

# FACULTY OF SCIENCE

## RULES FOR DEGREES AND DIPLOMAS

See the General Rules applicable to all Faculties.

The following Rules apply to the Faculty of Science only.

See the Faculty Web Page (<http://www.scifac.ru.ac.za>) for further information on activities and programmes in the Faculty of Science.

### S.1

The following degrees and diplomas may be awarded in the Faculty of Science:

<i>Name</i>	<i>To be denoted by the letters</i>
Bachelor of Science	BSc
Bachelor of Science (Information Systems)	BSc(InfSys)
Bachelor of Science (Software Development)	BSc(SofDev)
Bachelor of Science with Honours	BSc(Hons)
Master of Science	MSc
Doctor of Philosophy	PhD
Doctor of Science	DSc
Diploma in Fisheries Science (Postgraduate)	DipFisheriesSc
Higher Diploma in Environmental Biotechnology	HDipEnvTech

### S.2

S.2.1 Most undergraduate subjects in the Faculty of Science are offered as pairs of semester-courses, each of which can earn one semester-credit towards the total needed for a degree. A few subjects are offered as indivisible two-credit courses, and some are offered as single semester-credit courses.

S.2.2 In the rules and tables that follow, subjects are denoted sometimes by their full names, and sometimes by mnemonics and numbers (for example the subject Physics 1 (or PHY 1) consists of the two semester-credit courses PHY 101 and PHY 102). The first or only digit of the number denotes the level (year) at which the subject is offered; a 3 digit number denotes a semester-course or semester-credit subject.

Note, however, that “01” and “02” do not always imply “first semester” and “second semester”, and candidates should consult the timetable to determine in which semester a course will be offered in any particular year.

S.2.3 As a result of the semester structure of degrees it may happen that a major in a particular subject may sometimes be earned for a set of subjects that do not all carry the name of the major subject itself (see Rule S.23.5).

### DEGREE OF BACHELOR OF SCIENCE S.3

Except as provided in Rules G.44 to G.47 of the General Rules, candidates shall not be admitted to the degree unless they have attended approved courses subsequent to their first registration as students for at least three years.

### S.4

S.4.1 Candidates shall not normally be admitted to any of the full curricula for the degree of Bachelor of Science unless either they have met the minimum admission requirements for Bachelor’s degree programmes requiring a National Senior Certificate (NSC) or they are in possession of a matriculation certificate issued by the Matriculation Board or have obtained a certificate of exemption therefrom; and have achieved English (Home language or additional language) at a rating of 4 or above and at least a rating of 4 in Mathematics or a rating of 6 in Mathematical Literacy in the NSC, or at least an E symbol in Mathematics on the Higher Grade in the matriculation examination, or a pass in Mathematics deemed to be the equivalent of the above, or they have successfully completed a year of study under the provisions of the Science Extended Studies Programme.

S.4.2 Except with the permission of Senate, candidates shall not be admitted to any of the full curricula for the degree of Bachelor of Science unless they have obtained a pass in Physical Science or Biology in the matriculation examination, or in either Life Sciences or Physical Sciences at a rating of 4 or above in the NSC or equivalent subjects in another examination deemed by the Senate to be equivalent thereto.

**S.5**

Notwithstanding any exceptions to Rule S.4 approved by Senate, candidates will not normally be admitted to various courses in Chemistry, Computer Science, Mathematics, Physics or Statistics unless they have achieved a rating of 4 or above in Mathematics in the NSC or have completed Mathematics 1L. It should be noted that these restrictions apply to some courses that act as ancillary requirements to certain major subjects (see Rule S.23.5); ineligibility to register for an ancillary course may thus preclude certain major subjects from being selected for a candidate's degree.

**S.6**

A limited number of students who do not meet the strict criteria of Rule S.4 may be admitted to certain curricula that are arranged under the auspices of the Science Extended Studies Programme (see Rules S.45 to S.47).

**S.7**

Candidates for the ordinary degree must obtain not less than eighteen semester-credits (or in some combinations, twenty semester-credits) in courses in various approved subjects.

**S.8**

Candidates may present themselves for examination in the following subjects:

**S.8.1 Group A Science subjects**

Subject	Code	Courses
(offered as 6 semester-credit major subjects)		
Botany	BOT	102,201,202,301,302
Chemistry	CHE	101,102,201,202,301,302
Computer Science	CSC	1S, 101,102,201,202,301,302
Economics	ECO	101,102,201,202,301,302
Geography	GOG	102,201,202,301,302
Geology	GLG	102,201,202,301,302
Human Kinetics & Ergonomics	HKE	101,102,201,202,301,302
Mathematics	MAT	1C,1L,1C1,1C2,301,302
Mathematics & Applied Mathematics	MAM	201, 202
Physics	PHY	101,102,201,202,301,302
Zoology	ZOO	101,201,202,301,302
(offered as 4 semester-credit major subjects)		
Applied Mathematics	MAP	301,302
Applied Statistics	AST	302
Biochemistry	BCH	201,202,301,302
Entomology	ENT	201,202,301,302
Environmental Science	ENV	201,202,301,302
Ichthyology	ICH	201,202,301,302
Mathematical Statistics	MST	201,202,301,302
Microbiology	MIC	201,202,301,302
(offered as ancillary courses only)		
Anatomy & Physiology (Pharm)	PC	210
Cell Biology	CEL	101
Computer Science	CSC	303
Earth Science	EAR	101
Electronics Literacy	PHY	1E2
Physics for Life Sciences	PHY	1E1
Intro to Science Concepts and Methods	ISCM	1
Logic	LOG	101 (not available in 2010)
Statistics	STA	101,102,1D
Introduction to ICT	CSC	1L1, 1L2
Mathematics for Pharmacy & Life Sciences	MAT	1P

\* **NOTE:** The first semester of both GOG 1 and GLG 1 is the common Earth Sciences course, Earth Science 101.

The first semester of both ZOO 1 and BOT 1 is the common Cell Biology course CEL 101.

CSC 303 is an additional third year level semester. Students majoring in CSC MUST take both CSC 301 and CSC 302.

The three year major in mathematics comprises MAT 1C1, 1C2, MAM 201, 202, MAT 301, 302.

The two year major in applied mathematics comprises MAM 201, 202, MAP 301, 302.

Mathematics and Applied Mathematics MAM 2 is the common prerequisite for both MAT 3 and MAP 3.

### S.8.2 *Group B*

Group B comprises all other subjects currently offered for credit towards any undergraduate Bachelor's degree at Rhodes University.

### S.9

S.9.1 A candidate for the degree must obtain credit in all the required courses in at least two subjects, to be known as major subjects.

S.9.2 A candidate who selects both major subjects from Group A shall obtain a minimum of 18 semester-credits, of which at least 14 semester-credits must be chosen from Group A. The remaining 4 semester-credits may also be chosen from Group A, or alternatively, may be chosen from subjects offered in a single department in Group B, provided that the Dean is satisfied that the combination is academically sound.

S.9.3 A candidate may select at most one major subject from Group B. In this case the entire degree shall be made up of a minimum of 20 semester-credits. Apart from the courses and required ancillary courses needed for the major subject itself, the other credits for the degree shall all be earned for subjects in Group A, provided that in the case of Music at most 8 semester-credits shall be allowed for courses in Music, Ethnomusicology and Instrumental Music Studies. Registration for a major subject in Group B shall be subject to the rules of the Faculty in which the department which offers the subject is placed.

## **DEGREES OF BACHELOR OF SCIENCE (INFORMATION SYSTEMS) AND BACHELOR OF SCIENCE (SOFTWARE DEVELOPMENT)**

These degrees are intended for students who wish to become computer specialists in a commercial or

technical environment, and are composed of courses offered by departments in the Faculties of Science and Commerce.

### S.10

S.10.1 Except as provided in Rules G.44 to G.47, candidates shall not be admitted to the degree of Bachelor of Science (Information Systems) unless they have attended approved courses subsequent to their first registration for at least three years.

S.10.2 Except as provided in Rules G.44 to G.47, candidates shall not be admitted to the degree of Bachelor of Science (Software Development) unless they have attended approved courses subsequent to their first registration for at least four years.

### S.11

Candidates shall not normally be admitted to the full curriculum for the degrees of Bachelor of Science (Information Systems) or Bachelor of Science (Software Development) unless either they have met the minimum admission requirements for Bachelor's degree programmes requiring a National Senior Certificate (NSC), or have a matriculation certificate issued by the Matriculation Board, or have obtained a certificate of exemption therefrom; and have achieved English (Home language or additional language) at a rating of 4 or above and at least a rating of 4 in Mathematics on the NSC, or at least an E symbol in Mathematics on the Higher Grade in the matriculation examination, or a pass in Mathematics deemed to be the equivalent of the above, or they have successfully completed a year of study under the provisions of the Science Extended Studies Programme.

### S.12

S.12.1 A limited number of students who do not meet the strict criteria of Rule S.11 may be admitted to certain curricula that are arranged under the auspices of the Science Extended Studies Programme (see Rules S.45 to S.47).

S.12.2 It should be noted that the curriculum for the degree requires students to obtain credit in Computer Science 1, for which entrance is restricted to those who have achieved Mathematics at a rating 4 or above in the NSC or obtained a pass in Mathematics on the Higher Grade in the matriculation examination.

### S.13

S.13.1 A candidate for the degree of Bachelor of Science (Information Systems) must obtain 20 semester-credits in courses as set out in the following curriculum:

**FIRST AND SECOND YEARS**

1. Computer Science (CSC 1 and CSC 2)
2. Information Systems (INF 2)
3. Economics (ECO 1) or Management (MAN 1)
4. Accounting (ACC 1)
5. Statistics (STA 101 or STA 1D, or an alternative course in Statistics)
6. Mathematics (MAT 1C1 or MAT 1C)
7. Electronics Literacy (PHY 1E2)
8. Three further semester-credits in Management or Economics or Mathematics or Statistics or Mathematical Statistics or Logic or some other subject approved by the Dean.

**THIRD YEAR**

1. Computer Science 3
2. Information Systems 3, or one of the following: Accounting 3, Applied Statistics 3, Economics 3, Mathematical Statistics 3, Management 3, Mathematics 3.

S.13.2 A candidate for the degree of Bachelor of Science (Software Development) must obtain credit in the following courses:

**FIRST AND SECOND YEARS**

1. Computer Science (CSC 1 and CSC 2)
2. Information Systems (INF 2)
3. Economics (ECO 1) or Management (MAN 1)
4. Accounting (ACC 1)
5. Statistics (STA 101 or STA 1D, or an alternative course in Statistics)
6. Mathematics (MAT 1C1 or MAT 1C)
7. Electronics Literacy (PHY 1E2)
8. Three further semester-credits in Management or Economics or Mathematics or Statistics or Mathematical Statistics or Logic or some other subject approved by the Dean.

**THIRD YEAR**

1. Computer Science 3
2. Information Systems 3

**FOURTH YEAR**

1. Computer Science and Information Systems 4

S.13.3 Candidates will be advised at registration as to how the first two years of these degrees are to be structured, taking into account timetable constraints and their previous performance or experience in Computer Studies and Mathematics. Normally

candidates will be expected to register for Computer Science, Accounting, Economics, Management, Mathematics and Statistics.

S.13.4 Candidates who complete the third year of study for the degree of Bachelor of Science (Software Development) and who fail the fourth year or who do not meet the sub-minimum requirements for acceptance into Computer Science and Information Systems 4 may be awarded the degree of Bachelor of Science (Information Systems). Such candidates may not subsequently be admitted to the degree of Bachelor of Science (Software Development), but may be admitted to an Honours degree.

S.13.5 Candidates for the degree of Bachelor of Science (Software Development) who do not obtain at least 60% in CSC 102 and pass at least 8 of the 10 semester credits in their first year of study will be required to change registration to the (three year) BSc (Information Systems) degree, or change registration to a degree in the Faculty of Commerce.

S.13.6 Candidates for either the degree of Bachelor of Science (Software Development) or Bachelor of Science (Information Systems) who fail CSC 2 in their second year at Rhodes will be required to change registration to a degree in the Faculty of Commerce.

**RULES COMMON TO THE THE BSc, BSc(InfSys) AND BSc(SofDev)**

**S.14**

If a candidate in the BSc, BSc(InfSys) and BSc(SofDev) selects more than the minimum number of courses required for a degree, the additional courses may be in any of the subjects prescribed in Rule S.8.

**S.15**

S.15.1 At the start of the year students will normally register for both components of a semesterised subject, unless they make it clear that they intend taking only one of the semester-courses to obtain a single semester-credit, or to complete an outstanding component of a semesterised subject.

S.15.2 Students will be allowed to register after July for semester-courses held in the second semester in subjects for which they have not previously been registered (provided that they have met the prerequisite requirements for such courses). Such registrations will be at the discretion of the Dean, in consultation with the Head of the Department concerned.

S.15.3 Subject to any exceptions approved by the Senate, the last date for registration and change of course in the Faculty of Science shall be the end of the second full week of the semester in which the course begins.

S.15.4 Candidates who fail to perform adequately in the first semester component of a subject may have their registrations for the second semester component of that subject cancelled. This decision may sometimes be reversed, on appeal through the Head of Department to the Dean of the Faculty.

S.15.5 Candidates are strongly advised to include at least six second-year level semester-courses in their curricula.

### S.16

S.16.1 In all those subjects offered at a given level as a pair of semester-credit courses, where both credits are not obtained, an aggregate of at least 50% in the pair shall be deemed equivalent to credit in a 2-credit aggregate course for that subject.

S.16.2 Students who do not obtain credit in both components, but who meet the requirements of an aggregated course, will have their academic transcripts amended to show that an aggregated continuing credit (ACR) or aggregated non-continuing credit (NCR) has been achieved in the appropriate subject, as the Department may allow.

S.16.3 Credit will not be given for an aggregate course in addition to credit for one or more of its semester-credit components.

### S.17

S.17.1 Credit for any course normally requires that a student score an overall mark of at least 50%. At the discretion of the Board, non-continuing credit may occasionally be awarded for an overall mark of at least 48%.

S.17.2 Credit for an aggregate course also requires that a student has met any adequate performance subminima imposed for each constituent.

S.17.3 Subjects for which aggregated credit may be granted are shown in the table that accompanies Rule S.23.

S.17.4 If an aggregate pass is not achieved, credit in any semester-credit course passed can still be earned towards the degree as a whole.

S.17.5 In the case of first-year first semester subjects, candidates awarded supplementary examinations in terms of Rule S.25.1 who have scored the necessary sub-minimum may be permitted either to write the supplementary examination in November, or to take a chance of obtaining an aggregate pass if the Department feels that their performance in the

remaining (November) paper may achieve this. Students in this category will be required to elect in writing by the end of the third term which option they intend to exercise.

S.17.6 Aggregate course credit may only be granted on the basis of marks earned for the first semester course of a subject obtained in June (or for the replacement mark earned during the November supplementary examination for that course) and for the second semester course obtained in November (or at a supplementary examination in the following February) of a single academic year.

S.17.7 Aggregate course credit will be given only for two semester-courses offered within a single subject, with the following exceptions:

<i>Aggregated credit</i>	<i>Comprising of a semester-course in each of</i>
Botany 1	Cell Biology (CEL 101) and Botany (BOT 102)
Geography 1	Earth Science (EAR 101) and Geography (GOG 102)
Geology 1	Earth Science (EAR 101) and Geology (GLG 102)
Introductory Molecular Biology IMB 2	Biochemistry (BCH 201) and Microbiology (MIC 202)
Physics with Electronics 1E	Physics (PHY 1E1) and Electronics (PHY 1E2)
Zoology 1	Cell Biology (CEL 101) and Zoology (ZOO 101)

*Note: aggregated credit may not be earned for both Geography 1 and Geology 1; at most three semester-credits may be earned for EAR 101, GOG 102, GLG 102. Similarly, aggregated credit may not be earned for both Botany 1 and Zoology 1; at most three semester-credits may be earned for CEL 101, BOT 102, ZOO 101.*

### S.18

For the purposes of Rule G.7 as it applies to the Faculty of Science, students may be refused permission to renew registration in the Faculty if they are deemed to be unable to profit from further study, or if they have failed

S.18.1 by the end of their first year of full-time attendance at this university to have obtained four semester-credits; or

S.18.2 at the end of their second year of full-time attendance at this or any other university to have obtained eight semester-credits; or

S.18.3 at the end of their third year of full-time attendance at this or any other university to have

obtained twelve semester-credits, including those for two non-initial courses; or  
 S.18.4 at the end of every calendar year of study to have passed a minimum of half of the courses /semester-credits for which they were originally registered; or  
 S.18.5 to complete the undergraduate degree within a period of five years; or  
 S.18.6 (for students enrolled on the Science Extended Studies Programme) by the end of the first year of study to have passed all courses offered as part of the programme and to have achieved an average of 60% in the courses read in order to qualify for entry into mainstream courses in the following year.

**S.19**

S.19.1 A candidate is not allowed to obtain credit for certain overlapping combinations of subjects. The table below lists, for each of certain subjects and courses, those other courses for which credit will not also be given:

<i>Subject</i>	<i>Credit may not be obtained in more than one of:</i>
Accounting	ACC 1; ACC 1F/ACC 1G
Computer Science	CSC 1L; CSC 101
Computer Science	CSC 1L; CSC 1S
Statistics	STA 101; STA 1D
Mathematical Statistics	MST 3; AST 3
Physics	PHY 1; PHY 1E1
Psychology	ORG 2; PSY 2
Psychology	ORG 3; PSY 3
Maths	MAT 1; MAT 1C
Maths	MAT 101; MAT 1P
Maths	MAT 102; MAT1C1
Maths	MAT 2 or MAP 2; MAM 2

**S.20**

Except with the permission of Senate, candidates shall be deemed to be in their first year of study until they have obtained at least six semester-credits in the first level courses specified in Rule S.8 or S.13; they shall be deemed to be in their third year of study when they have obtained at least ten semester-credits and are engaged in or have passed the final courses of a major subject. Otherwise they shall be in their second year of study.

**S.21**

S.21.1 Candidates may present themselves for examination in not more than eight semester-courses in the first year of study for a BSc, and in not more

than ten semester-courses in the first year of study for a BSc(InfSys) or BSc(SofDev); provided that the Senate may permit candidates for a BSc to present themselves for examination and obtain credit in two additional semester-courses approved by the Senate.  
 S.21.2 Candidates may present themselves for examination in not more than eight semester-courses in their second year of study and not more than six semester-courses in their final year of study; provided that candidates in their final year of study may be permitted by Senate to present themselves at supplementary examinations for which they are eligible under Rule G.37, so as to obtain two additional semester-credits in subjects in which they have previously failed.

**S.22**

S.22.1 Except with the permission of Senate, candidates may not enter the second year of any subject unless they have obtained at least six semester-credits in first-year level courses, and may not enter the third year of any subject until they have obtained at least ten semester-credits.

S.22.2 Notwithstanding Rule S.22.1, candidates may not register for second year courses in the second semester if they have not previously been registered as second year students in the first semester.

**S.23**

S.23.1 Except with permission of the Senate, candidates may not enter courses in any subject unless they have satisfied all prerequisite conditions imposed for entry into such courses, and may not obtain credit for any subjects until they have obtained credit in all prescribed ancillary courses for such subjects.

S.23.2 There may be prerequisite (ancillary) requirements that must be met before a candidate may register for a particular course, and similar requirements that must be met before a candidate may obtain credit for a given course. Credit requirements will usually be stricter than registration requirements, which might stipulate “adequate performance” in an ancillary subject (or even at a lower level in the same subject) rather than “credit”.

S.23.3 Permission of the Senate is necessary to attend any course concurrently with a higher level course for which it is a prerequisite. Permission will not normally be given to attend a required first course concurrently with a final course. Applications in this regard should be made to the Dean of the Faculty at Registration.

S.23.4 A candidate who has passed the final course of a major subject, but has failed in a prescribed ancillary subject, may rewrite the examination in that ancillary subject without being required to rewrite the examination in the related major subject.

S.23.5 The accompanying tables summarise, for each major subject, those constituent credits and ancillary subjects in which credit must be obtained, and, for specific constituents, the prerequisite credits needed for registration.

The following notes apply to the courses marked with the appropriate superior numbers in the tables below; for further details, candidates should consult the departmental entries elsewhere in the Calendar.

1. *Entry into the second semester-course requires that a candidate has performed adequately in the first semester-course.*
2. *Permission may be given to register for this course concurrently with the course for which it is a required ancillary.*
3. *The modules in Advanced Calculus and Linear Algebra must be included.*
4. *A candidate who has passed Organizational Psychology 2 may take Psychology 3, but only with the permission of the Head of the Department. A candidate who has completed Psychology 2 may not proceed to Organizational Psychology 3, except with the permission of the Head of the Department, in which case additional coursework assignments will normally be set in which a specified level of performance must be achieved. In the event that candidates do not attain the specified level of performance by the end of the first term their registration will revert to Psychology 3.*
5. *By permission of Senate on the recommendation of the Head of the Department.*
6. *In 2011, MAT 1 will become MAT 1C.*
7. *In 2011, MAT 101 will become MAT 1P.*
8. *In 2011, MAT 102 will become MAT 1C1.*
9. *In 2011, MAP 2 and MAT 2 will become MAM 2.*

FACULTY OF SCIENCE

(a) Major Subject	Credit needed in each of
Accounting	ACC 1; ACC 2; ACC 3
Applied Mathematics	MAT 1 <sup>6</sup> ; MAP 2 or MAT 2 <sup>9</sup> ; MAP 3
Applied Statistics	MAT 1 <sup>6</sup> or (MAT 101 & MAT 102 <sup>7,8</sup> ); MST 2; AST 3
Biochemistry	CHE 1; BCH 2; BCH 3
Botany	CEL 101; BOT 102; ZOO 101; BOT 2; BOT 3; CHE 1
Chemistry	CHE 1; CHE 2; CHE 3; 1 of CSC 1; MAT 1 <sup>6</sup> ; PHY 1; PHY 1E; STA 1
Computer Science	CSC 1; CSC 2; CSC 3, MAT 102 <sup>8</sup> or MAT 1 <sup>6</sup>
Economics	ECO 1; ECO 2; ECO 3
Entomology	CEL 101; ZOO 101; BOT 102; CHE 1; ENT 2; ENT 3
Environmental Science	GOG 1; 1 of BOT 1, GLG 1, ZOO 1 or ANT 1; ENV 2; ENV 3
Ethnomusicology	ETH 1; ETH 2; ETH 3
Geography	GOG 1; GOG 2; GOG 3
Geology	GLG 1; GLG 2; GLG 3; 2 <sup>5</sup> of CHE 101, CHE 102, PHY 101, PHY 102, PHY 1E1, PHY 1E2, MAT 101 <sup>7</sup> , MAT 102 <sup>8</sup> , MAT 1 <sup>6</sup>
Human Kinetics & Ergonomics	HKE 1; HKE 2; HKE 3
Ichthyology	CEL 101; ZOO 101; BOT 102; ICH 2; ICH 3; 2 of CSC 101, CSC 102, STA 101, STA 102, MAT 101 <sup>7</sup> , MAT 102 <sup>8</sup> , MAT 1 <sup>6</sup>
Information Systems	CSC 101; INF 2; INF 3
Instrumental Music Studies	IMS 1; IMS 2; IMS 3
Legal Theory	LEG 1; LEG 2; LEG 3
Management	MAN 1; MAN 2; MAN 3; ACC 1; MAT 1 <sup>6</sup> or (TOF 1 & STA 1D)
Mathematics	MAT 1 <sup>6</sup> ; MAT 2 or MAP 2 <sup>9</sup> ; MAT 3
Mathematical Statistics	MAT 1 <sup>6</sup> or (MAT 101 & MAT 102 <sup>7,8</sup> ); MST 2; MST 3
Microbiology	CEL 101; BOT 1 or ZOO 1; MIC 2; MIC 3; CHE 1
Music	MUS 1; MUS 2; MUS 3
Organizational Psychology	PSY 1; ORG 2 or PSY 2; ORG 3 <sup>4</sup>
Physics & Electronics	PHY 1; PHY 2; PHY 3; MAT 1 <sup>6</sup> ; MAT 2 or MAP 2 <sup>3,9</sup>
Psychology	PSY 1; PSY 2 or ORG 2; PSY 3 <sup>4</sup>
Zoology	CEL 101; ZOO 101; BOT 102; CHE 1; ZOO 2; ZOO 3

(b) Subject / Course	Aggregate	Prerequisite credit needed in
Accounting ACC 101, ACC 102 <sup>1</sup> ACC 201, ACC 202 <sup>1</sup> ACC 3	ACC 1 ACC 2 none	ACC 1 ACC 2
Applied Mathematics MAM 201, MAM 202 MAP 301, MAP 302	MAM 2 MAP 3	MAT 1 <sup>6</sup> MAT 2 or MAP 2 <sup>9</sup>
Applied Statistics MST 301, AST 302 <sup>1,5</sup>	AST 3	MST 2; MAT 1 <sup>6</sup> or (MAT 101 & MAT 102 <sup>7,8</sup> )
Biochemistry BCH 201, BCH 202 <sup>1</sup> BCH 301, BCH 302 <sup>1</sup>	BCH 2 BCH 3	CHE 1 BCH 2
Botany CEL 101, BOT 102 <sup>1</sup> BOT 201, BOT 202 <sup>1</sup> BOT 301, BOT 302 <sup>1</sup>	BOT 1 BOT 2 BOT 3	CEL 101; BOT 102; ZOO 101 <sup>2</sup> ; CHE 1 <sup>2</sup> BOT 2; CHE 1

FACULTY OF SCIENCE

Chemistry CHE 101, CHE 102 <sup>1</sup> CHE 201, CHE 202 CHE 301, CHE 302	CHE 1 CHE 2 CHE 3	NSC Mathematics or HG Matric Mathematics CHE 1; 1 of CSC 1, MAT 1 <sup>6</sup> , PHY 1, PHY 1E, STA 1 <sup>2</sup> CHE 2;
Computer Science CSC 1L CSC 1S CSC 101, CSC 102 <sup>1</sup> CSC 201, CSC 202 <sup>1</sup> CSC 301, CSC 302 CSC 303	CSC 1 CSC 2 CSC 3	NSC Mathematics or HG Matric Mathematics CSC 101, CSC 102 CSC 2; MAT 102 <sup>8</sup> or MAT 1 <sup>6</sup> CSC 2
Economics ECO 101, ECO 102 ECO 201, ECO 202 ECO 301, ECO 302	ECO 1 ECO 2 ECO 3	ECO 1 ECO 2
Entomology ENT 201, ENT 202 <sup>1</sup> ENT 301, ENT 302 <sup>1</sup>	ENT 2 ENT 3	CEL 101; ZOO 101; BOT 102 <sup>2</sup> ; CHE 1 <sup>2</sup> ENT 2
Environmental Science ENV 201, ENV 202 <sup>1</sup> ENV 301, ENV 302	ENV 2 ENV 3	GOG 1; 1 of BOT 1, GLG 1, ZOO 1 or ANT 1 ENV 2
Geography EAR 101, GOG 102 GOG 201, GOG 202 GOG 301, GOG 302	GOG 1 GOG 2 GOG 3	GOG 1 GOG 2
Geology EAR 101, GLG 102 GLG 201, GLG 202 <sup>1</sup>  GLG 301, GLG 302 <sup>1</sup>	GLG 1 GLG 2  GLG 3	GLG 1; 2 of CHE 101, CHE 102, PHY 101, PHY 1E1, PHY 1E2, MAT 101 <sup>7</sup> , MAT 102 <sup>8</sup> , MAT 1 <sup>26</sup> GLG 2
Human Kinetics & Ergon. HKE 101, HKE 102 <sup>1</sup> HKE 201, HKE 202 <sup>1</sup> HKE 301, HKE 302 <sup>1</sup>	HKE 1 HKE 3 HKE 3	HKE 1 HKE 2; APA 2 (2010 only)
Ichthyology ICH 201, ICH 202 ICH 301, ICH 302	ICH 2 ICH 3	CEL 101; ZOO 101; BOT 102 <sup>2</sup> ; CHE 1 <sup>2</sup> ICH 2; 2 of CSC 101, CSC 102, STA 1D, STA 101, STA 102, MAT 101 <sup>7</sup> , MAT 102 <sup>8</sup> , MAT 1 <sup>6</sup>
Introductory Molecular Biology BCH 201, MIC 202	IMB 2	CHE 1
Information Systems INF 201, INF 202 <sup>1</sup> INF 301, INF 302 <sup>1</sup>	INF 2 INF 3	CSC 101; Must be a second-year student INF 2
Journalism & Media Studies JRN 1 JRN 2 JRN 3		JRN 1; Limited to a maximum of 110 students JRN 2

FACULTY OF SCIENCE

Legal Theory LEG 1 LEG 2 LEG 3		LEG 1 LEG 2
Management MAN 101, MAN 102 <sup>1</sup> MAN 201, MAN 202 <sup>1</sup> MAN 301, MAN 302 <sup>1</sup>	MAN 1 MAN 2 MAN 3	MAN 1; ACC 1 <sup>2</sup> MAN 2; ACC 1; MAT 1 <sup>6</sup> or (TOF 1 & STA 1D)
Mathematics MAT 1C1 MAT 1C2 MAT 1P MAM 201, MAM 202 MAT 301, MAT 302	MAT 1C  MAM 2 MAT 3	NSC Mathematics or HG Matric Mathematics NSC Mathematics or HG Matric Mathematics MAT 1 <sup>6</sup> MAT 2 or MAP 2 <sup>9</sup>
Mathematical Statistics MST 201, MST 202 <sup>1</sup> MST 301, MST 302 <sup>1,5</sup>	MST 2 MST 3	2 of MAT 101 <sup>7</sup> , MAT 102 <sup>8</sup> , MAT 1 <sup>6</sup> , STA 101 or STA 1D MST 2; MAT 1 <sup>6</sup> or MAT 101 <sup>7</sup> & MAT 102 <sup>8</sup>
Microbiology MIC 201, MIC 202 <sup>1</sup> MIC 302, MIC 302 <sup>1</sup>	MIC 2 MIC 3	CEL 101; ZOO 101 or BOT 102; CHE 1 <sup>2</sup> MIC 2; CHE 1
Music MUS 1, ETH 1, IMS 1 MUS 2, ETH 2, IMS 2 MUS 3, ETH 3, IMS 3		MUS 1 or ETH 1 or IMS 1 (respectively) MUS 2 or ETH 2 or IMS 2 (respectively)
Organizational Psychology ORG 2 ORG 3		PSY 1 ORG 2 or PSY 2 <sup>4</sup>
Physics & Electronics PHY 1E1, PHY 1E2 PHY 101, PHY 102 <sup>1</sup> PHY 201, PHY 202 PHY 301, PHY 302 <sup>1</sup>	PHY 1E PHY 1 PHY 2 PHY 3	NSC Mathematics or HG Matric Mathematics PHY1; MAT 1 <sup>2</sup> PHY 2; MAT 2 or MAP 2 <sup>9</sup>
Psychology PSY 101, PSY 102 PSY 2 PSY 3	PSY 1	PSY 1 PSY 2 or ORG 2 <sup>4</sup>
Statistics STA 101, STA 102 <sup>1</sup>	STA 1	NSC Mathematics or Matric Mathematics
Zoology CEL 101, ZOO 101 <sup>1</sup> ZOO 201, ZOO 202 <sup>1</sup> ZOO 301, ZOO 302 <sup>1</sup>	ZOO 1 ZOO 2 ZOO 3	CEL 101; ZOO 101; BOT 102 <sup>2</sup> ; CHE 1 <sup>2</sup> ZOO 2

**S.24**

S.24.1 Notwithstanding the provisions of Rule G.36, at the discretion of Departments in the Faculty of Science, a student's performance in a subject shall be assessed either

\* entirely at the end of the academic year

\* 50% in June and 50% in November (2-credit courses with write-offs)

\* 50% in June and 50% in November (aggregated 2-credit courses)

\* entirely in June or November, when the course is completed (1-credit courses)

S.24.2 Student assessment may incorporate class and practical records, as well as written examinations. The implication is that departments shall, where applicable, compute a first semester composite mark in June. Where assessment is subject to external examination, June assessments should be regarded as provisional, since external examiners usually perform their duties at the end of the year.

**S.25**

S.25.1 Students who have failed first-year first-semester courses but who have reached the necessary subminima may, on the recommendation of the Head of Department after consulting examiners, be admitted to supplementary examinations, normally written in November. Students who have passed first-year first-semester courses, but who wish to try to improve their classification may also be admitted to such examinations. Attention is drawn to Rule S.25.5.

S.25.2 Students will be required to have at least four semester-credits, and to have reached the necessary subminima, before being eligible for admission to supplementary examinations for first-year second-semester courses, to be written in January/February.

S.25.3 Only in exceptional circumstances will supplementary examinations be allowed in second- or third-year courses for subjects administered in the Faculty of Science.

S.25.4 Results of supplementary examinations for courses offered in the second semester are classified on the basis of passing or failing only.

S.25.5 A candidate who sits a supplementary examination for a first semester course shall have the mark and classification earned in the later examination recorded for that semester-credit course, and any computation of an aggregate course mark shall be performed on the basis of the marks earned for the later examination, and not on the basis of the highest mark ever obtained.

**S.26**

The degree certificate of a candidate who passes in class 1 in the final course of a major subject shall be endorsed with distinction in that subject. For the purpose of this rule, the final mark in a major subject shall, where applicable, be taken as the average mark of the semester-credit component courses.

**DEGREE OF BACHELOR OF SCIENCE WITH HONOURS**

**S.27**

Candidates shall not be admitted to any course for an honours degree unless they have been awarded the ordinary degree, or have been admitted to the status thereof; or have completed all the requirements thereof, except the requirements regarding attendance. Attention is drawn to the provisions of Rule G.49 of the General Rules.

**S.28**

S.28.1 Candidates shall not be admitted to any course for the honours degree unless they have obtained the permission of the Board of the Faculty on the recommendation of the Head of the Department concerned. Normally candidates will not be admitted to an honours course unless they have obtained at least a second class pass in the final year of the subject in which they wish to take honours.

S.28.2 The continued registration of Honours candidates beyond the first semester may be dependent on a satisfactory review of their progress.

**S.29**

A candidate who has satisfied the requirements of Rule S.27 by completing an ordinary degree in a faculty other than Science may, with the approval of Senate, be admitted to the status of BSc, and allowed to study for the degree of BSc(Hons).

**S.30**

S.30.1 A candidate shall attend the University for not less than one academic year after satisfying the requirements of Rule S.27, and pursue a course of advanced study in a subject approved by the Senate.

S.30.2 The following subjects have been approved by the Senate for this purpose:

African Vertebrate Biodiversity, Biodiversity and Conservation, Applied Mathematics, Biochemistry, Biotechnology, Botany, Chemistry, Computer Science, Electronics, Entomology, Environmental Water Management, Environmental Science, Ergonomics, Geography, Geology, Human Kinetics and Ergonomics, Ichthyology and Fisheries Science, Landscape Process and Management, Marine Biology, Mathematical Physics/Theoretical Physics, Mathematical Statistics, Mathematics, Microbiology, Physics, Spatial Development, Telecommunications, Zoology.

S.30.3 A Group B subject (as defined in Rule S.8) may also be offered for the honours degree; except that a candidate for an honours degree in such a subject may be required to obtain permission to transfer registration to the Faculty in which the subject is normally offered, and to proceed to an honours degree in that Faculty, depending on the combination of papers to be offered.

**S.31**

S.31.1 The honours degree normally requires a period of one year's full-time study.

S.31.2 Senate may, on the recommendation of the Head of the Department concerned, permit candidates to take honours courses over two years as full-time or as part-time students; provided that they attend the honours classes (including practicals) within the normal timetable of the Department, and that the honours course is spread over two years, but, except with the special permission of the Senate, no more than two years.

S.31.3 Students who originally register to take the honours degree over two years may, if progress is satisfactory, be allowed to change registration to complete the degree in the first year as full-time students. Full-time students who originally register to take the degree over one year may be advised by the Head of Department to take the degree over two years, or may opt to change registration to part-time. Any such changes must be effected no later than the end of the second week of the second semester.

S.31.4 Full-time candidates may withdraw from an Honours course during the second semester, but may not alter their registrations otherwise. On the recommendation of the Head of Department, candidates who withdraw may be permitted to register for the course in the following year, but will be required to complete all requirements for examination (including practical and project work) as though they had not previously been registered.

S.31.5 Any project work that forms part of the examinable material of an Honours degree must be completed and submitted before the final examinations are written.

**S.32**

A candidate may not take up any full-time employment while engaged in the course. However, on the recommendation of the Head of the Department concerned, with the approval of Senate, part-time employment is permitted.

**S.33**

An honours candidate may, on the recommendation of the Head of the Department concerned and with the permission of Senate, attend concurrently and write the examination in a maximum of two semester-credit undergraduate courses in the same or another department.

**S.34**

S.34.1 Subject to any exceptions approved by the Senate, or as provided in Rule S.34.2, the subject of an honours degree shall be one which the candidate has completed as a major subject for the ordinary degree.

S.34.2 Candidates for Honours degrees in various subjects not offered as major subjects in the ordinary degree shall normally have credit in cognate major subjects as provided in the following table:

African Vertebrate	Zoology
Biodiversity	Botany and Environmental Science
Biodiversity and Conservation	Biochemistry or Microbiology
Biotechnology	Physics with Electronics
Electronics	
Environmental Water Management	Geography
Environmental Science	Botany or Entomology or Geography or Geology or Zoology or Environmental Science
	Human Kinetics and Ergonomics
Ergonomics	
Landscape Process and Management	Geography
Ichthyology and Fisheries Science	Ichthyology or Zoology
Marine Biology	Botany or Ichthyology or Zoology
Mathematical Physics/Theoretical Physics	Physics and either Pure or Applied Mathematics
Telecommunications	Physics with Electronics

**S.35**

Candidates may, with the approval of the Senate, present themselves for examination in more than one subject; provided that the Heads of the relevant Departments have agreed upon the contents of the course and the structure of the examination. If more than 60% of the honours degree programme is given in one subject, the degree will be awarded in that subject. If between 40% and 60% of the degree programme is given in each of two subjects, the degree will be awarded as a joint degree in the two subjects.

**S.36**

Candidates who fail an honours examination may be permitted by the Senate to re-present themselves at most once for that examination, and for this purpose they shall be required to re-attend the course prior to such re-examination.

**S.37**

S.37.1 Subject to any exceptions approved by the Senate, a candidate must write all parts of the examination at one time, and shall not be exempted from any part of such examination; provided that students who are required to take the degree over two years may, on the recommendation of the Head of Department, and with the permission of Senate, write part of the examination at the end of the first year of study, and part at the end of the second year of study.

S.37.2 Exceptions have been approved for the following subjects, where parts of the examination may, at the discretion of the Head of Department, be written at any official examination session of the University.

Biochemistry, Biodiversity and Conservation Biotechnology, Computer Science, Information Systems, Mathematics, Microbiology, Mathematical Statistics, Physics, Electronics.

**DEGREES OF MASTER OF SCIENCE, DOCTOR OF PHILOSOPHY AND DOCTOR OF SCIENCE**

See General Rules and individual departmental entries.

**S.38**

The continued registration of MSc and PhD students (and, in particular, past the first year) is conditional on the Dean receiving satisfactory reports on their progress.

**S.39**

Applications to upgrade from MSc to PhD registration must be made on the official form and must normally be submitted within the first 18 months of registration.

**POSTGRADUATE AND HIGHER DIPLOMAS**

Various scientific postgraduate and higher diplomas may be awarded by the University.

The Postgraduate Diplomas in Fisheries Science (Resource Management) and Fisheries Science (Aquaculture) are not offered at present. They have occasionally been offered in the Department of Ichthyology and Fisheries Science, and are intended

for graduates who wish to obtain specialist career-oriented training in practical aspects of fisheries management and development, but do not intend to read for the honours or higher degrees.

**S.40**

**S.40.1** Candidates shall not be admitted to the course for the Postgraduate Diploma in Fisheries Science (Resource Management) unless they have satisfied the requirements of a BSc degree (with Zoology, or equivalent, as a major), a bachelor's degree in Agriculture or Veterinary Science, or a qualification deemed equivalent by Senate.

**S.40.2** Candidates shall not be admitted to the course for the Postgraduate Diploma in Fisheries Science (Aquaculture) unless they have satisfied the requirements of a BSc degree approved by the Head of the department, or a qualification deemed equivalent by Senate.

**S.41**

Candidates shall not be admitted to these courses unless they have obtained the permission of the Board of the Faculty, on the recommendation of the Head of the Department.

**S.42**

Candidates shall attend the University for the entire duration of the course, that is from 1 February to 30 November.

**S.43**

Candidates shall not be awarded either Postgraduate Diploma unless they obtain credit for all examinations as stipulated in the prospectus, and have satisfactorily completed and submitted their class work and research investigation on a subject approved by the Head of the Department.

**S.44**

The Diploma may be awarded with distinction.

**THE SCIENCE EXTENDED STUDIES PROGRAMME**

Special provision is made in the Faculty of Science to accommodate students who would not normally be admitted to the curricula for the degrees of Bachelor of Science, Bachelor of Science (Information Systems) or Bachelor of Science (Software Development), or who are identified as having potential, but as lacking an adequate educational background in certain key subjects. The Science Extended Studies Programme extends over a year, during which specially designed courses are offered, which earn credit towards a full degree.

**S.45**

**S.45.1** Candidates shall not normally be admitted to the Science Extended Studies Programme unless they are in possession of a National Senior Certificate or a matriculation certificate issued by the Matriculation Board, or have obtained a certificate of exemption therefrom.

**S.45.2** Candidates are normally expected to have achieved at least a level 3 in Mathematics or level 5 in Mathematical Literacy in the NSC, or passed Mathematics at the Standard Grade at matriculation level, and to have achieved at least a level 4 in either Biology or Physical Science at the NSC or passed either Biology or Physical Science at matriculation level.

**S.46**

**S.46.1** A student admitted to the Science Extended Studies Programme will register for a first-year curriculum that will earn four semester-credits if completed: Computer Skills 1S, Introduction to Science Concepts and Methods, Mathematics 1L.

**S.46.2** A student admitted to the Science Extended Studies Programme is required to obtain credit in all these foundation courses before later being admitted to other full courses.

**S.46.3** A student admitted to the Science Extended Studies Programme is expected to obtain credit in 20 semester credits before being admitted to the degree of BSc.

**S.46.4** Attention is drawn to Rule S.18 and Rule S.23.

**S.47**

A candidate admitted to the Science Extended Studies Programme may be permitted by the Dean to change registration to a regular curriculum during the first two weeks of term.

The syllabi for Mathematics 1L and for Computer Skills 1S and Introduction to Science Concepts and Methods are found in the respective course guides. The Mathematics course guide is distributed by the Department of Mathematics, while the Computer Skills 1S and Introduction to Science Concepts and Methods guides are distributed by the Science Extended Studies Unit. Computer skills for Science equips students with end-user training as well as basic web authoring, introduction to programming and information systems. Introduction to Science Concepts and Methods is a multidisciplinary, theme-based course with contributions from several departments in the Science Faculty. The class record marks for both Computer Skills 1S and Introduction to Science Concepts and Methods are generated through continuous assessment of a variety of tasks. The class record, along with a formal examination mark, contributes towards the assessment of both courses.