic - provided that subminima have been met, and that the examination has already been set for other candidates who qualified for supplementary or aegrotat examinations.

* **You do not have the right to "appeal" for the award of supplementary examinations.**

* Recommending that a supplementary examination be awarded is done, in the first instance, by the Department.

* **Supplementary examinations are *not* simply awarded automatically once you have an aggregate or component mark of at least 45% (sometimes subminima have not been attained, for example).**

*** Subminima**

The final mark is often comprised of the class record, a practical exam and a theory exam. Some departments apply a subminimum mark (for example it may be 35%) to one or more of these components and if this subminimum is not met the student fails and may not even earn a re-write or supp. So, for example, it may be possible to get a final mark of 50% but fail the theory exam with less than 35%. In such a case the record would show % FSM and the student would not get a credit.

* Candidates who fail in June, but who score a mark that would allow them to obtain an aggregate pass if the second semester course is passed well enough, may sometimes choose *either* to write the re-write paper in that subject in November, *or* to take a chance of obtaining an aggregate pass.

* The Faculty Board has discretion over the final award of supplementary examinations. No restrictions are usually placed on the number of supplementary examinations that you will be allowed to write for first semester initial courses. For second semester courses and non-initial courses (where such supplementary exams may occasionally be offered) you must have obtained at least four semester-credits by November of your first year to qualify for any supplementaries for November examinations.

*** In the Faculty of Science, supplementary examinations are not awarded to students who have been excluded.**

* Supplementary examinations are almost never recommended for second and third year subjects in any Faculty.

*** Note that Supps are not normally awarded in the Humanities Faculty.** This may affect you if you take a subject from the Humanities.

* **Rewriting to improve marks**

Students in first-semester first year courses who *pass* in June but who wish to try to improve their mark - perhaps to qualify for scholarships - have been permitted to write the November re-write paper

for this purpose. You are free to *re-attend* a course and rewrite a subsequent "ordinary" examination. Some potential Honours students have been known to take this approach.

* **Aegrotat examinations**

If you are unable to attend an examination because of genuine ill-health, or for some other valid reason, such as the death of a member of your family, then you may be allowed to write another (equivalent) examination at a later time, known as an *aegrotat* examination. Applications to sit such examinations must be made *in writing* and *before the examination* to the Student Bureau, and must be supported by doctor's certificates or other proof that the request is genuine.

Answers to Common Questions

What is a "semester"?

The academic year is divided into two semesters. The first semester starts in February and ends with the examinations in June; the second semester starts in July and ends with the examinations in November.

What is a "dawnie" or "dawn patrol"?

The lectures that start at 07h45 each morning have been known by these terms to generations of Rhodes students. In fact, even in midwinter, 07h45 is quite a long time after sunrise, but tradition is Very Important!

What is "leave of absence"?

Many departments have strict rules about attending classes and handing in assignments. If you are ill, or have to be away from the University for any genuine reason, and so find yourself missing classes, you should apply for leave of absence from the head of each department in which you are studying. This is done on a standard form available from:

https://www.ru.ac.za/media/rhodesuniversity/content/registrar/documents/forms/LeaveofAbsenceApplicationForm.pdf

It is VERY IMPORTANT that when applying for an LOA, you follow the rules and ensure that your application is supported as required and submitted in good time.

What is an "extended DP"?

Sometimes a student who has failed a course is allowed to rewrite the examinations in the course in the following year, without actually attending all the lectures and practicals for a second time. This is known as "writing on an extended DP". Permission to do so is usually given only to students who cannot afford to attend the University again, perhaps because they have started a job before completing their degree properly. Applications for extended DPs must be made within two weeks of the start of a course. *It is our experience that attempts to complete courses in this way are, sadly, usually unsuccessful.*

What is an "academic transcript"?

This is a summary of the courses that a student has studied, and of the marks earned for each of these courses. If you need one, enquire at the Student Bureau.

What do the symbols on my transcript / result sheet mean?

Symbol	Meaning
Pass	
1	75-100%
2A	70-74%
2B	60-69%
3	50-59%
P	Pass (supp was passed)
3NC	3rd class pass with no right to continue with this subject
ACR	Aggregate pass for two semesters in the same subject
NCR	Aggregate pass but with NO right to continue with this subject
Fail	
F1	45-49%
F2	30-44%
F3	0-29%
F1S/F2S	Fail but with a re-write in bruary of the following year
F1N/F2N	Fail but with re-write in November of the same year.
FSM	Failed to meet a sub-minimum; no credit awarded
Other	
CR	Credit from another university in SA
CRX	Credit earned while on exchange as part of a recognised exchange programme
CRT	Credit on the basis of prior learning
DPR	DP refused and NOT allowed to write exam
DPP	DP refused for plagiarism
DNW	Absent from exam with no reason provided
AEG	Absent from exam with permission on medical or compassionate grounds. Allowed to write a supplementary exam in either November or January/February
PND	Pending – results not available for this course.

What is a "subminimum"?

Several departments assess students by adding together results from several tests, examinations, practicals and so on. It may not be sufficient simply to gain an overall average mark of 50% to pass - sometimes minimum marks must be obtained in some or all of the component parts of the assessment.

What does it mean to "obtain a distinction"?

If a student obtains a first class pass (75% or better, averaged over the various components) in a major subject, or for an Honours degree, then he or she is said to have earned a distinction in that subject, and the degree certificate records this.

What is a "merit bursary" or Fee Rebate?

If you obtain first class passes in all of your subjects you will get a 50% rebate on academic fees for your second year. This reduces to a 25% rebate if firsts are in three of four subjects and 12.5% for firsts in two of four subjects.

If the average mark for all your Rhodes exams in any year is 90% or greater (student taking a normal undergraduate lecture load), you will automatically get a full academic fee rebate.

What is "plagiarism"?

(This section is closely based on a document issued to students in the Department of Psychology, and their permission to incorporate it is gratefully acknowledged. Read the full University policy on plagiarism at:

http://www.ru.ac.za/media/rhodesuniversity/content/institutionalplanning/documents/Plagiarism.pdf

Plagiarism refers to the (unacceptable) practice of presenting as your own work material which has been written by someone else. Any use of material that is derived from the work of another person constitutes plagiarism, unless the source is clearly acknowledged. You will be guilty of plagiarism if, for example, you hand in an assignment under your own name which, either in part or as a whole,

*is copied from a document downloaded from a website;
*is copied from a published article or book chapter;
*is copied from an essay, computer program or practical report written by another student;
* has been written for you by someone else.

Of course, when you write an essay or report in an academic setting, it is normal - and often necessary - to draw on material written by other people, to the point where many students think that there is no harm in copying sentences from books and articles when composing essays and practical reports. However, in terms of the definition above, the use of even one sentence without acknowledgement constitutes plagiarism and is not acceptable. Thus it is important that you acknowledge the fact whenever you draw on other people's work. There are standard procedures for doing this - for example by citing a reference and providing details of the source in a reference list at the end of the assignment. You are expected to do this even where you do not quote directly from your source but merely express in your own words ideas or arguments which you have taken from that source. In addition, where you quote verbatim from a published source, you must put inverted commas round the quoted material and provide a page number. The only situation in which these rules do not apply strictly is in examinations written without access to books and other reference materials.

As a University student you are being trained to understand and observe the highest standards of ethics, integrity and professional practice in the writing of essays and reports. The University and its constituent Departments expects these high standards to be observed as a matter of course. Accordingly, Senate has adopted an overall policy towards the handling of plagiarism. In terms of this policy:

* Departments are encouraged to address the matter in their teaching and to train students in the correct procedures for acknowledging the sources of material used for assignments.

* Higher standards are expected as students progress through the University. The highest standards are expected of all post-graduates.

* Cases of plagiarism must be addressed by disciplinary procedures within the Department and at University level.

To implement this policy, a Department will (typically) have a Disciplinary Committee to deal with the problem of plagiarism. Where staff have evidence that students have plagiarized work, the matter will normally be referred to this Disciplinary Committee. Where the Committee concludes that plagiarism has occurred, it will make a ruling as to what disciplinary steps are appropriate. In terms of the Senate guidelines, these steps may range from giving a warning (for first time and minor offences), to imposing a mark penalty, and, in more serious cases, to withdrawing the student's DP.

In the case of second time alleged offenders in first year, or for any really serious cases, the Disciplinary Committee is **required** to refer the offence to a select subcommittee. After considering the evidence of the staff and the student, this Committee, in cases where guilt is established, will normally withdraw the DP of the offender for the subject in question, but might impose an even greater penalty such as a fine, rustication or even expulsion from the University.

You have been warned! Plagiarism is taken very seriously - don't do it!

Can I take more than the standard number of courses for a degree?

The simple answer is yes, although usually it is only above average students that do so. There are restrictions on the total number of courses that may be taken in a year - ten semester-credits in the case of a first year student, and six semester-credits in the case of a final year student. (In both cases this represents one more "subject" than the normal load). Provided that these restrictions are met, there is no extra charge for taking an extra course within a given year.

I only took Mathematics Literacy, What are my options?

Students who have taken Maths Literacy on the NSC are not allowed to attempt to study Mathematics, Chemistry, Computer Science, Statistics, or Physics as **major subjects**. The options, therefore, are to choose as major subjects Biochemistry, Botany, Entomology, Environmental Science, Geography, Geology, Ichthyology, Microbiology or Zoology. If you need to do a maths course, you may be advised to take MAT 1F or MAT 1S to prepare you for the required first year maths course.

Do I need to be concerned about the Natural Science Professions Act?

In a recent letter to the Registrar we were told that "professional registration of natural scientists has now been in existence for approximately two decades. The South African Council for Natural Scientific Professions (SACNASP) was established by an Act of Parliament and is responsible for the registration of all Professional Natural Scientists. In terms of Sections 18(2) and 20(1) of the Act, professional registration for all practising and consulting natural scientists is compulsory. Unregistered persons may not perform work identified for registered persons in Schedule 1 of the Act."

Quite what this means in practice is uncertain in a country with as severe skills shortages as ours, but in principle you might find that you are barred from certain jobs, in which a BSc or Honours is needed, if your degree does not pass the criteria of this body. You can find out more about SACNASP from our Faculty website, or from **http://www.sacnasp.org.za/**

What is the difference between doing a BSc (InfSys) degree and a BCom majoring in Information Systems?

The BSc (InfSys) degree affords the best opportunity to major in both Computer Science *and* Information Systems, and provide a student with the most intensive preparation for a general career in Information Technology in both technical and management components. The BCom degree provides considerably less technical content, but more "commercial" background in Management and Accounting and Law.

Can I try to get into the Pharmacy Faculty by doing an appropriate first year curriculum, and then transferring from Science to Pharmacy?

No, not easily. If you are determined to try, you will need to register for the following: CEL 101, ZOO 101, CHE 101 & 102, MAT 1S, In addition, register for a subject such as CSC 1L1 in the first semester. To complete the second semester, include BOT 102 and perhaps STA 1D. If you pass all of these subjects well, it may be possible for you to move to a BPharm year 1.

What if I want to take a combination of subjects that results in timetable clashes?

The lecture timetable has been carefully designed so that most subjects either clash "every time" or "not at all". For example, if you try to take Geography and Computer Science, you will find that the first year lectures clash exactly, so do the second year ones, and so do the third year ones. If you are taking some science subjects and some non-science subjects, you may find fewer clashes, but it is preferable to choose subjects that do not clash at all. **Indeed, the Dean will not allow you to register for courses that clash more than once a week**. If you really want to pursue curricula that result in serious clashes, then you will be advised to spend at least one extra year over the degree so as to find an arrangement that avoids clashes.

If I fail an exam, can I ask for my papers to be marked again?

No, but you can arrange to get a copy of your script from the Registrar.

What are my options if I fail very badly in the June examinations?

Unfortunately, every year a small but significant number of students fail so badly in June that there is no chance they can complete the year in November. Such students are dealt with as follows:

If the performance is very poor then they will be advised (not required) to withdraw. In addition, all such students will be required to meet with the Dean in the first week of term 3 and a revised curriculum will be developed.

Where can I consult old examination papers to help me prepare for examinations?

The library carries a collection of papers going back over the last three years, and many departments have more extensive archives; some old examination papers are now also available for perusal on the WWW at **http://www.ru.ac.za/library.** Remember that courses evolve over time - what may appear a fiendishly difficult question in an old paper may really be the effect of having attended a course that no longer covers that particular topic at all!

What is the earliest stage at which I may take second and third year courses?

Other Faculties have different rules, but Science students are not permitted to take any second year level courses until they have obtained at least six semester-credits of first year level courses, and they are not allowed to take any third year courses until they have obtained at least ten semester-credits. And, fairly obviously, one cannot take any second or third year level course without having obtained the prerequisite first or second year level credits in that subject.

I studied at another university before coming to Rhodes, and passed some courses there. Can I get credit for them towards my Rhodes degree?

Most departments at Rhodes are prepared to recommend that a student get credit for at least some *first year* courses passed elsewhere, provided that the course is also offered at Rhodes, and is deemed to cover essentially the same material as the Rhodes course, and at the same sort of level. You are unlikely to be granted a credit in Astronomy or Archaeology, for example, but you might well be allowed to count a UNISA or UCT credit in Chemistry or Mathematics. Finally, for a Rhodes degree to be earned, at least half of the semester-credits (including the major subjects) must have been earned at Rhodes University.

How do I find out what textbooks I shall need?

Most departments issue a list of these, display a list on their notice board, or announce them during the first lectures of a course. Don't rely on what other students tell you - the advice may be out of date, since textbooks change from year to year.

Where do I buy textbooks?

The best-known bookseller in Grahamstown that carries stocks of new Rhodes textbooks is Van Schaik Bookstore, just down the High Street from the Drostdy Arch. Sometimes you can buy second-hand textbooks from students who took the course in previous years, or from other booksellers like Fables, but do make sure that you get up-to-date books and editions!

Do I need to have my own computer to do a BSc (and in particular to do Computer Science or Information Systems)?

While it is useful to have your own one, it is not necessary. Rhodes has particularly good computer facilities, available to students around the clock. If you do acquire your own computer, try to make sure that it is compatible with one on campus.

Do I have to pay extra to use the computer facilities?

Students registered for Computer Science and Information Systems pay a small additional levy to provide funds to keep their laboratories at the cutting edge. The levy simply forms an extra part of their student fee for the year. While access to computers, to e-mail, to the World Wide Web, and to the news groups is free to all students, you will have to pay a small amount per page to use laser printers if you want to produce high quality printouts of essays. (Contact the Student Bureau for details of how to debit this to your student account.)

How do I get to start using the university's computers?

Almost immediately you complete your registration you will become a registered user of the systems, and be issued with an email address and a password.

Can I get help in learning to use a computer?

Introduction to ICT (CSC 1L1) is an in-depth literacy course that many students find useful -and it earns them credit. The student based Computer Users' Society (RUCUS) has its own server on the network, and runs orientation courses at regular intervals. Details of these can be found at the Society Fair, or from the secretaries in Computer Science.

Are there any restrictions on what I may do on the university's computers?

Naturally there are. You may not, for example, raid the files of other students, send obscene messages to the VC or even to the Dean, pretend to be anybody but yourself, make money by running systems on the university computers, or play games on the machines. These conditions are all explained in detail at **http://www.ru.ac.za/aup.**

I hear I can connect my own computer to the network. How do I do this?

The University offers a service called Student Networking details of which can be found at http://www.ru.ac.za/studentnetworking.

Still feeling lost?

I am having trouble adjusting to University life. Who can help me?

The Dean, Deputy Deans and Faculty Administrative Officer are all available to discuss problems with you. They are equipped to help with academic problems and although not trained counsellors, can listen to other problems. In addition for career guidance, see the Career Advisor. If you are having social or personal problems, make an appointment to see your warden, or the counsellors in the Counselling Centre. The SRC (Students' Representative Council) publishes an extremely valuable "Student Services Booklet" detailing where to find help on travel, medical care, psychological problems, financial aid, legal problems, security, and harassment. If you haven't yet done so, get a copy and *use* it!

Timetable Summaries

NOTE. The master copy of the timetable will always be the one on the web site. It is updated whenever changes are made unlike hard copies which are only updated once a year. ALWAYS confirm that your subjects do not clash on the web site.

http://www.scifac.ru.ac.za/wwwtime/timetable.php

The Science lecture timetable - summarized below - has been carefully designed so that most subjects either clash "all the time" or "not at all". For example, if you want to take Geography and Computer Science, you will find that the first year lectures clash exactly, as do the second year ones, and also the third year ones. If you are taking some science subjects and some non-science subjects, you may find fewer clashes, but it is preferable to choose subjects that do not clash at all. The Dean will not usually allow you to register for courses that clash more than once a week. If you want to pursue curricula that result in serious clashes, you will be advised to spend at least one extra year over the degree so as to design the degree structure to avoid clashes.

Note that some first year subjects - notably Economics, Psychology and Accounting - are offered in alternative timetable slots to help alleviate the clash problem. In the tables on the following pages, an asterisk * appears next to a subject that has alternative lectures so that it appears to be offered in more than one "group". The other alternatives for Accounting 1 do not fit the "patterns".

Please do this, as last minute changes to the published timetable sometimes occur; the online timetable checker will always be updated, but printed copies of the timetable in this handbook and in the University Calendar easily become out of date and misleading.

Timetable (Refer to the web site for the full and most up to date timetable.)

Group 1 Some or all of periods 1 2 3 4 5

Earth Science 101 (Sem 1)	Chinese 2	Accounting 3
CSC 112 (Sem 2)	Biochemistry 2	Chemistry 3
Geography 102(Sem 2)	* Economics 2	Environmental Science 3
Legal Theory 1	Entomology 2	Mathematical Statistics 3
* isiXhosa 1N	Geology 2	English 3
Computer Science 101 & 102	* Information Systems 201/202	Sociology 3
* Psychology 1	Anthropology 2	Indus. & Economic
* Commercial Law 1	Philosophy 2	Sociology 3
Drama 1		

Group 2 –Some or all of periods 2 3 4 5 1

Cell Biology 101 (Sem 1)	Pharm. Anat. & Phys. 2	Computer Science 3
CSC 112 (Sem 2)	Accounting 2	Chinese 3
* Economics 1	Chemistry 2	* Economics 3
English 1	Environmental Science 2	Geography 3
Zoology 101 (Sem 2)	Mathematical Statistics 2	Legal Theory 3
* Sociology 1	Journalism 2	Microbiology 3
		Drama 3
		Ichthyology 3
		isiXhosa 3

Group 3 – Some or all of periods 3 4 5 1 2

Botany 102 (Sem 2)	Computer Science 2	Organizational
BSc1 augmented	Geography 2	Psychology 3
Human Kinetics & Ergonomics 1	Legal Theory 2	Maths 3
Management 1	Microbiology 2	Psychology 3
Maths 1S	Drama 2	Zoology 3
Maths 1L	Ichthyology 2	* Economics 3
Physics 1	isiXhosa 2	CSC 303
* Stats 1D (Sem 2)		
* Theory of Finance (Sem 1)		
Linguistics 1		
* Sociology 1		
Accounting 1		

Group 4 – Some or all of periods 4 5 1 2 3

* isiXhosa 1N	* Economics 2	Botany 3
Introduction to ICT (CSC 1L1;Sem 1)	* Information Systems 201	Human Kinetics &
Anthropology 1	Organizational Psychology 2	Ergonomics 3
Geology 102	Maths & Applied maths 2	Management 3
Physics 1E	Psychology 2	Physics 3
Statistics 101 & 102	Zoology 2	Linguistics 3
* Statistics 1D (Sem 2)	Chinese 2	
* Theory of Finance (Sem 1)		
Accounting 112 (Sem 2)		

Group 5 – Some or all of periods 5 1 2 3 4

* Economics 1	Management 2	Applied Mathematics 3
Chemistry 1	Botany 2	Biochemistry 3
Journalism 1	Human Kinetics & Ergon 2	Entomology 3
German 1	Physics 2	Geology 3
Chinese 1	Linguistics 2	Information Systems 3
Philosophy 1	Sociology 2	Philosophy 3
Latin 1	Industrial Sociology 2	French 3
		Anthropology 3

Group 6 Some or all of periods 6 6 6 6 6

Maths 1C, Maths 1C1, Commercial Law 1

Afternoon lectures

* Psychology 1; Journalism 1; French 1; History 1; English 2; Classical Civilization 1

*Indicate subjects with alternative lecture slots

Lecture timetable

Subjects not shown here have been omitted only because they do not usually form part of a Science degree, or because their timetable is only decided after Registration. A complete timetable appears at **http://scifac.ru.ac.za/timetable**

An entry in this table like 5,6 means a double period; an entry like 5/6 means that the same class is offered twice - in period 5 or 6.

Alphabetically by Subject		Mon	Tue	Wed	Thu	Fri	Practical Days
ACC 1	Accounting 1	¾	1/3	4/5			Mon/Tue/Thu/Fri
ACC 2	Accounting 2	2	3	4	5		Tue/Wed/Thu
ACC3	Accounting 3		2	3	4	5,6	Tue/Wed/Thu
ANT 1	Anthropology 1	4	5	1		3	
MAP 3	Applied Maths 3	5,6	1	2	3	4	Mon
BCH 2	Biochemistry 2	1	2	3	4	5,6	Fri
BCH 3	Biochemistry 3	5,6	1	2	3	4	Mon
BOT 102	Botany 102 (Sem 2)	3	4	5	1	2	Mon/Wed
BOT 2	Botany 2	5	1	2	3	4	Mon
BOT 3	Botany 3	4	5	1	2	3	Tue
CEL 101	Cell Biology (Sem 1)	2	3	4	5	1	Mon/Thu/Fri
CHE 1	Chemistry 1	5	1	2	3	4	Mon/Tue/Wed/Thu/Fri
CHE 2	Chemistry 2	2	3	4	5,6	1	Thu
CHE 3	Chemistry 3	1	2	3	4	5,6	Fri
CHI 1	Chinese 1	5	1	2	3	4	
CHI 2	Chinese 2	4	5	1	2	3	
CHI 3	Chinese 3	2	3	4	5,6	1	
CSC 1S	Computer Skills 1S	3,4	5,6	5,6		3,4	Thu
CSC 1L1	CSC 1L1 - Intro to ICT (Sem 1)	4	5		2	3	Tue/Wed
CSC 112	CSC 112 - (Sem 2)	2	3	4	5	1	Mon/Tue/Wed
CSC 101	Computer Science 101 (Sem 1)	1	2	3	4	5	Mon/Tue/
CSC 102	Computer Science 102 (Sem 2)	1	2	3	4	5	Mon/Tue
CSC 2	Computer Science 2	3	4	5	1	2	Wed
CSC 3	Computer Science 3	2	3	4	5	1	Thu
CSC 303	CSC 303	3	4	5	1	2	Wed
EAR 101	Earth Science 101 (Sem 1)	1	2	3	4	5	Mon/Tue/Fri
ECO 1	Economics 1	2/5		2/4	3/5	¼	Tue (tutorials)
ECO 2	Economics 2	¼	2/5	1/3	2/4		Fri (tutorials)
ECO 3A	Economics 3 (some)	3	3	4	1	1	Wed/Fri (tutorials)
ECO 3B	Economics 3 (others)	2	4	5,6		2	Wed/Fri (tutorials)
ENG 1	English 1	2	3	4			
ENT 2	Entomology 2	1	2	3	4	5,6	Fri
ENT 3	Entomology 3	5,6	1	2	3	4	Mon
ENV 2	Environmental Science 2	2	3	4	5,6	1	Thu
ENV 3	Environmental Science 3	1	2	3	4	5,6	Fri
FRE 1	French 1	8	9	6	7		
GOG 102	Geography 102 (Sem 2)	1	2	3	4	5	Mon/Tue/Fri
GOG 2	Geography 2	3	4	5	1	2	Wed
GOG 3	Geography 3	2	3	4	5	1	Thu
GLG 102	Geology 102 (Sem 2)	4	5	1	2	3	Tue/Wed
GLG 2	Geology 2	1	2	3	4	5,6	Fri
GLG 3	Geology 3	5,6	1	2	3	4	Mon
HIS 1	History 1	7	8	9	6		
HKE 1	Human Kinetics & Ergon. 1	3	4	5		2	Fri
HKE 2	Human Kinetics & Ergon. 2	5	1	2		4	Mon
HKE 3	Human Kinetics & Ergon. 3	4	5,6	1	2	3	Tue
ICH 2	Ichthyology 2	3	4	5	1	2	Wed
ICH 3	Ichthyology 3	2	3	4	5,6	1	Thu
INF 201	Information Systems 201	¼	2/5	1/3	2/4	3/5	Mon//Wed/Thu/Fri
INF 202	Information Systems 202	1	2	3	4	5	Mon/ Wed/Thu/Fri
INF 3	Information Systems 3	5,6	1	2	3	4	Mon
ICSM 1	Intro. to Science Concepts	5,6	1,2	2,3	2,3	5,6	Mon
JRN 1	Journalism 1	9	6	7	8		

LAW 1	Legal Theory 1		2	3	4	5	Mon/Tue/Wed/Thu
LAW 2	Legal Theory 2	3	4	5	1	2	
LAW 3	Legal Theory 3	2	3	4	5,6	1	
MAN 1	Management 1		4/5		½	2/3	Wed (tutorials)
MAN 2	Management 2	5		2	3	4	Mon (tutorials)
MAN 3	Management 3	4	5,6	1	2	3	Tue (tutorials)
MAT 1C	Mathematics 1C1 & 1C2	6	6	6	6	6	Mon/Tue/Thu
MAT 1S	Mathematics 1S (Sem 1)	3	4	5	1	2	Mon/Tue/Thu
MAT 1F	Mathematics Literacy – all year	2	3	4	5	1	Wed
MAM 2	Maths & Applied maths 2	4	5	1	2	3	Tue
MAT 3	Mathematics 3	3	4	5,6	1	2	Wed
MST 2	Mathematical Statistics 2	2	3	4	5	1	Thu
MST 3	Mathematical Statistics 3	1	2	3	4	5	Fri
MIC 2	Microbiology 2	3	4	5	1	2	Wed
MIC 3	Microbiology 3	2	3	4	5,6	1	Thu
ORG 2	Organizational Psychology 2	4	5	1	2		Mon/Tue
ORG 3	Organizational Psychology 3	3	4	5	1	2	Wed/Thu
PHI 1	Philosophy 1 (Intro to Philo)	5		2	3	4	
PHI 2	Philosophy 2		2	3	4	5	
PHI3	Philosophy 3	7,8	1	2	3	4	
PHY1	Physics 1	3	4	5	1	2	
PHY 1E1	Phys 1E1 (Physics) (Sem 1)	4	5	1	2	3	Wed/Fri
PHY 1E2	Phys 1E2 (Electronics Sem 2)	4	5	1	2	3	Mon/Tue
PHY 2	Physics 2	5,6	1,6	2,6	3	4	Mon/Tue
PHY 3	Physics 3	4	5,6	1,6	2,6	3	Mon
PSY 1	Psychology 1		2/9	3/6	4/7		Tue
PSY 2	Psychology 2	4	5	1	2		Fri (tutorials)
PSY 3	Psychology 3	3	4	5	2	2	Mon/Tue
SOC 1	Sociology 1	2/3	¾	4/5	1		Wed/Thu
STA 101	Statistics 101 (Sem 1)	4	5	1	2	3	
STA 102	Statistics 102 (Sem 2)	4	5	1	2	3	Mon/Tue
STA 1D	Statistics 1D (Sem 2)	3/4	4/5	1/5	1/2	2/3	Tue
TOF 1	Theory of Finance 1 (Sem 1)						
ZOO 101	Zoology 101 (Sem 2)	2	3	4	5	1	Thu/Fri
ZOO 2	Zoology 2	4	5	1	2	3	Mon/Thu/Fri
ZOO 3	Zoology 3	3	4	5	1	2	Tue Wed

Practicals in the following second and third year subjects are held on fixed days, *probably* on those shown.

Monday	Tuesday	Wednesday	Thursday	Friday
Botany 2 HKE 2 Physics 2 Applied Maths 3 Biochemistry 3 Entomology 3 Geology 3 Information Systems 3	Maths & Applied maths 2 Zoology 2 Botany 3 HKE 3 Physics 3	Computer Science 2 Geography 2 Ichthyology 2 Microbiology 2 Mathematics 3 Zoology 3	Chemistry 2 Environmental Sci 2 Mathematical Stats 2 Computer Science 3 Geography 3 Ichthyology 3 Microbiology 3	Biochemistry 2 Entomology 2 Geology 2 Chemistry 3 Environmental Sci 3 Mathematical Stats 3

Practicals in the following first year subjects are held on fixed days, *probably* on those shown.

Subject	Monday	Tuesday	Wednesday	Thursday	Friday
CEL 101	X			X	X
BOT 102	X		X		
ZOO 101	X			X	X
CHE 1	X	X	X	X	X
CSC 1	X	X		X	X
CSC 1L1	X	X		X	X
CSC 112	X	X	X	X	X
EAR 101	X	X			X
GOG 102	X	X			X
GLG 102		X	X		
HKE 1				X	X
MAT 1C				X	
MAT 1S	X	X	X		
PHY 1E	X	X		X	X
PHY 1			X		X
STA 1		X			
STA 1D				X	X
TOF 1				X	X
PSY 1					X
LAW 1	X	X	X		
MAN 1			X		
ACC 1	X	X		X	X

Useful Contact Addresses and Telephone Numbers

Dean of Science: Professor Tony Booth, Schönland Building, Botany Department
Phone: (046) 603-7232 e-mail: dean.science @ru.ac.za

Deputy Dean of Science: Professor Jo Dames, Department of Biochemistry and Microbiology; e-mail: j.dames@ru.ac.za

Deputy Dean of Science: Mrs Joyce Sewry, Department of Chemistry; e-mail: j.sewry@ru.ac.za

Faculty Administrative Officer: Ms Lusanda Klaas, Schönland Building, Botany Department
Phone: (046) 603-7232 e-mail: scisec@ru.ac.za

Science Extended Studies Programme Coordinator: Dr Karen Ellery: ADC
Phone: (046) 603-8864 FAX: (046) 622-8587 e-mail: k.ellery@ru.ac.za

Manager, Academic Administration: Contact Registrar's Division
Phone: (046) 603-8219 FAX: (046) 603-8127 e-mail: academicadmin@ru.ac.za

Registrar: Dr Adele Moodly, Registrar's Division
Phone: (046) 603-8101 FAX: (046) 603-8127 e-mail: registrar@ru.ac.za

Admissions Officer: Mrs Desiree Wicks, Registrar's Division
Phone: (046) 603-8276 FAX: (046) 603-8300 e-mail: admissions@.ru.ac.za

Counselling Centre: Ms Christine Lewis. 046 603-7070; http://www.ru.ac.za/counsellingcentre e-mail: s.green@ru.ac.za

Financial Aid Administrator, Registrar's Division
Phone: (046) 603-8248 FAX: (046) 603-8300 e-mail: finaid@ru.ac.za

Student Careers Adviser: Ms Christine Lewis, Careers Centre
Phone: (046) 603-8180 FAX: (046) 603-8197 e-mail: Christine.lewis@ru.ac.za

Director: Student Affairs: Ms Nomangwane Mrwetyana, Phone: (046) 603-8181 email: n.mrwetyana@ru.ac.za

SciFest: http://www.scifest.org.za

If you have Internet access: visit the University Home Page: http://www.ru.ac.za

Visit the Science Faculty WWW Home Pages at: http://www.ru.ac.za/facultyofscience

For further information on any particular subject, please write a letter or email to "The Dean of Science" or to "The Head of Department" of that subject, Rhodes University, Grahamstown 6140.

SciFest 2019 - the National Science Festival
http://www.scifest.org.za/

As Science students at Rhodes University you are indeed fortunate. Not only do you have the privilege of going to hear some of the best lecturers in the country every day as you take our degree courses, you have the opportunity once a year of spending a week listening to some of the best lecturers in the world!

The Science Festival, which is now in its 23nd year, is a week-long, spectacular collection of lectures, demonstrations, workshops, exhibitions, quizzes, films, sunset shows and much more will take place on your doorstep from 6 – 12 March. Many of the events are held on campus or in the Museums near Eden Grove; many others are held in the Settlers' Monument.

While it may be difficult to fit in lectures or a visit to the Monument around your other study commitments, we strongly encourage you to try and get to one or two of the special lectures.

With more than 500 events there is something of interest for everyone. More importantly, all these folk share the ability to explain what they do, and are fired up with enthusiasm to encourage us all to take a new look at the world around us.

You can find out more about SciFest 2019 from many sources - watch out for the posters that will soon start to appear, and look for the press releases in our local papers and the (free) Festival newspaper, SciCue, produced by our Journalism department.

Don't miss SciFest!

Summary of subjects offered as majors in the BSc and BSc (InfSys) degrees

This summary is intended to give the essence of the relationships between courses offered at various levels in the subjects that can be taken for the BSc and BScS degrees. Where an aggregated credit can be obtained by achieving an average mark of at least 50% in the two related semester-credit courses, this is shown in the row denoted **Aggregated**, and the subminima that must be obtained in each component are shown in the row marked **Agg sub-min**. The sub-minimum needed before the Department will recommend that a student may write a supplementary examination is shown in the row marked **Supp sub-min**. The row marked **Prerequisite** shows what other courses offered in the same department must have been passed before you may register for a particular course. Other (ancillary) prerequisites may be found summarized on page 18.

NOTE: FULL DETAILS OF ALL SUBMINIMA AND OTHER REQUIREMENTS, INCLUDING SUBMINIMA FOR INDIVIDUAL PAPERS CAN BE FOUND IN THE CALENDAR WHICH CONTAINS THE OFFICIAL SET OF RULES. ONCE YOU HAVE REGISTERED FOR SUBJECTS YOU ARE ENCOURAGED TO MAKE YOURSELF FAMILIAR WITH ALL THE RULES.

Accounting

is a subject in which two semester-credits at each level are needed to continue to the next level. Both parts of the first year course must be passed before you may proceed to second year, and both parts of the second year course must be passed before you may proceed to third year. Accounting 3 is not semesterized. Accounting 112 is an alternative to Accounting 102 for students who do not wish to continue to Accounting 2.

	Accounting 1		**Accounting 2**		**Accounting 3**	**Accounting 1F/1G**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Full year course*	*Year 1*	*Year 2*
Courses	ACC 101	ACC 102/112	ACC 201	ACC 202	ACC 3 *not semesterized*	*Sem 1*	
Aggregated	ACC 1		ACC 2		No	ACC 1F	ACC 1G
Aggregated sub-minimum	40%	40%	45%	45%	N/A	ACC 1F + ACC 1G = ACC 1	
Supplementary sub-minimum	35%	45%	45%	45%	45%		
Prerequisite		ACC 101 35%	ACC 101 50% ACC 102 50% ACR ACC 1	ACC 201 35%	ACC 201 50% ACC 202 50% ACR ACC2	45% 50%	45% ACC 1F

Biochemistry

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Credit in Chemistry 1 is required before you may register for Biochemistry 2.

	Biochemistry 2		**Biochemistry 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*
Courses	BCH 201	BCH 202	BCH 301	BCH 302
Aggregated	BCH 2		BCH 3	
Aggregated sub-minimum	40%	40%	40%	40%
Supplementary sub-minimum	No supps	No supps	No supps	No supps
Prerequisite		BCH 201 40%	BCH 2 50%	BCH 301 40%

Botany

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Prerequisites for majoring in Botany are Cell Biology 101, Botany 102, Zoology 101 and Chemistry 1. Credit in Cell Biology 101 and Botany 102 (or an aggregate credit for Botany 1) is required before you may register for Botany 2. Students are required to obtain at least 40% for their theory examinations in order to obtain credit for Bot 201, 202, 301 or 302. CEL 101 acts as the first semester course for Botany 1 and for Zoology 1. Students who take both Botany 1 and Zoology 1 can earn only 3 semester credits from the combination CEL 101 + BOT 102 + ZOO 101; such students are required to take an extra semester credit in another subject to make up the total needed for a degree.

	Botany 1		**Botany 2**		**Botany 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses	CEL 101	BOT 102	BOT 201	BOT 202	BOT 301	BOT 302
Aggregated	BOT 1		BOT 2		BOT 3	
Aggregated sub-minimum	45%	45%	45%	45%	45%	45%
Supplementary sub-minimum	35%	45%	No supps	No supps	No supps	No supps
Prerequisite		CEL 101 35%	CEL 101 50% BOT 102 50% ACR BOT 1	BOT 201 40%	BOT 2 50%	BOT 301 40%

Chemistry

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Students who get from 20% to 39% in THEORY for June in their first year are transferred to Chem 1R1, rewrite Chem 1R1 in November and, if successful, continue with Chem 1R2 in the first semester of the next year to write Chem 1R2 in June. Those failing Chem 1R2 in June move into Chem 102 in July. Two ancillary semester-credits, normally comprised of one full first year course in any of Physics, Maths, Computer Science or Statistics is required for a student to major in Chemistry.

	Chemistry 1		**Chemistry 2**		**Chemistry 3**		**Chemistry 1R**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses	CHE 101	CHE 102	CHE 201	CHE 202	CHE 301	CHE 302	CHE 1R1	CHE 1R1
Aggregated	CHE 1		CHE 2		CHE 3		CHE 1R2	No
Aggregated sub-minimum	40% theory & 45% CHE 101	40% theory & 45% CHE 102	40% theory	40% theory	40% theory	40% theory	No	
Supplementary sub-minimum	40% theory	40% theory	No supps	No supps	No supps	No supps		No supps
Prerequisite		CHE 101 theory paper 40 %	CHE 1 50%	CHE 1 50%	CHE 2 50%	CHE 2 50%	No supps CHE 1R1 50%	CHE 101 20%

Computer Science

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Credit in MAT 1C1 or MAT 1C is required for a student to major in Computer Science. CSC 303 is an optional extra semester credit, it does not replace either CSC 301 or CSC 302.

	Computer Science 1		**Computer Science 2**		**Computer Science 3**		**Introduction to ICT**	**CSC 112**	**CSC 303**
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*	*Op. extra*
Courses	CSC 101	CSC 102	CSC 201	CSC 202	CSC 301	CSC 302	CSC 1L	CSC112	
Aggregated	CSC 1 (NCR)		CSC 2		CSC 3		No	No	
Aggregated sub-minimum	40%	40%	40%	40%	40%	40%	N/A	N/A	CSC
Supplementary sub-minimum	40%	40%	No supps	No supps	No supps	No supps	35%	35%	303
Prerequisite		CSC 101 40% in same year OR credit for	CSC 101 50%	CSC 201 40%	CSC 2 50%	CSC 2 50%			No N/A No supps
			CSC 102 50%						

		CSC 101							CSC 201 Must be in 3rd year

Economics

is a subject in which the equivalent of two semester-credits at one level are needed before you may continue to the next level. Economics 3 is subdivided further; students have to register for a choice of topics.

	Economics 1		**Economics 2**		**Economics 3**
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*
Courses	ECO 101	ECO 102	ECO 202	ECO 201	*Semester 2*
Aggregated	ECO 1		ECO 2		Choice of 4 topics
Aggregated sub-minimum	40%	40%	45%	45%	ECO 3
Supplementary sub-minimum	35%	45%	45%	45%	No module under 40%
Prerequisite			ECO 1 50%		45% 45%
					ECO 2 50% ECO 2 50%

Entomology

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Prerequisites for majoring in Entomology are Cell Biology 101, Botany 102, Zoology 101 and Chemistry 1. Credit in Cell Biology 101 and Zoology 101 (or an aggregate credit for Zoology 1) is required before you may register for Entomology 2.

	Entomology 2		**Entomology 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*
Courses	ENT 202	ENT 201	ENT 302	ENT 301

Aggregated	ENT 2		ENT 3	
Aggregated sub-minimum	45%	45%	45%	45%
Supplementary sub-minimum	No supps	No supps	No supps	No supps
Prerequisite	CEL 101 50% ZOO 101 50% ACR ZOO 1	ENT 202 40%	ENT 2 50%	ENT 302 45%

Environmental Science

is a two year major subject. Credit is required in Geography 1 and in either Anthropology 1, Botany 1, Economics 1, Geology 1 or Zoology 1 before a student may start ENV 2. For each semester, there is a subminimum mark of 35% for the both the class record and for each exam. Students getting less than 35% will get an FSM, will not get a credit and will not be able to aggregate with a mark for the other semester.

	Environmental Science 2		**Environmental Science 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*
Courses	ENV 201	ENV 202	ENV 301	ENV 302
Aggregated	ENV 2	ENV 2	ENV 3	ENV 3
Aggregated sub-minimum	40%	40%	40%	40%
Supplementary sub-minimum	No supps	No supps	No supps	No supps
Prerequisite	See above	ENV 201 40%	ENV 2	ENV 301 40%

Geography

is a subject in which credit in part of a year is needed before you may continue to the matching part in the next level. Credit in both second year semesters is normally needed before you may enrol for Geography 3 as a major subject. For each semester, there is an overall subminimum AND subminima for the class record and the exams which is the same as the overall subminimum. Students getting less than 40% in either of the exams OR the class record will get an FSM irrespective of the final mark, will not get a credit, will not be able to aggregate with a mark for the other semester and will not get a supp.

EAR 101 acts as the first semester course for Geography 1 and for Geology 1.

	Geography 1		**Geography 2**		**Geography 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses	EAR 101	GOG 102	GOG 201	GOG 202	GOG 301	GOG 302

Aggregated Aggregated sub-minimum Supplementary sub-minimum Prerequisite	GOG 1 40% 35%	 40% 40% EAR 101 35% OR, a pass in matric geography or equivalent	GOG 2 40% No supps EAR101 50% GOG 102 50% (OR GOG 1 60%)	 40% No supps EAR 101 50% GOG102 50% (OR GOG1 60%)	GOG 3 45% No supps GOG 201 50% GOG 202 50%	 45% No supps GOG 201 50% GOG 202 50%

Geology

is a subject in which credit in only part of a year (but preferably both) is needed before you may continue to the next level. Credit in Chemistry 101 and one other semester credit in Chemistry, Maths or Physics is required for a student to major in Geology. **Students are ENCOURAGED to take a full year of Chemistry 1 in their first year.**

	Geology 1		**Geology 2**		**Geology 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses Aggregated Aggregated sub-minimum Supplementary sub-minimum Prerequisite	EAR 101 GLG 1 40% 35%	GLG 102 40% 45% EAR 101 35% and met the subminimum requirements for both theory and practical papers	GLG 201 GLG 2 40% No supps GLG 1 50% Has at least attended CHE 101	GLG 202 40% No supps GLG 201	GLG 301 GLG 3 40% No supps GLG 2 OR credit in either GLG 201 or 202 and adequate performance in the other AND credit in at least CHE 101 and/or CHE 102 or a credit in maths or physics.	GLG 302 40% No supps GLG 301

Human Kinetics and Ergonomics

is a subject in which two semester-credits at one level are needed before you may continue to the next level.

	Human Kinetics & Ergonomics 1	**Human Kinetics & Ergon. 2**	**Human Kinetics & Ergon. 3**

Courses	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Aggregated	HKE 101	HKE 102	HKE 201	HKE 202	HKE 301	HKE 302
Aggregated sub-minimum	HKE 1		HKE 2		HKE 3	
Supplementary sub-minimum	40% 40%	40% 40%	40% No supps	40% No supps	40% No supps	40% No supps
Prerequisite		HKE 101 40%	HKE 1 50%	HKE 201 40%	HKE 2 50%	

Ichthyology

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Prerequisites for majoring in Ichthyology are Cell Biology 101, Zoology 101, Botany 102, Chemistry 1 and two semester credits of Maths, Computer Science (not CSC 1L) or Statistics. Credit in Cell Biology 101 and Zoology 101 (or an aggregate credit for Zoology 1) is required before you may register for Ichthyology 2.

	Ichthyology 2		**Ichthyology 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*
Courses	ICH 201	ICH 202	ICH 301	ICH 302
Aggregated	ICH 2		ICH 3	
Aggregated sub-minimum	40%	40%	40%	40%
Supplementary sub-minimum	No supps	No supps	No supps	No supps
Prerequisite	CEL 101 50% ZOO 101 50% ACR ZOO 1	ICH 201 40%	ICH 201 50% ICH 202 50%	ICH 301 40%

Information Systems

is a subject in which both semester-credits at one level are needed before you may continue to the next level. Credit in Introduction to Information Systems (CSC 112) is required before you may register for Information Systems 2. Aggregated passes require an overall subminimum of 45% in the course failed, with further subminima of 40% for each of theory and practicals. INF 203 is an alternative to INF 202 that can be taken by BCom students, but not by BSc students.

	Information Systems 2	**Information Systems 3**
	Semester 1	*Semester 1*
Courses	*Semester 2*	*Semester 2*

Aggregated Aggregated sub-minimum Supplementary sub-minimum Prerequisite	INF 201 INF 202 INF 2 40% both theory & pracs No supps No supps CSC 112 and INF 201 40% Must be in 2nd year	INF 301 INF 302 INF 3 40% both theory & pracs No supps No supps INF 201 50% INF 301 INF 202 50% or INF 2 ACR

Journalism

is not semesterized. Journalism 1, 2 and 3 are 2-credit courses.

Legal Theory

Legal Theory 1 consists of two one-semester courses, Introduction to Law (first semester) and Foundations of Law (second semester). Legal Theory 2 consists of four one semester courses (Legal Interpretation and Constitutional Law A in the first semester, and Constitutional Law B and Customary Law in the second semester). There are six one semester courses in Legal Theory 3 (Law of Persons, Law of Property A and Law of Contract A in the first semester, and Law of Life Partnerships, Law of Property B and Law of Contract B in the second).

Management *(NOTE: the prerequisites required to major in MAN makes it difficult to include as a major subject in a BSc)*

is a subject in which both semester-credits at one level are needed before you may continue to the next level. Both parts of the first year course must be passed before you may proceed to second year, and all parts of the second year course must be passed before you may proceed to third year. You must have credit in Accounting 1 to proceed with MAN2, and credits in ECO1, MAT1C or TOF and STA1D to proceed with MAN3.

	Management 1		**Management 2**		**Management 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses	MAN 101	MAN 102	MAN 212+214	MAN 211+213	MAN 311+313	MAN 314+312
Aggregated	MAN 1		MAN 2		MAN 3	MAN3
Aggregated sub-minimum	45%	45%	40%/45%*	40%/45%*	40%/45%*	40%/45%*
Supplementary sub-minimum	35%	45%	45%	45%	45%	45%
Prerequisite		MAN 101 35% in that year	MAN 1 50% ACC1	MAN 1 50% ACC 1	MAN 2 50% ECO1, MAT1	

					OR TOF AND STA1D	

Aggregation of modular papers is permitted for MAN2 and MAN3 provided that the papers constituting the semester for each year are read in the same year and that a subminimum of 45% is obtained for at least two papers with credits being obtained for the remaining two papers; OR that a sub-minimum of 40% is obtained for one paper with credits obtained for the remaining three papers.

Mathematics

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Students who perform poorly in the first semester of MAT 1C may be required to attend a remedial programme that will help them improve their performance. Mathematics 1L is an Extended Studies Programme course open to students who have taken mathematical literacy on the NSC or Standard Grade maths at matric level. MAT 1C is the prerequisite for MAM 2.

NOTE: Normally, students who have taken Mathematical Literacy on the NSC will not be allowed to register for Maths 1C or MAT 1S BUT can take MAT 1F

	Maths 1 C		**Maths & Applied maths 2**		**Maths 3**		**Applied maths 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses	MAT 1C1	Mat 1C2	MAM 201	MAM 202	MAT 301	MAT 302	MAP 301	MAP 302
Aggregated	MAT 1C		MAM 2		MAT 3		MAP 3	
Aggregated sub-minimum	40%	40%	40%	40%	40%	40%	40%	40%
Supplementary sub-minimum	40%	40%	No supps	No supps	No supps	No supps	No supps	No supps
Prerequisite	See note above	MAT 1C1 40%	MAT 1C 50%	MAM 201 40%	MAM 2 50%	MAM 2 50%	MAM 2 50%	MAM 2 50%
	Maths 1L		**Single Service Courses**					
	Full year course		*Semester 1*	*Semester 1*				
Courses	MAT 1F		MAT 1S	TOF				
Aggregated			No	No				
Aggregated sub-minimum	N/A		No	N/A				
Supplementary sub-minimum	45%		40%	35%				
Prerequisite	See note above		See note above					

NOTE: The third year maths modules now have individual codes. It is essential that students register correctly for the modules of their choice.

Microbiology

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Chemistry 1, and Cell Biology 101 (or an aggregate pass in BOT 1 or ZOO 1) are required before you may register for Microbiology 2.

	Microbiology 2		**Microbiology 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*
Courses	MIC 201	MIC 202	MIC 301	MIC 302
Aggregated	MIC 2		MIC 3	
Aggregated sub-minimum	40%	40%	40%	40%
Supplementary sub-minimum	No supps	No supps	No supps	No supps
Prerequisite	CEL 101 50% ZOO 101/BOT 101 50% ACR BOT 1/ZOO 1	MIC 201 40%	MIC 2 50%	MIC 301 40%

Music

Except for Ethnomusicology 1 and Music, Health and the Brain (MHB), courses are not semesterised. Various options are available at each level in Music, Ethnomusicology, and Instrumental Music Studies. These options will be explained to students on registration.

Physics

is a subject in which two semester-credits at one level are needed before you may continue to the next level. A prerequisite to register for Physics 2 is Mathematics 1C. To major in Physics with Electronics you are required to obtain credit in Maths & Applied Maths 2, including the modules in Advanced Calculus and Linear Algebra. Physics 1E1 (Elementary Physics for Pharmacy) and 1E2 (Electronics Literacy) can be taken as independent courses.

	Physics 1		**Physics 2**		**Physics 3**		**Physics 1E**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses	PHY 101	PHY 102	PHY 201	PHY 202	PHY 301	PHY 302	PHY 1E1	PHY 1E2
Aggregated	PHY 1		PHY 2		PHY 3			
Aggregated sub-minimum	40%	45%	40%	45%	40%	45%	40%	45%
Supplementary sub-minimum	40%	45%	No supps	No supps	No supps	No supps	40%	45%
Prerequisite		PHY 101 40% or PHY 1E1	PHY 1 50%	PHY 201 50%	PHY 2 50%	PHY 301 40%		

		70%						

Psychology / Organizational Psychology

Psychology 1 is not a semesterized course; neither are Psychology 2, Psychology 3, Organizational Psychology 2 or Organizational Psychology 3. Organizational Psychology 2 and 3 are two-credit courses, which have Psychology 1 as a prerequisite.

Statistics (Mathematical Statistics)

is a subject in which three semester-credits at one level are needed before you may continue to the next level. Credit in Mathematics 1C and Statistics 102 are required for a student to major in Mathematical Statistics or Applied Statistics. Grade 12 Mathematics (not maths literacy) is required before you may register for first year Statistics courses. **Note that Maths 1C and STA 102 are prerequisites for MST 201 and not STA 101 or STA 1D.**

	Statistics 1		**Statistics 1D (130)**					
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*				
Courses	STA 101	STA 102		STA 1D				
Aggregated	STA 1							
Aggregated sub-minimum	40%	40%		N/A				
Supplementary sub-minimum	35%	45%		45%				
Prerequisite		**STA 101 40%**						
			Maths Stats 2		**Maths Stats 3**		**Applied Stats 3 (not in 2013)**	
			Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses			MST 201	MST 202	MST 301	MST 302	AST 301	AST 302
Aggregated			MST 2		MST 3		AST 3	
Aggregated sub-minimum			40%	40%	40%	40%	40%	40%
Supplementary sub-minimum			No supps	No supps	No supps	No supps	No supps	No supps
Prerequisite			See note above	MST 201 35%	MST 2 >60% and see note above	MST 301 35%	MST 2 50%	MST 301 35%

NOTE. Students must pass MST 2 with an aggregate mark of 60% or more to enter MST 3.

Zoology

is a subject in which two semester-credits at one level are needed before you may continue to the next level. Prerequisites for majoring in Zoology are Cell Biology 101, Botany 102, Zoology 101 and Chemistry 1. Credit in Cell Biology 101 and Zoology 101 (or an aggregate credit for Zoology 1) is required before you may register for Zoology 2.

	Zoology 1		**Zoology 2**		**Zoology 3**	
	Semester 1	*Semester 2*	*Semester 1*	*Semester 2*	*Semester 1*	*Semester 2*
Courses	CEL 101	ZOO 101	ZOO 201	ZOO 202	ZOO 301	ZOO 302
Aggregated	ZOO 1		ZOO 2		ZOO 3	
Aggregated sub-minimum	45%	45%	45%	45%	45%	45%
Supplementary sub-minimum	35%	45%	No supps	No supps	NO supps	No supps
Prerequisite		CEL 101 35%	CEL 101 50% ZOO 101 50% ACR ZOO 1	ZOO 201 40%	ZOO 2 50%	ZOO 301 40%