**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. **Pairs of semester-courses.** Most courses in the faculty are found in semester-long pairs of courses that can been aggregated together if is one is failed but not too badly. 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 National Qualifications Framework (NQF) credits. If one semester is passed and the other failed but not too badly such that the average is 50% or more, this is known as an aggregated pass. In this case NQF credits for each semester are earned by the student. 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 MAM 101 and not MAM 102. **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 1C2) and MAT 1S1. Exams are written at the end of the semester and a pass earns NQF credits. Please note that these courses have code with a letter in the middle “1C1”, “1S1”, “1E2” etc.
3. Stand-alone courses that are taught in the second semester (STA 1C2, 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).*
4. **Year-long courses.** Here, the full course covers a full academic year without being broken into semesters and include the extended studies subjects such as MAT 1F, ISCM 1F and CSC 1S. Many subjects within the Humanities fall into this category too.
5. **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 and Microbiology 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 or letters. 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). In the case of year-long courses there is a number and a letter such as MAT 1F and in stand-alone semester-courses the middle letter denotes the targeted audience. For example, MAT 1S1 is a single-semester course in mathematics at the first-year level, aimed at “Science students and held in the first semester. Another example is STA 1C2, a first-year level semester-long course in Statistics offered for “C” commerce students in the second semester.

**NQF levels and credits**

The Higher Education Qualifications Framework, part of the National Qualifications Framework (NQF), provides higher education institutions in South Africa with a single coherent nationally co-ordinated higher education system with a key objective to enable the description of certificates, diplomas and degrees so that students can transfer between programmes and higher education institutions. Part of this systems is to give qualifications different academic levels. For example, your National Senior Certificate is an NQF level 4 qualification. By the time you graduate with a Bachelor’s degree you would have passed through levels 5 and 6 with third year majors being at the NQF level 7. An Honours degree is at the NQF level 8, a Master’s degree at level 9, and a doctorate at level 10.

Each qualification requires a minimum amount to time to complete it and this time is converted into NQF credit values. A Bachelor’s degree takes a minimum of three years to complete at 1200 hours per year (30 weeks at 40 hours per week). An NQF credit is then 10 hours of work. This time is further divided into academic levels of progressive higher levels of study. Therefore, each full year-long course at the first year is worth 300 hours or 30 NQF credits, while this doubles to 600 hrs or 60 credits in third year. The number of courses however decrease as you specialise, so you are required to take the equivalent of four year-courses in first year and two in your third year.

**NOTE:**

**If you are not working at least 40 hours per week for every academic week of the year you will most probably fail some or all of your courses. The hours worked include a substantial amount of self-study, which increases with each academic year. It is strongly recommended to exceed the minimum of 40 hours per week and extend it to 50 hours instead – this is 10 hours of solid academic work from Monday to Friday.**

**Science subjects**

The following subjects are offered by departments within the Faculty of Science. Course-specific details can be found in the departmental entries. Normally, some subjects are offered in the first semester (S1), second semester (S2) or are offered throughout the year (Y). Subminimum requirements for supplementary examinations and aggregation of two semester-courses are also provided.

|  |
| --- |
| **Department of Biochemistry & Microbiology** |
| *Subject code* | *Mnemonic* | *Subject name* | *Semester* | *NQF level* | *NQF**Credits* | *Supplementary**subminimum* | *Aggregation subminimum* |
| 5004201 | BCH 201 | Biochemistry 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 5004202 | BCH 202 | Biochemistry 202 | S2 | 6 | 20 |
| 5004301 | BCH 301 | Biochemistry 301 | S1 | 7 | 30 |
| 5004302 | BCH 302 | Biochemistry 302 | S2 | 7 | 30 |
| 5601201 | MIC 201 | Microbiology 201 | S1 | 6 | 20 |
| 5601202 | MIC 202 | Microbiology 202 | S2 | 6 | 20 |
| 5601301 | MIC 301 | Microbiology 301 | S1 | 7 | 30 |
| 5601302 | MIC 302 | Microbiology 302 | S2 | 7 | 30 |
| **Department of Botany** |
| 5902101 | CEL 101 | Cell Biology 101 | S1 | 5 | 15 | 35% | 45% |
| 6002102 | BOT 102 | Botany 102 | S2 | 5 | 15 | 45% |
| 6002201 | BOT 201 | Botany 201 | S1 | 6 | 20 | No supplementary examinations offered |
| 6002202 | BOT 202 | Botany 202 | S2 | 6 | 20 |
| 6002301 | BOT 301 | Botany 301 | S1 | 7 | 30 |
| 6002302 | BOT 302 | Botany 302 | S2 | 7 | 30 |
| **Department of Chemistry** |
| 5001101 | CHE 101 | Chemistry 101 | S1 | 5 | 15 | 40% Theory examination | 45% with at least 40% for the theory examination |
| 5001102 | CHE 102 | Chemistry 102 | S2 | 5 | 15 |
| 50011R1 | CHE 1R1 | Chemistry 1R1 | S2 | 5 | 15 | No supplementary examinations offered |
| 50011R2 | CHE 1R2 | Chemistry 1R2 | S1 | 5 | 15 |
| 5001201 | CHE 201 | Chemistry 201 | S1 | 6 | 20 | 40% |
| 5001202 | CHE 202 | Chemistry 202 | S2 | 6 | 20 |
| 5001301 | CHE 301 | Chemistry 301 | S1 | 7 | 30 |
| 5001302 | CHE 302 | Chemistry 302 | S2 | 7 | 30 |

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| **Centre for Higher Education Research, Teaching & Learning** |
| 51011B0 | CSC 1S | Computer Skills for Science | Y | 5 | 15 | No supplementary examinations offered | None |
| 6601100 | ISCM 1F | Introduction to Scientific Concepts & Methods | Y | 5 | 30 |
| **Department of Computer Science** |
| 5101101 | CSC 1L1 | Introduction to ICT | S1 | 5 | 15 | 35% | None |
| 5101112 | CSC 112 | Problem Solving with Computers | S2 | 5 | 15 |
| 51011P3 | CSC 101 | Computer Science 101 | S1 | 5 | 15 | 40% | 40% |
| 51011P4 | CSC 102 | Computer Science 102 | S2 | 5 | 15 |
| 5101201 | CSC 101 | Computer Science 201 | S1 | 6 | 20 | No supplementary examinations offered |
| 5101202 | CSC 202 | Computer Science 202 | S2 | 6 | 20 |
| 5101301 | CSC 301 | Computer Science 301 | S2 | 7 | 30 |
| 5101302 | CSC 302 | Computer Science 302 | S1 | 7 | 30 |
| **Department of Environmental Science**  |
| 2602201 | ENV 201 | Environmental Science 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 2602202 | ENV 202 | Environmental Science 202 | S2 | 6 | 20 |
| 2602301 | ENV 301 | Environmental Science 301 | S1 | 7 | 30 |
| 2602302 | ENV 302 | Environmental Science 302 | S2 | 7 | 30 |
| **Department of Geography** |
| 26011G1 | EAR 101 | Earth Science 101 | S1 | 5 | 15 | 35% | 40% |
| 2601102 | GOG 102 | Geography 102 | S2 | 5 | 15 |
| 2601201 | GOG 201 | Geography 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 2601202 | GOG 202 | Geography 202 | S2 | 6 | 20 |
| 2601301 | GOG 301 | Geography 301 | S1 | 7 | 30 |
| 2601302 | GOG 302 | Geography 302 | S2 | 7 | 30 |

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| **Department of Geology** |
| 5201102 | GLG 102 | Geology 102 | S2 | 5 | 15 | 35% | 45% |
| 5201201 | GLG 201 | Geology 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 5201202 | GLG 202 | Geology 202 | S2 | 6 | 20 |
| 5201301 | GLG 301 | Geology 301 | S1 | 7 | 30 |
| 5201302 | GLG 302 | Geology 302 | S2 | 7 | 30 |
| **Department of Human Kinetics & Ergonomics** |
| 2207101 | HKE 101 | Human Kinetics & Ergonomics 101 | S1 | 5 | 15 | 40% | 40% |
| 2207102 | HKE 102 | Human Kinetics & Ergonomics 102 | S2 | 5 | 15 |
| 2207201 | HKE 201 | Human Kinetics & Ergonomics 201 | S1 | 6 | 20 | No supplementary examinations offered |
| 2207202 | HKE 202 | Human Kinetics & Ergonomics 202 | S2 | 6 | 20 |
| 2207301 | HKE 301 | Human Kinetics & Ergonomics 301 | S1 | 7 | 30 |
| 2207302 | HKE 302 | Human Kinetics & Ergonomics 302 | S2 | 7 | 30 |
| **Department of Ichthyology & Fisheries Science** |
| 6201201 | ICH 201 | Ichthyology 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 6201202 | ICH 202 | Ichthyology 202 | S2 | 6 | 20 |
| 6201301 | ICH 301 | Ichthyology 301 | S1 | 7 | 30 |
| 6201302 | ICH 302 | Ichthyology 302 | S2 | 7 | 30 |
| **Department of Mathematics** |
| 54011T0 | TOF 1F | Theory of Finance Foundation | Y | 5 | 15 | No supplementary examinations offered | None |
| 54010Z0 | TOF 1C1 | Theory of Finance for Commerce | S1 | 5 | 15 | 40% | None |
| 540101S | MAT 1S1 | Mathematics for Science | S1 | 5 | 15 | 40% | None |
| 54011L1 | MAT 1F | Mathematics Foundation | Y | 5 | 15 | No supplementary examinations offered | None |
| 540101A | MAM 101 | Mathematics 101 | S1 | 5 | 15 | 40% | 40% |
| 540101B | MAM 102 | Mathematics 102 | S2 | 5 | 15 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 5401203 | MAM 201 | Mathematics and Applied Mathematics 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 5401204 | MAM 202 | Mathematics and Applied Mathematics 202 | S2 | 6 | 20 |
| 5401311 | MAT 311 | Mathematics 311 Algebra | S1 | 7 | 18 | No supplementary examinations offered | 40% but 50% is required for two of the four prescribed subjects for MAT 3 or MAP 3  |
| 5401313 | MAT 313 | Mathematics 311 Real Analysis | S1 | 7 | 18 |
| 5401315 | MAT 315 | Mathematics 311 Topics in Mathematics | S2 | 7 | 18 |
| 5401316 | MAM 311 | Mathematics MAM 311 Complex Analysis | S2 | 7 | 18 |
| 5411311 | MAP 311 | Applied Mathematics 311 Numerical Analysis | S1 | 7 | 18 |
| 5411312 | MAP 312 | Applied Mathematics 311 Dynamical Systems | S2 | 7 | 18 |
| 5411314 | MAP 314 | Applied Mathematics 311 Partial Diff Equations | S1 | 7 | 18 |
| **Department of Physics & Electronics** |
| 57011Z1 | PHY 1E1 | Elementary Physics | S1 | 5 | 15 | 40% | None |
| 5701Z2 | PHY 1E2 | Electronics Literacy | S2 | 5 | 15 | 45% | None |
| 5701101 | PHY 101 | Physics 101 | S1 | 5 | 15 | 40% | 40% |
| 5701102 | PHY 102 | Physics 102 | S2 | 5 | 15 | 45% | 45% |
| 5701201 | PHY 101 | Physics 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 5701202 | PHY 202 | Physics 202 | S2 | 6 | 20 | 45% |
| 5701301 | PHY 301 | Physics 301 | S1 | 7 | 30 | 40% |
| 5701302 | PHY 302 | Physics 302 | S2 | 7 | 30 | 45% |

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| **Department of Statistics** |
| 55041D0 | STA 1C2 | Statistics for Commerce | S2 | 5 | 15 | 35% | None |
| 7001121 | STA 1P1 | Statistics for Pharmacy | S1 | 5 | 15 | 35% | None |
| 5504101 | STA 1S1 | Statistics for Science | S1 | 5 | 15 | 35% | None |
| 5504102 | MST 102 | Mathematical Statistics 102 | S2 | 5 | 15 | 45% | None |
| 5501201 | MST 201 | Mathematical Statistics 201 | S1 | 6 | 20 | No supplementary examinations offered | 40% |
| 5501202 | MST 202 | Mathematical Statistics 202 | S2 | 6 | 20 |
| 5501301 | MST 301 | Mathematical Statistics 301 | S1 | 7 | 30 |
| 5501302 | MST 302 | Mathematical Statistics 302 | S2 | 7 | 30 |
| **Department of Zoology & Entomology** |
| 5801101 | ZOO 102 | Zoology 102 | S2 | 5 | 15 | 45% |  |
| 5801201 | ZOO 201 | Zoology 201 | S1 | 6 | 20 | No supplementary examinations offered |
| 5801202 | ZOO 202 | Zoology 202 | S2 | 6 | 20 |
| 5801301 | ZOO 301 | Zoology 301 | S1 | 7 | 30 |
| 5801301 | ZOO 302 | Zoology 302 | S2 | 7 | 30 |
| 6101201 | ENT 201 | Entomology 201 | S1 | 6 | 20 |
| 6101202 | ENT 202 | Entomology 202 | S2 | 6 | 20 |
| 6101301 | ENT 201 | Entomology 301 | S1 | 7 | 30 |
| 6101302 | ENT 302 | Entomology 302 | S2 | 7 | 30 |

**Non-science subjects**

Non-science subjects comprise all other undergraduate subjects currently offered in the Faculties of Commerce, Humanities and Law.

**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** | **Corequisites** (normally taken in first year but required before degree will be awarded) (School maths requirement if relevant) |
| Applied Mathematics | MAM 101 + MAM 102 | MAM 2 | MAP 3 | 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 102 |
| Chemistry | CHE 101 + CHE 102 | CHE 2 | CHE 3 | MAM 1, or MAM 101 / MAT 1S1 + STA 1S1/STA 1C2/MST 102 |
| Computer Science | CSC 101 + CSC 102 | CSC 2 | CSC 3 | Any one of MAM 101 (or MAM 1), MAT 1S1, STA 1S1, STA 1C2, MST 102 (Must have Maths at >60% on NSC or equivalent)  |
| Economics | ECO 101 + ECO 102 | ECO 2 | ECO 3 | None |
| Entomology | CEL 101 + ZOO 102  | 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 + one other from CHE 102, MAM 101 or PHY 101, MAT 1S1, STA 1S1, STA 1C2, MST 102 |
| Human Kinetics & Ergonomics | HKE 101 + HKE 102 | HKE 2 | HKE 3 | None |
| Ichthyology | CEL 101 + ZOO 102  | ICH 2 | ICH 3 | CHE 1, BOT 102 plus any two semester courses in Mathematics, Statistics, Theory of Finance or Computer Science (CSC 101, 102 or 112) |
| Information Systems | CSC 112 | INF 2 | INF 3 | None |
| Mathematics | MAM 101 + MAM 102 | MAM 2 | MAT 3 | None (Must have Maths at >60% on NSC or equivalent) |
| Mathematical Statistics | MAM 101 + MAM 102 +MST 102 | MST 2 | MST 3 | None (Must have Maths at >60% on NSC or equivalent) |
| Microbiology | CHE 1 + CEL 101 (or BOT 1 or ZOO 1) | MIC 2 | MIC 3 | None |
| Physics | PHY 101 + PHY 102 | PHY 2 | PHY 3 | MAM 1 and MAM 2 (taken in 2nd year) (Must have Maths at >60% on NSC or equivalent) |
| Zoology | CEL 101 + ZOO 102 | 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)** |
| 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 MAM 1 or TOF 1C1 & STA 1C2 |
| Music (in various forms) | MUS 1ETH 1IMS 1 | MUS 2ETH 2IMS 2 | MUS 3ETH 3IMS 3 | None |
| Psychology | PSY 101 and PSY 102 | PSY 2 | PSY 3 | None |
| Organizational Psychology | PSY 101 and PSY 102 | ORG PSY 2 | ORG PSY 3 | None |

\*Available in a BScS degree only as Management and its co-requisites comprise 10 non-science non-semester courses.

**Timetabling**

Pages 19 and 20 summarise the timetable of Science subjects and the most common non-Science subjects taken by Science students in their degrees, either as major subjects or subjects that build towards a strong multidisciplinary degree.

There are 16 possible major subjects offered by the faculty and over a dozen more offered by departments from the Faculties of Law and Humanities. However, there are unfortunately only 6 lecture slots per day because afternoons are reserved for practicals. Therefore, the timetable will not permit certain combinations of subjects. Most of these combinations don’t make sense anyway.

**Note: when planning your curriculum always keep an eye on the timetable.**

**Timetable**

All courses in each row happen at the same time and WILL clash, while different academic years are in the three columns.

|  |
| --- |
| **Group 1 Some or all of periods 1 2 3 4 5** |
| Earth Science 101\* CSC 112Geography 102Legal Theory 1Computer Science 101 & 102\* Psychology 1\* Commercial Law 1Drama 1\* Management 1 |  Chinese 2 Biochemistry 2\* Economics 2 Entomology 2 Geology 2\* Information Systems 201/202 Anthropology 2 Philosophy 2  | Accounting 3Chemistry 3Environmental Science 3Mathematical Statistics 3English 3Sociology 3Indus. & Economic Sociology 3 |
| **Group 2** –**Some or all of periods 2 3 4 5 1** |
| Cell Biology 101\* CSC 112\* Economics 1English 1Zoology 102\* Sociology 1TOF 1FMaths 101 |  Pharm. Anat. & Phys. 2 Accounting 2 Chemistry 2 Environmental Science 2 Mathematical Statistics 2 Journalism 2 | Computer Science 3Chinese 3\*Economics 3 Geography 3 Legal Theory 3 Microbiology 3 Drama 3 Ichthyology 3  |
| **Group 3 – Some or all of periods 3 4 5 1 2** |
| Botany 102BSc1 augmentedHuman Kinetics & Ergonomics 1Maths 1S1Maths 1FPhysics 1\* Theory of Finance (TOF 1C1)Linguistics 1\* Sociology 1Accounting 1 and 112 | Computer Science 2Geography 2Legal Theory 2Microbiology 2Drama 2Ichthyology 2 | Organizational Psychology 3Applied Maths 3Psychology 3Zoology 3\* Economics 3CSC 303 |
| **Group 4 – Some or all of periods 4 5 1 2 3** |
| Introduction to ICT (CSC 1L1)Anthropology 1Geology 102Physics 1EStatistics 1S1Statistics 1C2Mathematical Statistics 102\* Theory of Finance (TOF 1C1)\* Management 1 | \* Economics 2\* Information Systems 201 Organizational Psychology 2 Maths & Applied maths 2 Psychology 2 Zoology 2 Chinese 2 | Botany 3Human Kinetics & Ergonomics 3Management 3Physics 3Linguistics 3 |

|  |
| --- |
| **Group 5 – Some or all of periods 5 1 2 3 4** |
| **\*** Economics 1 Chemistry 1 Journalism 1German 1 Chinese 1 Philosophy 1 Latin 1 | Management 2Botany 2Human Kinetics & Ergon 2Physics 2Linguistics 2Sociology 2Industrial Sociology 2 | Mathematics 3Biochemistry 3Entomology 3Geology 3 Information Systems 3Philosophy 3French 3 |
| **Group 6 - Some or all of periods 6 6 6 6 6** |
| Maths 102, Commercial Law 1 |
| **Afternoon lectures** |
| **\*** Psychology 1; Journalism 1; French 1; History 1; English 2; Classical Civilization 1 |

\*Indicates subjects with alternative lecture slots

Be aware that while Anthropology 1 and 2 o no clash with certain Science subjects such as Geography of Environmental Science, Anthropology 3 is no scheduled on a diagonal and creates hard clashes with Science subjects.

## 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 interests**, and in such a way that you will develop a real passion for what you are doing, and 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** and the degree is taken over a minimum of **three years**. To complete a Bachelor’s degree you will require **360 NQF credits** of which at least **120 credits must be at the NQF level 7** (third year level). These are your two majors.

In the first year you will take 8 semester courses, at least 6 of which should belong to year-long courses will make up 120 NQF credits. The remaining 2 semester courses may be ancillary courses such as STA 1S1 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-courses which will typically be three, year-long second year courses at the NQF level 6 such as MAM 2, HKE 2, BOT 2 and so on. These will count 120 NQF credits.

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) and these will count 120 NQF credits.

Two examples of the classic BSc are shown below.

The first is for someone with an interest in the biological and earth sciences. The superscripts refer to the lecture periods such that you can see that no courses clash.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** | **CEL 101**2 (15) | **ZOO 102**2 (15) | **CSC 1L1**4 (15)  | **BOT 102**3 (15) | **CHE 101**5 (15) | **CHE 102**5 (15) | **EAR 101**1 (15) | **GOG 102**1 (15) | (120) |
| **Year 2** | **ZOO 201**4 (20) | **ZOO 202**4 (20) | **ENT 201**1 (20) | **ENT 202**1 (20) | **CHE 201**2 (20) | **CHE 202**2 (20) |  |  |  (120) |
| **Year 3** | **ZOO 301**3 (30) | **ZOO 302**3 (30) | **ENT 301**5 (30) | **ENT 302**5 (30) |  |  (120) |

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 102 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, statistical and physical sciences. The superscripts refer to the lecture periods such that you can see that no courses clash.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** | **MAM 101**2 (15) | **MAM 102**6 (15) | **STA 1S1**4 (15) | **MST 102**4 (15) | **PHY 101**3 (15) | **PHY 102**3 (15) | **CSC 101**1 (15) | **CSC 102**1 (15) |  (120) |
| **Year 2** | **MAM 201**4 (20) | **MAM 202**4 (20) | **MST 201**2 (20) | **MST 202**2 (20) | **PHY 201**5 (20) | **PHY 202**5 (20) |  |  |  (120) |
| **Year 3** | **MAT 301**3 (30) | **MAT 302**3 (30) | **MST 301**1 (30) | **MST 302**1 (30) |  |  (120) |

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. MAM 1 (MAM 101 & MAM 102) and MST 102 are the required first year courses for MST 3

**NOTE: 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 but over 4 years – Rhodes’ “flexible” BSc**

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 180 NQF 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.

|  |
| --- |
| First Semester |
| CEL 101Augmented | EAR 101Augmented | CHE 101 |



**PASS ALL June exams**

**FAIL one or more June exams**

|  |  |  |
| --- | --- | --- |
| Second Semester |  | Second Semester |
| ZOO 102 | BOT 102 | CHE 102 | GOG 102 |  | CHE 1R1 | ZOO 102 | GOG 102 |



Should complete in 4 years

Should complete in 3 years

These curricula must be developed in conjunction with the Dean.

**(C)The BSc with anon-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 still comprise at least 360 semester credits. Semester courses offered by the Faculty of Science are worth 20 NQF credits each while in other faculties they are 15 credits each.** In this degree an additional 15 credit course is required so that there are 125 NQF credits in year 2.

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:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** | **LAW 1**1 (30) | **CHE 101**5 (15) | **CHE 102**5 (15) | **CEL 101**2 (15) | **ZOO 102**2 5 (15) | **PHY 1E1**4 (15) | **BOT 102**3 (15) |  (120) |
| **Year 2** | **LAW 2**3 (30) | **BCH 201**1 (20) | **BCH 202**1 (20) | **CHE 201**2 (20) | **CHE 202**2 (20) | **STA 1S1**4 (15) |  |  (125) |
| **Year 3** | **LAW 3**2 (60) | **BCH 301**5 (30) | **BCH 302**5 (30) |  |  (120) |

NOTE: CHE 1 is the prerequisite for BCH 2

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** | **PSY 101**1 (15) | **PSY 102**1 (15) | **HKE 101**3 (15) | **HKE 102**3 (15) | **CEL 101**2 (15) | **ZOO 102**2 5 (15) | **CHE 101**5 (15) | **CHE 102**5 (15) |  (120) |
| **Year 2** | **PSY 201**4 (15) | **PSY 202**4 (15) | **HKE 201**5 (20) | **HKE 202**5 (20) | **BOT 201**3 (20) | **BOT 202**3 (20) | **CSC 112**1,2 (15) |  |  (125) |
| **Year 3** | **PSY 301**3 (30) | **PSY 302**3 (20) | **HKE 301**4 (30) | **HKE 302**4 (30) |  |  (120) |

**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 is intended for students who wish to become computer specialists in technical, commercial or industrial environments. The normal degree structure consists of at least 370 NQF 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-courses 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 + ACC 102 or ACC 112)
6. Statistics (STA 1C2 or STA 1S1 or MST 102, or MST 201+202 if MST 102)
7. Mathematics (MAM 101 or MAM 101 & MAM 102 or MAT 1S1)
8. Electronics Literacy (PHY 1E2).

The curriculum for the first 3 years for is as follows and sums to 370 credits:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** |
| **Year 1** | **CSC 101**1 (15) | **CSC 102**1 (15) | **ACC 101**3 (15) | **ACC 102/112**3 (15) | **MAN 101**4 (15) | **MAN 102**4 (15) | **ECO 101**5 (15) | **ECO 102**5 (15) | **MAM 101**2 (15) | **CSC 112**2 (15) |
| **Year 2** | **CSC 201**3 (20) | **CSC 202**3 (20) | **INF 201**1 (15) | **INF 202**1 (15) | **STA 1S1**4 (15) | **PHY 1E2**4 (15) |  |
| **Year 3** | **CSC 301**2 (30) | **CSC 302**2 (30) | **INF 301**5 (30) | **INF 302**5 (30) |  |

Students are required to obtain at least 8 of these 10 semester-courses 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 60 NQF credits towards the 360 NQF credit 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.

An example of a 390 NQF credit BScF curriculum with **all** Science subjects from years 2 onwards. While it is possible to not take BOT 202 to make the degree a 370-credit degree it is advised to have a 3rd second year subject for its flexibility in majors in the third year. The additional work in your third year will be worth it later.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** | **MAT 1F**3 (15) | **CSC 1S**1 and 2 (15) | **ISCM 1F**4 and 5 (30) | (60) |
| **Year 2** | **EAR 101**1 (15) | **GOG 102**1 (15) | **CEL 101**2 (15) | **BOT 102**3 (15) | **CHE 101**5 (15) | **CHE 102**5 (15) | (90) |
| **Year 3** | **GOG 201**3 (20) | **GOG 202**3 (20) | **ENV 201**2 (20) | **ENV 202**2 (20) | **BOT 201**5 (20) | **BOT 202**5 (20) | (120) |
| **Year 4** | **GOG 301**2 (20) | **GOG 302**2 (30) | **ENV 301**1 (30) | **ENV 302**1 (30) |  |  | (120) |

An example of a 370 NQF credit BScF curriculum with a **non-Science major** from years 2 onwards because second-year non-Science semester-courses are only 15 NQF credits requiring an extra 15 NQF Science semester course. The degree now totals 365 NQF credits.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** | **MAT 1F**3 (15) | **CSC 1S**1 and 2 (15) | **ISCM 1F**4 and 5 (30) | (60) |
| **Year 2** | **PSY 101**1 (15) | **PSY 102**1 (15) | **HKE 101**3 (15) | **HKE 102**3 (15) | **CEL 101**2 (15) | **ZOO 102**2 (15) | (90) |
| **Year 3** | **PSY 201**4 (15) | **PSY 202**4 (15) | **HKE 201**5 (20) | **HKE 202**5 (20) | **EAR 101**1 (15) | **GOG 101**1 (15) | (100) |
| **Year 4** | **PSY 301**3 (20) | **PSY 302**3 (30) | **HKE 301**4 (30) | **HKE 302**4 (30) |  |  | (120) |

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

**(A) The classic BSc degree**(3-year degree, 360 NQF credits with all Science subjects)

Your subjects will fit into the classic 3-year BSc grid a copy of which is below. Additional blanks are on page 35.

Blank curriculum template for classic BSc

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **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 timetable clashes.

1. 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.
2. 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 17) and enter it on the grid. For example, to take Entomology 2, you must pass first-year biology (CEL 101, ZOO 102 and BOT 102) and Chemistry 1 (CHE 101 and CHE 102).

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 17) 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.

1. The choice of major subjects with their ancillary subjects will determine at least eight, usually twelve, and frequently more of the semester-courses, 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.

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

It is possible to include up to 60 NQF credits (not your major subjects) in the classic BSc from those offered by a *single non-Science department*. The restriction to a single department from Group B is significant - it means, for example, that you cannot obtain credits 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. 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.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** |  |  |  |  |  |  |  |  |  |
| **Year 2** |  |  |  |  |  |  |  |  |  |
| **Year 3** |  |  |  |  |  |  |  |  |  |
| **Year 4** |  |  |  |  |  |  |

**(C) The BSc degree with a non-science major**(3 year degree, one Science major and one non-Science major)

In this case, **your entire degree must be made up of at least 360 NQF s**s.

Apart from the semester-courses needed to obtain the one non-Science major subject, **you may not count other non-Science courses, with two exceptions**:

1. If the non-Science major 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 credits for Accounting 1; Economics 1 and MAM 1 or TOF 1C1 and STA 1C2).
2. If you major in Music, Ethnomusicology or Instrumental Music Studies you are allowed to obtain 150 NQF credits 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 26).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** | ***NQF credits*** |
| **Year 1** |  |  |  |  |  |  |  |  |  |
| **Year 2** |  |  |  |  |  |  |  |  |  |
| **Year 3** |  |  |  |  |  |  |

**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 and there is very little flexibility in terms of subject choice.

The following tables will help you plan your curriculum.

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

|  |  |
| --- | --- |
| **Major Subject**Applied MathematicsApplies StatisticsBiochemistryBotanyComputer ScienceEnvironmental ScienceGeographyGeologyHuman Kinetics & ErgonomicsIchthyologyMathematical StatisticsPhysicsZoology | **Useful complementary first year courses**Computer Science, PhysicsStatistics, Mathematics, Computer ScienceComputer ScienceGeography, ZoologyPhysics, Statistics Broad range selected from Chemistry, Botany, Geography, Geology, Zoology, Statistics, EconomicsBotany, Zoology, Economics, Geology, Information SystemsPhysics, Mathematics, French 1, ZoologyChemistry, Zoology, StatisticsBotany, Geography, Zoology, EntomologyStatistics, Computer Science, MathematicsComputer Science, Chemistry, StatisticsEntomology, Botany, Statistics, Ichthyology |

**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 1S1 Statistics 1C2

 Maths 1 Maths 1S1\*

 Maths 1F Maths 1S1

\*A student who already has a credits for MAM 1 may not get credits for MAT 1S1. A student with MAT 1S1 may then enrol for MAM 1 and obtain its credits.

**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 semester 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 non-Science subject, 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. An exception to this would be IF the non-Science subject is a sensible ancillary to your majors.
1. Now, select the CORRECT blank template (see pages 39-42 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 pages 16 and 17) and fill these in on your template.
4. 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.
5. Now choose other subjects that will complement those already chosen, so as to make up the required NQF 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:

1. Are there any clashes? Use the timetables (pages 19 and 20) 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.
2. Do you have at least three year-long courses in first year?
3. Have you chosen sensible ancillaries?
4. Does your curriculum allow room for change?
5. Of the 360 NQF credits required for a degree, 200 must be "non-initial" (that is, second- or third-year semester-credits), and at least 90 must be at the first year level. The others may be first, second- or third-year level semester-courses. *However, you are strongly advised to include 6 second year semester-courses wherever possible.*
6. If you have included non-Science subject, are they all from the same department and are there no more than 60 NQF credits?
7. If one of your majors is a non-Science major, will you have at least 360 NQF credits after three years?
8. If one of your majors is a non-Science subject, are all of your other semester-courses Science subjects?
9. If your degree is BSc (Inf Sys) have you included all the required semester-courses?

**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 **is** problematic and you will **not** be registered as a natural scientist.

## 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** | BiologyCEL 101 | ZoologyZOO 102 | PhysicsPHY 1E1 | BotanyBOT 102 | ChemistryCHE 101  | CHE 102 | Geography EAR 101  | GOG 102 |
| **Year 2** | ZoologyZOO 201 | ZOO 202 | BotanyBOT 201 | BOT 202 | ENT 201 | ENT 202 |
| **Year 3** | ZoologyZOO 301 | ZOO 302 | BotanyBOT 301 | BOT 302 | ← Major subjects |

Very often biologists specialise. 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** | BiologyCEL 101 | ZoologyZOO 102 | StatisticsSTA 1S1 | BotanyBOT 102 | ChemistryCHE 101 | CHE 102 | GeographyEAR 101 | GOG 102 |
| **Year 2** | ZoologyZOO 201 ZOO 202 | EntomologyENT 201 ENT 202 | MicrobiologyMIC 201 MIC 202 |
| **Year 3** | ZoologyZOO 301 | ZOO 302 | EntomologyENT 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** | ChemistryCHE 101 | CHE 102 | StatisticsSTA 1S1 | BotanyBOT 102 | BiologyCEL 101 | ZoologyZOO 102 | Comp SciCSC 101 | CSC 102 |
| **Year 2** | BiochemistryBCH 201 | BCH 202 | MicrobiologyMIC 201 | MIC 202 | ZoologyZOO 201 | ZOO 202 |
| **Year 3** | BiochemistryBCH 301 | BCH 302 | MicrobiologyMIC 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** | MathsMAT 1S1 | ZoologyZOO 102 | ChemistryCHE 101 | CHE 102 | BiologyCEL 101 | BotanyBOT 102 | StatisticsSTA 1S1 | MST 102 |
| **Year 2** | ZoologyZOO 201 | ZOO 202 | IchthyologyICH201 | ICH 202 | BotanyBOT 102 | BOT 202 |
| **Year 3** | ZoologyZOO 301 | ZOO 302 | IchthyologyICH 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** | BiologyCEL 101 | ZoologyZOO 102 | GeographyEAR 101  | GOG 102 | ChemistryCHE 101 | CHE 102 | MathsMAT 1S1 | BotanyBOT 102 |
| **Year 2** | ZoologyZOO 201 | ZOO 202 | IchthyologyICH 201 | ICH 202 | Environmental Science ENV 201 ENV 202 | Comp SciCSC 101 |
| **Year 3** | ZoologyZOO 301 | ZOO 302 | IchthyologyICH3 01 | 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** | BiologyCEL 101 | ZoologyZOO 102 | ChemistryCHE 101 | CHE 102 | PhysicsPHY 1E1 | PHY 1E2 | Mathematics |
| MAM 101 | MAM 102 |
| **Year 2** | BiochemistryBCH 201 | BCH 202 | ChemistryCHE 201 | CHE 202 | MicrobiologyMIC 301 MIC 202 |
| **Year 3** | BiochemistryBCH 301 | BCH 302 | ChemistryCHE 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** | PhysicsPHY 101 | PHY 102 | ChemistryCHE 101 | CHE 102 | MathematicsMAM 101 MAM 102 | Computer ScienceCSC 101 CSC 102 |
| **Year 2** | PhysicsPHY 201 | PHY 202 | ChemistryCHE 201 | CHE 202 | Maths &Applied MathsMAM 201 MAM 202 |
| **Year 3** | PhysicsPHY 301 | PHY 302 | ChemistryCHE 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** | PhysicsPHY 101 | PHY 102 | StatisticsSTA 1S1 | MST 102 | MathematicsMAM 101 MAM 102 | Computer ScienceCSC 101 CSC 102 |
| **Year 2** | PhysicsPHY 201 | PHY 202 | CSC 201 | CSC 202 | Maths &Applied MathsMAM 201 MAM 202 |
| **Year 3** | PhysicsPHY 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** | PhysicsPHY 101 | PHY 102 | GeologyEAR 101 | GLG 102 | ChemistryCHE 101 | CHE 102 | MathematicsMAM 101 MAM 102 |
| **Year 2** | PhysicsPHY 201 | PHY 202 | GeologyGLG 201 | GLG 202 |  Maths & Applied mathsMAM 201 MAM 202 |
| **Year 3** | PhysicsPHY 301 | PHY 302 | GeologyGLG 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** | GeographyEAR 101 | GOG 102 | StatisticsSTA 1S1 | GeologyGLG 102 | ChemistryCHE 101 | CHE 102 | EconomicsECO 101 | ECO 102 |
| **Year 2** | GeographyGOG 201 | GOG 202 | Geology GLG 201 | GLG 202 | ChemistryCHE 201 | CHE 202 |
| **Year 3** | GeographyGOG 301 | GOG 302 | GeologyGLG 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** | EconomicsECO 101 | ECO 102 | GeologyEAR 101 | GLG 102 | ChemistryCHE 101 | CHE 102 | MathematicsMAM 101 MAM 102 |
| **Year 2** | EconomicsECO 201 | ECO 202 | GeologyGLG 201 | GLG 202 | ChemistryCHE 201 | CHE 202 |
| **Year 3** | EconomicsECO 301 | ECO 302 | GeologyGLG 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** | EconomicsECO 101 | ECO 102 | GeographyEAR 101 | GOG 102 | BiologyCEL 101 | BotanyBOT 102 | AnthropologyANT 1 – all year |
| **Year 2** | EconomicsECO 201 | ECO 202 | GeographyGOG 201 | GOG 202 | Environmental ScienceENV 201 ENV 202 |
| **Year 3** | EconomicsECO 301 | ECO 302 | GeographyGOG 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** | GeographyEAR 101 | GOG 102 | Anthropology 1ANT 1 – all year | BiologyCEL 101 | BotanyBOT 102 | ChemistryCHE 101 | CHE 102 |
| **Year 2** | GeographyGOG 201 | GOG 202 | ENV 201 | ENV 202 | BotanyBOT 201 | BOT 202 |
| **Year 3** | GeographyGOG 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** | PhysicsPHY 101 | PHY 102 | CSC 101 | CSC 102 | Mathematics 1MAM 101 MAM 102 | StatisticsSTA 1S1 | Electr.PHY 1E2 |
| **Year 2** | PhysicsPHY 201 | PHY 202 | CSC 201 | CSC 202 | Maths &Applied MathsMAM 201 MAM 202 |
| **Year 3** | PhysicsPHY 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 | StatisticsSTA 1S1 | MST 102 | PhysicsPHY 101 | PHY 102 | Mathematics 1MAM 101 MAM 102 |
| **Year 2** | Computer Sci.CSC 201 | CSC 202 | Math. StatsMST 201 | MST 202 | Information SystemsINF 201 INF 202 |
| **Year 3** | Computer Sci.CSC 301 | CSC 302 | Mathematical StatisticsMST 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** | ChemistryCHE 101 CHE 102 | Comp. ScienceCSC 101 CSC 102 | MathematicsMAM 101 MAM 102 | StatisticsSTA 1S1 MST 102 | BiologyCEL 101 |
| **Year 2** | BiochemistryBCH 201 BCH 202 | Comp. ScienceCSC 201 CSC 202 | Maths or Math Stats 2MAM 2 or MST 2 |
| **Year 3** | BiochemistryBCH 301 BCH 302 | Comp. ScienceCSC 301 CSC 302 | MicrobiologyMIC 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 1MAM 101 MAM 102 | StatisticsSTA 1S1 MST 102  | Computer ScienceCSC 101 CSC 102 | PhysicsPHY 101 PHY 102 |
| **Year 2** | Maths & Applied maths MAM 201 MAM 202 | Mathematical StatisticsMST 201 MST 202 | Information SystemsINF 201 INF 202 |
| **Year 3** | MathematicsMAT 301 | MAT 302 | Mathematical StatisticsMST 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** | MathematicsMAT 1C1 MAT 1C2 | StatisticsSTA 101 STA 102 | PhysicsPHY 101 PHY 102 | Computer ScienceCSC 101 CSC 102 |
| **Year 2** | Maths & Applied maths MAM 201 MAM 202 | Mathematical StatisticsMST 201 MST 202 | Physics 2PHY 201 PHY 202 |
| **Year 3** | Applied MathematicsMAP 301 MAP 302 | Math 3MAT 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** | BiologyCEL 101 | ZoologyZOO 102 | Human Kinetics & Ergo.HKE 101 HKE 102 | ChemistryCHE 101 CHE 102 | PHY 1E1 STA 1C2 |
| **Year 2** | ZoologyZOO 201 |  ZOO 202 | Human Kinetics & Ergo.HKE 201 HKE 202 | EAR 101 | BOT 102 | GOG 102 |
| **Year 3** | ZoologyZOO 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 non-Science subject and additional 15 NQF credits are required to total at least 360 NQF credits.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year 1** | PsychologyPSY 1 all year | Human Kinetics & Ergo.HKE 101 HKE 102 | BiologyCEL 101 | Zoology ZOO 102 | ChemistryCHE 101 CHE 102 |
| **Year 2** | PsychologyPSY 2 – all year | Human Kinetics & Ergo.HKE 201 HKE 202 | Biochemistry 2BCH 201 BCH 202 | StatisticsSTA 101 |  |
| **Year 3** | PsychologyPSY 3 – all yer | Human Kinetics & Ergo.HKE 301 HKE 302 | ← Major Subjects |

Another non-science 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 150 NQF credits in music are allowed in a BSc.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year 1** | MusicMUS 1 – all year | Computer ScienceCSC 101 CSC 102 | PhysicsPHY 101 PHY 102 | MathematicsMAM 101 MAM 102 |
| **Year 2** | MusicMUS 2 – all year | Computer ScienceCSC 201 CSC 202 | PhysicsPHY 201 PHY 202 | Instrumental Studies – all year |
| **Year 3** | MusicMUS 3 – all year | Computer ScienceCSC 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. Law 1 clashes with Geography 1 so students can take Geography 1 in their second year instead.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Year 1** | Legal Theory 1Introduction Foundation | BiologyCEL 101 | ZoologyZOO 102 | PhysicsPHY 1E1 | BotanyBOT 102 | ChemistryCHE 101 CHE 102 |
| **Year 2** | Legal Theory 2Various courses | Environmental ScienceENV 201 ENV 202 | BotanyBOT 201 BOT 202 | GeographyEAR 101 GOG 102 |
| **Year 3** | Legal Theory 2Various courses | Environmental ScienceENV 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 ScienceCSC 101 CSC 102 | AccountingACC 101 ACC 102 | MAM 101  | CSC 112 | ManagementMAN 101 MAN 102 | EconomicsECO 101 & ECO 102 |
| **Year 2** | Computer ScienceCSC 201 CSC 202 | Info. SystemsINF 201 INF 202 | StatisticsSTA 1S1 | Electronics PHY 1E2 |
| **Year 3** | Computer ScienceCSC 301 CSC 302 | Info. SystemsINF 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 ScienceCSC 101 CSC 102 | AccountingACC 101 ACC 102 | MAM 101  | CSC 112 | ManagementMAN 101 MAN 102 | EconomicsECO 101 ECO 102 |
| **Year 2** | Computer ScienceCSC 201 CSC 202 | AccountingACC 201 ACC 202 | StatisticsSTA 1S1 | Electronics PHY 1E2 | Information SystemsINF 201 INF 202 |
| **Year 3** | Computer ScienceCSC 301 CSC 302 | AccountingAcc. 3 all year | ← Major subjects |

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

## BLANK TEMPLATES TO PLAN YOUR CURRICULUM

**Three-year Classic BSc degree (360 NQF credits with three second-year courses)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 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
(it has the extra NQF credits in either first or second-year level semester-courses)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 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**

**Note:**

In BScS, the second major is often INF 3 but may be one of a number of other subjects. 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 | MAM 101 | CSC 112 |
| **Year 2** | CSC 201 | CSC 202 | INF 201 | INF 202 | STA 1S1 | 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 | MAM 101 | CSC 112 |
| **Year 2** | CSC 201 | CSC 202 | ACC201 | ACC 202 | STA 1S1 | PHY 1E2 |
| **Year 3** | CSC 301 |  CSC 302 | ACC3 | ← Major subjects |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year 1** | CSC 101 | CSC 102 | ACC 101 | ACC 102 | ECO 101 | ECO 102 | MAN 101 | MAN 102 | MAM 101 |  |
| **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 150 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 1F |
|  | 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 courses

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

## CURRICULUM APPROVAL

**First year students**

Guidance is available from Monday 6th February through to Thursday 9th 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 10rd 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 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 10th 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 11th February 09h00 - 13h00

Third year students: Saturday 11thFebruary 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.

First year practical classes start in the **second** week after registration, which is on Monday 20th 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 41st**. 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, nor 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 homework 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**

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 the credits 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-courses (90 NQF 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-courses have been gained, the equivalent to at least 150 NQF credits.

***You will NOT be allowed to start on a second-year course unless you have obtained at least six first-year semester-courses*.** 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-courses 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 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-courses, or 60 NQF credits, by the end of your first year of study.
* You must have eight semester-credits, or 120 NQF credits, by the end of your second year of study.
* You must have twelve semester-courses by the end of your third year of study, and
of these, four at least must be second-year or third-year credits equivalent to at least 190 NQF 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 semester courses well in
your first year and then failing everything in second year means that you will have a
total of eight semester-courses 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**

If you have fared poorly in June or November such that you have just satisfied the G7 rules, the Dean will place you on academic probation to achieve a minimum academic level in the following semester or academic year. Failure to meet these terms could lead to more drastic measures by the Dean including Academic Exclusion.

## MORE RULES AND LEGALESE

This section attempts to summarize the various rules that apply to obtaining credits 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-semester year-long courses, e.g., CEL 101 & BOT 102; HKE 201 & HKE 202; applies to most courses in the Science Faculty); or
* entirely in June or November, when the course is finished (single semester courses, *e.g.,* CSC 1L1 or CSC 112; MAT 1S1)

"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.

**Passing**

Passing 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.

**Aggregated passes**

In all subjects offered at a given level as a pair of semester-long courses, if both semester-courses are not obtained, an aggregate of 50% in the pair may still be deemed equivalent to passing a full 2-semester "aggregate pass" for that subject. **Credit for an aggregate pass also requires that you have met any adequate performance sub minima imposed for each constituent.** If you do not obtain passes in both components, but meet the requirements of an aggregate pass, you will have your academic transcript amended to show that an aggregated continuing course (ACR) or aggregated non- continuing course (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 passing one or more of its semester-course components, and that if you do not achieve an aggregate pass, a pass in any semester-course you have passed can still count towards the degree.

\* Aggregated pass can only be given for components of a subject taken within a single academic year, and the calculation of aggregated pass will normally take place in December. This means that such passed 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 different years, for example.

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

**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 can 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 pass a given course.

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 passing at 50%.

At the start of the year, you would normally register for both components of a semesterised 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 semesterised 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 semesterised, 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 rewrites**

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 August (for courses narrowly failed in June) or a supplementary (Supp) exam in January (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 12-16.**

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-courses 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 August 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 later, 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 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 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 February 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 | Credits from another university in SA |
| CRX | Credits earned while on exchange as part of a recognised exchange programme |
| CRT | Credits 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 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 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-courses in the case of a first-year student, and six semester-courses 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.

**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 102, CHE 101 & 102, MAT 1S1, 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 1C2. 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-courses of first year level courses, and they are not allowed to take any third-year courses until they have obtained at least ten semester-courses. And, obviously, one cannot take any second- or third-year level course without having obtained the prerequisite first or second year level courses in that subject.

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

Most departments at Rhodes are prepared to recommend that a student get credits 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 credits in Astronomy or Archaeology, for example, but you might well be allowed to count a UNISA or UCT credits in Chemistry or Mathematics. Finally, for a Rhodes degree to be earned, at least half of the semester-courses (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 once 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 credits.

**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!

## 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: Dr Yusuf Motara, Department of Computer Science; e-mail: y.motara@ru.ac.za

Deputy Dean of Science: Professor Jo Dames, Department of Chemistry; e-mail: j.dames@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 2023 - 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 27th 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 in 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 folks 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 20223 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 course can be obtained by achieving an average mark of at least 50% in the two related semester-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 17.

**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-courses 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 semesterised. Accounting 112 is an alternative to Accounting 102 for students who do not wish to continue to Accounting 2.

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| --- | --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Accounting 1** | **Accounting 2** | **Accounting 3** | **Accounting 1F/1G** |
| *Semester 1*ACC 101ACC 140%35% | *Semester 2*ACC 102/11240%45%ACC 101 35% | *Semester 1*ACC 201ACC 245%45%ACC 101 50%ACC 102 50%ACR ACC 1 | *Semester 2*ACC 20245%45%ACC 201 35% | *Full year course*ACC 3 *not semesterized*NoN/A45%ACC 201 50%ACC 202 50%ACR ACC2 | *Year 1 Year 2 Sem 1*ACC 1F ACC 1GACC 1F + ACC 1G = ACC 145% 45% ACC 1F 50% |

**Biochemistry**

is a subject in which two semester- courses 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.

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| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Biochemistry 2** | **Biochemistry 3** |
| *Semester 1*BCH 201BCH 240%No supps | *Semester 2*BCH 20240%No suppsBCH 201 40% | *Semester 1*BCH 301BCH 340%No suppsBCH 2 50% | *Semester 2*BCH 30240%No suppsBCH 301 40% |

**Botany**

is a subject in which two semester- courses 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 102 and Chemistry 1. Cell Biology 101 and Botany 102 (or an aggregate credit for Botany 1) are 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 45 NQF credits from the combination CEL 101 + BOT 102 + ZOO 102; such students are required to take extra NQF credits in another subject to make up the total needed for a degree.

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| --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Botany 1** | **Botany 2** | **Botany 3** |
| *Semester 1*CEL 101BOT 145%35% |  | *Semester 2*BOT 10245%45%CEL 101 35% | *Semester 1*BOT 201BOT 245%No suppsCEL 101 50%BOT 102 50%ACR BOT 1 | *Semester 2*BOT 20245%No suppsBOT 201 40% | *Semester 1*BOT 301BOT 345%No suppsBOT 2 50% | *Semester 2*BOT 30245%No suppsBOT 301 40% |

**Chemistry**

is a subject in which two semester- courses 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- courses, normally comprised of one full first year course in Maths (MAM 1) or a semester-course in Mathematics (MAM 101 or MAT 1S1) and a semester course in Statistics (STA 1S1, STA 1C2, MST 102) is required for a student to major in Chemistry.

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| --- | --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Chemistry 1** | **Chemistry 2** | **Chemistry 3** | **Chemistry 1R** |
| *Semester 1*CHE 101CHE 140% theory & 45% CHE 10140% theory | *Semester 2*CHE 10240% theory & 45% CHE 10240% theoryCHE 101 theory paper 40 % | *Semester 1*CHE 201CHE 240% theoryNo suppsCHE 1 50% | *Semester 2*CHE 20240% theoryNo suppsCHE 1 50% | *Semester 1*CHE 301CHE 340% theoryNo suppsCHE 2 50% | *Semester 2*CHE 30240% theoryNo suppsCHE 2 50% | *Semester 1*CHE 1R2NoNo suppsCHE 1R1 50% | *Semester 2*CHE 1R1NoNo suppsCHE 101 20% |

**Computer Science**

is a subject in which two semester- courses at one level are needed before you may continue to the next level. One of MAM 101 or MAM 1 or MAT 1S1 or STA 1S1 or STA 1C2 or MST 102 is required for a student to major in Computer Science. CSC 303 is an optional extra semester courses, it does not replace either CSC 301 or CSC 302.

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| --- | --- | --- | --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Computer Science 1** | **Computer Science 2** | **Computer Science 3** | **Introduction to ICT** | **CSC 112** | **CSC 303** |
| *Semester 1*CSC 101CSC 1 (NCR)40%40% | *Semester 2*CSC 10240%40%CSC 101 40% in same year OR credit for CSC 101 | *Semester 1*CSC 201CSC 240%No suppsCSC 101 50%CSC 102 50% | *Semester 2*CSC 20240%No suppsCSC 201 40% | *Semester 1*CSC 301CSC 340%No suppsCSC 2 50% | *Semester 2*CSC 30240%No suppsCSC 2 50% | *Semester 1*CSC 1L No N/A35% | *Semester 2*CSC112 NoN/A35% | *Op. extra*CSC 303NoN/ANo suppsCSC 201Must be in 3rd year |

**Economics**

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

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| --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Economics 1** | **Economics 2** | **Economics 3** |
| *Semester 1*ECO 101ECO 140%35% |  | *Semester 2*ECO 10240%45% | *Semester 1*ECO 202ECO 245%45%ECO 1 50% | *Semester 2*ECO 20145%45% | *Semester 1 Semester 2*Choice of 4 topicsECO 3No module under 40%45% 45%ECO 2 50% ECO 2 50% |

**Entomology**

is a subject in which two semester- courses 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 102 and Chemistry 1. Cell Biology 101 and Zoology 102 (or an aggregate credit for Zoology 1) are required before you may register for Entomology 2.

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| --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Entomology 2** | **Entomology 3** |
| *Semester 1*ENT 202ENT 245%No suppsCEL 101 50%ZOO 102 50%ACR ZOO 1 | *Semester 2*ENT 20145%No suppsENT 202 40% | *Semester 1*ENT 302ENT 345%No suppsENT 2 50% | *Semester 2*ENT 30145%No suppsENT 302 45% |

**Environmental Science**

is a two-year major subject. Geography 1 and either Anthropology 1, Botany 1, Economics 1, Geology 1 or Zoology 1 are required 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 earn any NQF credits and will not be able to aggregate with a mark for the other semester.

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| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Environmental Science 2** | **Environmental Science 3** |
| *Semester 1*ENV 201ENV 240%No suppsSee above | *Semester 2*ENV 202ENV 240%No suppsENV 201 40% | *Semester 1*ENV 301ENV 340%No suppsENV 2 | *Semester 2*ENV 302ENV 3 40%No suppsENV 301 40% |

**Geography**

is a subject in which NQF credits in part of a year are needed before you may continue to the matching part in the next level. Both second year semesters are normally needed before you may enrol for Geography 3 as a major subject. For each semester, there is an overall subminimum AND sub minima 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 earn any NQF credits, 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.

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| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Geography 1** | **Geography 2** | **Geography 3** |
| *Semester 1*EAR 101GOG 140%35% | *Semester 2*GOG 10240%40%EAR 101 35%OR, a pass in matric geography or equivalent | *Semester 1*GOG 201GOG 240%No suppsEAR101 50%GOG 102 50%(OR GOG 1 60%) | *Semester 2*GOG 20240%No suppsEAR 101 50%GOG102 50%(OR GOG1 60%) | *Semester 1*GOG 301GOG 345%No suppsGOG 201 50%GOG 202 50% | *Semester 2*GOG 30245%No suppsGOG 201 50%GOG 202 50% |

**Geology**

is a subject in which NQF credits in only part of a year (but preferably both) are needed before you may continue to the next level. 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.**

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| --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Geology 1** | **Geology 2** | **Geology 3** |
| *Semester 1*EAR 101GLG 140%35% |  | *Semester 2*GLG 10240%45%EAR 101 35% and met the subminimum requirements for both theory and practical papers | *Semester 1*GLG 201GLG 240%No suppsGLG 1 50%Has at least attended CHE 101 | *Semester 2*GLG 20240%No suppsGLG 201 | *Semester 1*GLG 301GLG 340%No suppsGLG 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. | *Semester 2*GLG 30240%No suppsGLG 301  |

**Human Kinetics and Ergonomics**

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

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| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Human Kinetics & Ergonomics 1** | **Human Kinetics & Ergonomics 2** | **Human Kinetics & Ergonomics 3** |
| *Semester 1*HKE 101HKE 140%40% |  | *Semester 2*HKE 10240%40%HKE 101 40% | *Semester 1*HKE 201HKE 240% No suppsHKE 1 50% | *Semester 2*HKE 20240%No suppsHKE 201 40% | *Semester 1*HKE 301HKE 340%No suppsHKE 2 50% | *Semester 2*HKE 30240%No supps |

**Ichthyology**

is a subject in which two semester-courses 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 courses of Maths, Theory of Finance, Computer Science (not CSC 1L) or Statistics. Cell Biology 101 and Zoology 101 (or an aggregate credit for Zoology 1) are required before you may register for Ichthyology 2.

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| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Ichthyology 2** | **Ichthyology 3** |
| *Semester 1*ICH 201ICH 240%No suppsCEL 101 50%ZOO 102 50%ACR ZOO 1 | *Semester 2*ICH 20240%No suppsICH 201 40% | *Semester 1*ICH 301ICH 340%No suppsICH 201 50%ICH 202 50% | *Semester 2*ICH 30240%No suppsICH 301 40% |

**Information Systems**

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

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| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Information Systems 2** | **Information Systems 3** |
| *Semester 1 Semester 2*INF 201 INF 202INF 240% both theory & pracsNo supps No suppsCSC 112 and INF 201 40%Must be in 2nd year | *Semester 1 Semester 2*INF 301 INF 302INF 340% both theory & pracsNo supps No suppsINF 201 50% INF 301 INF 202 50% or INF 2 ACR |

**Journalism**

is not semesterised. 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**is a subject in which both semester-courses 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 Accounting 1 to proceed with MAN 2, and ECO 1, MAM 1 or TOF 1C1 and STA 1C2 to proceed with MAN 3.

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

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| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Management 1** | **Management 2** | **Management 3** |
| *Semester 1*MAN 101MAN 145%35% |  | *Semester 2*MAN 10245%45%MAN 101 35% in that year | *Semester 1*MAN 212+214MAN 240%/45%\*45%MAN 1 50%ACC1 | *Semester 2*MAN 211+21340%/45%\*45%MAN 1 50%ACC 1 | *Semester 1*MAN 311+313MAN 340%/45%\*45%MAN 2 50%ECO1, MAT1 OR TOF 1C1 AND STA 1C2 | *Semester 2*MAN 314+312MAN340%/45%\*45% |

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 MAM 1 may be required to attend a remedial programme that will help them improve their performance. Mathematics 1F is an Extended Studies Programme course open to students who have taken mathematical literacy on the NSC or Standard Grade maths at matric level. MAM 1 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 1 or MAT 1S1 BUT can take MAT 1F

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| --- | --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Maths & Applied Maths 1** | **Maths & Applied Maths 2** | **Maths 3** | **Applied maths 3** |
| *Semester 1*MAM 101 MAM 140%40%See note above | *Semester 2*MAM 10240%40%MAM 101 40% | *Semester 1*MAM 201MAM 240%No suppsMAM 1 55% | *Semester 2*MAM 20240%No suppsMAM 201 40% | *Semester 1*MAT 301MAT 340%No suppsMAM 2 50% | *Semester 2*MAT 30240%No suppsMAM 2 50% | *Semester 1* MAP 301 MAP 340%No suppsMAM 2 50% | *Semester 2*MAP 30240%No suppsMAM 2 50% |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Maths 1F**  | **Single Service Courses** |  |  |
| *Full year course*MAT 1FN/A45%See note above | *Semester 1*MAT 1S1No No40% See note above | *Semester 1*TOF 1C1NoN/A35% |  |  |  |

**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-courses 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.

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| --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Microbiology 2** | **Microbiology 3** |
| *Semester 1*MIC 201MIC 240%No suppsCEL 101 50%orACR BOT 1/ZOO 1 | *Semester 2*MIC 20240%No suppsMIC 201 40% | *Semester 1*MIC 301MIC 340%No suppsMIC 2 50% | *Semester 2*MIC 30240%No suppsMIC 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- courses at one level are needed before you may continue to the next level. A prerequisite to register for Physics 2 is Mathematics 1. To major in Physics with Electronics you are required to obtain 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.

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| --- | --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Physics 1** | **Physics 2** | **Physics 3** | **Physics 1E** |
| *Semester 1*PHY 101PHY 140%40% |  | *Semester 2*PHY 10245%45%PHY 101 40% or PHY 1E1 70% | *Semester 1*PHY 201PHY 240%No supps PHY 1 50% | *Semester 2*PHY 20245%No suppsPHY 201 50% | *Semester 1*PHY 301PHY 340%No suppsPHY 2 50% | *Semester 2*PHY 30245%No suppsPHY 301 40% | *Semester 1*PHY 1E140%40% | *Semester 2*PHY 1E245%45% |

**Psychology / Organizational Psychology**

Psychology 1 is a semesterized course; neither are Psychology 2, Psychology 3, Organizational Psychology 2 or Organizational Psychology 3. Organizational Psychology 2 and 3 are two-semester courses, which have Psychology 1 as a prerequisite.

**Statistics (Mathematical Statistics)**

is a subject in which three semester- courses at one level are needed before you may continue to the next level. Mathematics and Applied Mathematics 1 and Mathematical Statistics 102 are required for a student to major in Mathematical Statistics or Applied Statistics. Grade 12 Mathematics is required before you may register for first year Statistics courses. **Note that Maths 1 and MST 102 are prerequisites for MST 201 and not STA 1S1 or STA 1C2.**

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| --- | --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Statistics for Science and Commerce** |  |  |  |
| *Semester 1*STA 1S1N/A35% | *Semester 2*STA 1C2N/A45% |  |  |  |  |  |
|  | **Maths Stats 1** | **Maths Stats 2** | **Maths Stats 3** | **Applied Stats 3 (not in 2020)** |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite |  | *Semester 2*MST 10240% 45% | *Semester 1*MST 201MST 240%No suppsSee note above | *Semester 2*MST 20240% No suppsMST 201 35% | *Semester 1*MST 301MST 340%No suppsMST 2 >60% and see note above | *Semester 2*MST 30240%No suppsMST 301 35% | *Semester 1*AST 301AST 340%No suppsMST 2 50% | *Semester 2*AST 30240%No suppsMST 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- courses 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 102 and Chemistry 1. Cell Biology 101 and Zoology 102 (or an aggregate credit for Zoology 1) are required before you may register for Zoology 2.

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| --- | --- | --- | --- |
| CoursesAggregatedAggregated sub-minimumSupplementary sub-minimumPrerequisite | **Zoology 1** | **Zoology 2** | **Zoology 3** |
| *Semester 1*CEL 101ZOO 145%35% | *Semester 2*ZOO 10245%45%CEL 101 35% | *Semester 1*ZOO 201ZOO 245%No suppsCEL 101 50%ZOO 102 50%ACR ZOO 1 | *Semester 2*ZOO 20245%No suppsZOO 201 40% | *Semester 1*ZOO 301ZOO 345%NO suppsZOO 2 50% | *Semester 2*ZOO 30245%No suppsZOO 301 40% |