UNIVERSITY OF KELANIYA
SRI LANKA
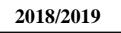
Faculty of Science

Student Handbook

**BACHELOR OF SCIENCE
AND BACHELOR OF SCIENCE HONOURS
DEGREE PROGRAMMES**

**BACHELOR OF SCIENCE IN
PHYSICS AND ELECTRONICS
DEGREE PROGRAMME**

**BACHELOR OF SCIENCE IN
ENVIRONMENTAL CONSERVATION AND MANAGEMENT AND BACHELOR OF
SCIENCE HONOURS IN
ENVIRONMENTAL CONSERVATION AND MANAGEMENT
DEGREE PROGRAMMES**

**BACHELOR OF SCIENCE HONOURS IN
MANAGEMENT AND INFORMATION TECHNOLOGY
DEGREE PROGRAMME**

**BACHELOR OF SCIENCE HONOURS IN
SOFTWARE ENGINEERING
DEGREE PROGRAMME**

2018/2019

UNIVERSITY OF KELANIYA
SRI LANKA

Mission of the Faculty of Science

The Mission of the Faculty of Science of the University of Kelaniya is to produce highly motivated graduates and postgraduates capable of making a significant contribution towards national development and the well being of mankind, to conduct research and provide advice and consultancy services in various scientific disciplines to foster a better understanding of the environment for sustainable use and conservation of natural resources.

CONTENTS

**BSc and
BSc Hons Degrees**

1.1   Preamble

The Faculty of Science of the University of Kelaniya consists of eight academic Departments, namely the Departments of Chemistry, Industrial Management, Mathematics, Microbiology, Physics and Electronics, Plant & Molecular Biology, Statistics & Computer Science, and Zoology & Environmental Management. Academic programmes of the Faculty operate on a 'Course Unit System' i.e. a modularized credit based system within a two-semester academic year with end of course examinations. It offers a variety of course combinations that are designed to provide maximum possible flexibility in the choice of subjects.

The Faculty of Science offers 3 Bachelor of Science Degree Programmes of 3-year duration, and 15 Bachelor of Science Honours Degree Programmes of 4-year duration.

The Bachelor of Science Degree Programmes are
   (i)   Bachelor of Science,
   (ii)   Bachelor of Science in Environmental Conservation and Management (ENCM), and
   (iii) Bachelor of Science in Physics and Electronics (PE).

The Bachelor of Science Honours Degree Programmes are
   (i)   Bachelor of Science Honours in Biochemistry,
   (ii)   Bachelor of Science Honours in Botany,
   (iii)   Bachelor of Science Honours in Chemistry,
   (iv)   Bachelor of Science Honours in Computer Science,
   (v)   Bachelor of Science Honours in Computer Studies,
   (vi)   Bachelor of Science Honours in Environmental Conservation and Management,
   (vii)   Bachelor of Science Honours in Management and Information Technology,
   (viii) Bachelor of Science Honours in Mathematical Physics,
   (ix)   Bachelor of Science Honours in Mathematics,
   (x)   Bachelor of Science Honours in Microbiology,
   (xi)   Bachelor of Science Honours in Molecular Biology & Plant Biotechnology,
   (xii)   Bachelor of Science Honours in Physics,
   (xiii) Bachelor of Science Honours in Software Engineering,
   (xiv)   Bachelor of Science Honours in Statistics, and
   (xv)   Bachelor of Science Honours in Zoology.

The duration of a semester is 15 weeks. After 15 weeks of teaching, a study leave period of 2 weeks is given followed by end of course examinations that are conducted within a period of 3 to 4 weeks. Examinations of laboratory course units are usually conducted either during the last week of the semester or during the examination period.

A course unit is a subject module which has a credit value. A credit is a time based quantitative measure used in calculating the grade point average. The course modules are organized at four levels namely level 1, level 2, level 3 and level 4.

For level 1, level 2 and level 3 course units, credit ratings are as follows.

For course units with lectures only
15 contact hours = 1 credit

For course units with laboratory work only
30 – 45 hours of laboratory work = 1 credit
60 – 75 hours of laboratory work = 2 credits

For course units with both lectures and laboratory/field work
10 contact hours + 15 hours of laboratory work = 1 credit
(or any combination of contact hours (< 15) and practical work where one contact hour to be replaced by 3 hours of laboratory/field work = 1 credit)

Theory course units at level 4 with 15 hours of lectures, seminars and tutorials in any combination carry a credit rating of one. Laboratory course units and research projects at level 4 with 30 hours of laboratory or field work carry a credit rating of one. A level 4 lecture *cum* practical course unit with 10 hours of lectures plus 15 hours of laboratory or 15 hours of field work also carries a credit rating of one.

1.2   Sri Lanka Qualifications Framework

The Sri Lanka Qualifications Framework (SLQF) is a nationally consistent framework for all higher education qualifications offered in Sri Lanka. The SLQF applies to all higher education institutions (HEIs) both public and private, which comprises of 12 Levels. SLQF recognizes the volume of learning of students and identifies the learning outcomes that are to be achieved by the qualification holders.

SLQF level	Qualification awarded	Minimum Volume of Learning for the Award
SLQF 6	Bachelor of Science Honours	120 credits after GCE (A/L) of which 90 credits after SLQF 3, of which 60 credits after SLQF 4, of which 30 credits after SLQF 5
SLQF 5	Bachelor of Science	90 credits after GCE (A/L) of which 60 credits after SLQF 3, of which 30 credits after SLQF 4
SLQF 4		60 credits after GCE (A/L) of which 30 credits after SLQF 3
SLQF 3		30 credits after GCE (A/L)

The **SLQF levels** 3, 4 and 5 are corresponding sequentially to the first, second and third years of an undergraduate study programme leading to Bachelors qualification. Also, the **SLQF level** 6 is corresponding to fourth year of an undergraduate study programme leading to Bachelors Honours qualification.

According to SLQF guidelines, **1 credit** is equivalent to **50 notional learning hours** for a taught course, laboratory studies course or field studies. In case of industrial

training/professional placement/internship/research projects, **1 credit** is equivalent to a minimum of **100 notional learning** hours.

1.3 Notations of Course Units and Abbreviations Used

There are three types of course units, namely **Compulsory (C), Optional (O) and Auxiliary (A)**.

All **compulsory course units** of a given subject together form the minimum subject content required to be completed by a student following those units as the subject.

The **optional course units** are those outside the core of a particular subject.

The **auxiliary course units** of a subject are, in general, designed to provide fundamental knowledge and to develop some skills in selected areas of the subject. Auxiliary course units of a subject are offered, without any pre-requisites, to all students other than those who are following that as a subject.

An alpha numeric code is used to identify a unit. The code consists of five digits prefixed by a set of four letters which refers to the principal discipline of the course content of the unit.

The first digit denotes the level of the course unit whereas the fifth digit signifies its credit value. The second digit indicates the semester in which the course unit is offered (1 – first semester, 2 – second semester, 3 – both first & second semesters, 4 – either the first or the second semester). The third and fourth digits together form a number assigned by the Department that conducts it.

The academic disciplines designated by the 4 letters in the code are as follows:

Applied Mathematics	AMAT
Biochemistry*	BIOC
Biological Science Compulsory Course Units*	BIOL
Botany*	BOTA
Business Finance[1]	BFIN
Chemistry*	CHEM
Computer Science*	COSC
Computer Studies*	COST
Electronics*	ELEC
Environmental Conservation and Management*	ENCM
Generic Competencies	GNCT
Industrial Management	IMGT
Information Technology*	INTE
Management for Physical Science Students*	MAPS
Management and Technology*	MGTE
Microbiology*	MIBI
Molecular Biology & Plant Biotechnology*	MBBT
Multi-Disciplinary Group Project*	MDGP

Physics*	PHYS
Professional Placement	PRPL
Pure Mathematics	PMAT
Software Engineering*	SENG
Statistics*	STAT
Zoology*	ZOOL

* - with a practical component
[1] – offered by the Faculty of Commerce & Management Studies

Some course units require courses of study that must previously be completed before students are allowed to follow them. Such courses of study are called pre-requisites (PR). Some of the pre-requisites are subjects taken for the GCE (Advanced Level) Examination. Some other course units require certain course units, which are called co-requisites (CR), to be taken simultaneously with them. Practical course units are co-requisites for theory course units and vice-versa.

1.4 Bachelor of Science Degree Programmes (SLQF 5)
1.4.1 Biological Science
Selection of 185 students is done by the UGC from the A/L Biological Science stream. All the students are required to follow all the stream compulsory course units (page 36.) as specified for the first semester of the first academic year. All students have the option of following the Computer Science course unit COST 11513 during the first semester of the first academic year. Those who wish to follow Computer Studies as a subject are required to offer COST 11513 and COST 11522 during the first semester of the first academic year.

In the Biological Science streams, Biochemistry (BIOC), Computer Studies (COST), Microbiology (MIBI) and Molecular Biology & Plant Biotechnology (MBBT) subjects have limited enrolment. Selection of students for these subjects will be carried out at the beginning of the second semester of the first academic year based upon the performance at examinations in the first semester of the first academic year when demand exceeds capacity.

1.4.2 Environmental Conservation and Management
Selection of 60 students is done by the UGC from the Biological Science stream. Students are not permitted to change their degree programme to any other degree programme after the registration according to the UGC regulations. The course structure for this programme is given in the page 36.

1.4.3 Physical Science
Selection of 300 students is done by the UGC from the A/L Physical Science stream. Selection of students for preferred subjects in the Physical Science streams will be carried out at the beginning of the first academic year when demand exceeds capacity. In the Physical Sciences, Computer Science (COSC), Computer Studies (COST), Electronics (ELEC), Physics (PHYS) and Statistics (STAT) subjects have limited enrolment.

1.4.4   Physics and Electronics

Selections of students are done by the UGC and the number is limited to 50 students. The course structure for this programme is given in the page 31.

Students following the BSc Degree, BSc (ENCM) Degree, and BSc (PE) Degree are required to follow only the levels 1, 2 and 3 course units. Course units to be completed during each academic year by the students following the BSc Degree, BSc (ENCM) Degree and BSc (PE) Degree Programmes are given in Pages from 24 to 32 of this Handbook. After deciding on a particular subject combination, a student should take all course units in the category 'C' of the selected subjects and sufficient number of units in categories 'O' and 'A', as the timetable permits, to make up at least 30 credits in each academic year. A student may take course units aggregating **to a total of not more than 6 credits with only 2 credits per semester from the other Faculties** for the Degree Programme. Students are advised to consult an academic advisor of the Faculty before deciding on their choice of course units.

All credits accumulated by a student over the entire three academic year period shall be considered for the computation of the GPA in respect of the BSc Degree Programme, the BSc (ENCM) Degree Programme and BSc (PE) Degree Programme **unless stated otherwise**.

1.5   Bachelor of Science Honours Degree Programmes (SLQF 6)

The Faculty of Science offers 15 BSc Hons Degree programmes. Students are enrolled to some Honours programmes through a direct intake whereas for the others; students are enrolled at the end of the second academic year based on merit.

The maximum number of credits that should be accumulated by a student following an Honours Degree Programme shall be determined by the Department(s) concerned.

During the fourth academic year, an Honours Degree student should carry out a research/study project on a given topic under the supervision of a senior member of the academic staff assigned by the Department(s).

All credits accumulated by a student over the entire four academic year period shall be considered for the computation of the Grade Point Average (GPA) in respect of the BSc Hons Degree Programme in the relevant subject, **unless stated otherwise**.

1.5.1   Honours Degrees with direct intakes

Students who have been selected to follow the Bachelor of Science Honours in Management and Information Technology Degree programme and the Bachelor of Science Honours in Software Engineering Degree programme enrol directly for the said programmes from their first academic year. At the end of the second academic year, the students may select different specialization paths as follows.

(i) Management and Information Technology (MIT)

The students who follow the BSc Hons in Management and Information Technology (MIT) can select one of the following major areas of specializations in their third academic year. They are Information Technology (IT), Information Systems (IS), Business Systems Engineering (BSE), and Operations and Supply Chain Management (O&SCM).

Students may opt for the three year BSc (MIT) Degree by making a request at the end of their third academic year provided that they have completed the necessary requirements for the award of the degree mentioned under 2.10.2.

(ii) Software Engineering (SENG)

The software engineering programme has been designed in such a way that it provides the necessary flexibility for the students to develop competencies in specific application domains relevant to current human resource requirements. During their third academic year, students can choose their pathways comprising the following application domains: Net centric applications domain (AD1), Mobile computing applications domain (AD2), Data science and Engineering applications domain (AD3), Health informatics applications domain (AD4), Digital gaming and animation applications domain (AD5), Business engineering applications domain (AD6).

1.5.2 Honours Degree with Intakes at the End of the Second Academic Year

At the end of the second academic year, a student may apply to follow the BSc Hons Degree Programme in any one of the following subjects: Biochemistry, Botany, Chemistry, Computer Science, Computer Studies, Environmental Conservation and Management, Mathematical Physics, Mathematics, Microbiology, Molecular Biology and Plant Biotechnology, Physics, Statistics, and Zoology.

The minimum requirements to apply for the BSc Hons Degree Programmes are as follows:

(i) Biochemistry

A student should have obtained a GPA of 3·00 or greater for compulsory course units in Biochemistry offered in first two years, BIOL 11532 and B grades for additional 03 credits from any of the following course units; CHEM 11522 General Chemistry and Basic Analytical Chemistry/ CHEM 12562 Basic Organic Chemistry/ CHEM 12571 Introductory Organic Chemistry Laboratory/ CHEM 22552 Organic Spectroscopy, Synthetic and Natural Product Chemistry/ CHEM 22561 Organic Spectroscopy, Synthetic and Natural Product Chemistry Laboratory. In addition, a student should obtain grades of C or better for all course units mentioned above and should not have obtained either D/D+/C- grades in course units offered in year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in year 1 and 2.

(ii) Botany

A student should have obtained grades of B or better in compulsory course units in Botany, offered in the first two years, BIOL 11512 Scope and Fundamentals of Microbiology and BIOL 11522 Genetics aggregating to 22 credits. In addition, a student should not have obtained either D/D+/C- grades in course units offered in the year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2.

(iii) Chemistry

A student should have obtained a GPA of 3·00 or greater for compulsory course units in Chemistry offered in first two years aggregating to 21 credits counted for GPA. In addition, a student should obtain grades of C or better for all chemistry course units mentioned above and should not have obtained either D/D+/C- grades in course units offered in year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in year 1 and 2.

(iv) Computer Science

A student should have obtained grades of B or better in compulsory course units offered in first two years in Computer Science aggregating to at least 21 credits and followed Pure Mathematics as a subject in the first two years of study. In addition, a student should not have obtained either D/D+/C- grades in course units offered in year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in year 1 and 2.

(v) Computer Studies

A student should have obtained at least B grades for course units in Computer Studies (COST) offered in first two years aggregating to 20 credits in the first two years of study. In addition, a student should not have obtained either D/D+/C- grades in course units offered in year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in year 1 and 2.

(vi) Environmental Conservation and Management (ENCM)

A student should have obtained grades of C or better in all BOTA, CHEM, ENCM, MIBI, and ZOOL compulsory course units offered in first two years prescribed for the Degree programme and obtained grades of B or better aggregating to at least 40 credits from BOTA, ENCM, MIBI and ZOOL course units.

(vii) Mathematical Physics

A student should have followed Applied Mathematics, Physics and Pure Mathematics as subjects in the first two years of study and should have obtained a GPA of 3·00 or better in compulsory course units offered in the first two years aggregating to 20 credits in Pure Mathematics, 18 credits in Applied Mathematics and 18 credits in Physics counted for GPA. In addition, a student should obtain grades of C or better for all course units mentioned above. A student should not have obtained either D/D+/C- grades in course units offered in the first two years aggregating to more than 8 credits, or E grades in course unit offered in the year 1 and 2.

(viii) Mathematics (Pure Mathematics and Applied Mathematics)

A student should have obtained a GPA of 3·00 or greater for compulsory course units offered in the first two years in Pure Mathematics aggregating to 20 credits and Applied Mathematics aggregating to 18 credits counted for GPA. In addition, a student should obtain grades of C or better for all Pure and Applied Mathematics course units mentioned above and should not have obtained either D/D+/C- grades in course units offered in the first two years aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2.

(ix) Mathematics (Pure Mathematics and Statistics)

A student should have obtained a GPA of 3·00 or greater for compulsory course units in Pure Mathematics aggregating to 20 credits and Statistics aggregating to 20 credits counted for GPA offered in the first two years. In addition, a student should obtain grades of C or better for all Pure Mathematics and Statistics course units mentioned above and should not have obtained either D/D+/C- grades course units offered in the year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2.

(x) Microbiology

A student should have obtained grades of B or better for in compulsory course units offered in the first two years in Microbiology and BIOL 11512 Basic Microbiology aggregating to at least 20 credits. In addition, a student should not have obtained either D/D+/C- grades in course units offered in the year 1 and 2aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2.

(xi) Molecular Biology & Plant Biotechnology

A student should have obtained grades of B or better in compulsory course units in Molecular Biology & Plant Biotechnology offered in the first two years, and BIOL 11512 Scope and Fundamentals of Microbiology and BIOL 11522 Genetics aggregating to 21 credits. In addition, a student should not have obtained either D/D+/C- grades in course units offered in the year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2.

(xii) Physics

A student should have obtained a GPA of 3·00 or greater for compulsory course units in Physics offered in the first two years aggregating to 18 credits counted for GPA. In addition, a student should obtain grades of C or better for all physics course units mentioned above and should not have obtained either D/D+/C- grades in course units offered in the year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2. The maximum number of students for BSc Hons Degree Programme is determined by the Department depending on the facilities available in each year.

(xiii) Statistics

A student should have obtained grades of B or better in compulsory course units offered in the first two years aggregating to 20 credits in Statistics and followed Pure Mathematics as a subject in the first two years of study. In addition, a student should not have obtained either D/D+/C- grades in course units offered in the year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2.

(xiv) Zoology

A student should have obtained grades of B or better in compulsory course units in Zoology offered in the first two years and BIOL 11542 Animal Form, Function and Behaviour, BIOL 11512 Scope and Fundamentals of Microbiology and BIOL 11522 Genetics, aggregating to at least 20 credits. In addition, a student should not have obtained either D/D+/C- grades in course units offered in the year 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the year 1 and 2.

Selection criteria may be varied at the discretion of the Department concerned. A student selected for the BSc Hons Degree Programme is required to obtain the approval of the relevant Head/Heads of the Department/Departments for the course units he/she intends to follow before enrolling for the programme.

During the fourth academic year, an Honours Degree student should carry out a research/study project on a given topic under the supervision of a senior member of the academic staff assigned by the Department/Departments.

All credits accumulated by a student over the entire four academic year period shall be considered for the computation of the Grade Point Average (GPA) in respect of the BSc Hons Degree Programme in the relevant subject, **unless stated otherwise**.

1.6   Registration for Courses

Students are strongly advised to obtain advice from relevant academic advisors prior to registration for course units, and must complete their registration for selected course combinations at the beginning of the commencement of each academic year. A student must also ensure that he/she fulfils the required pre-requisites.

1.7   Changes of Courses

A student wishing to drop or add a course unit may do so within the first two weeks of the relevant semester. **No changes in enrolment for course units shall be permitted later than the stipulated period.**

1.8   Attendance

Students are strongly advised to attend and actively participate in their academic activities regularly, as it has proven that there is a highly significant relationship with the grades obtained for a particular course unit and attendance.

For the Level 1, 2 and 3 theory course units 90% of the marks is assigned based on the assessments (including continuous assessments) and the balance 10% of the marks is allocated based on the attendance at the lectures. For the Level 4 theory course units 100% of the marks is assigned based on the assessments (including continuous assessments).

If the attendance of a student at a laboratory course unit is between 50% - 79% the best grade obtainable by a student for that course unit will be "C" and if the attendance of a student at a laboratory course unit is less than 50%, the best grade obtainable by the student will be "D".

2. ASSESSMENT CRITERIA

2.1   Assessment Procedure

Student performance at a course unit is generally assessed through assignments, reports, presentations and end of course examinations. The method of assessment will be announced by the relevant Department at the commencement of a course unit. The research projects of the BSc Hons Degree Programme are assessed by a dissertation and an oral presentation.

2.2   Grading System

Marks obtained in respect of a course unit will be graded according to the following grading system. A grade point value as indicated below is assigned to each grade.

Range of Marks	Grade	Grade Point Value
85 -100	A+	4·0
70 -84	A	4·0
65 -69	A-	3·7
60 -64	B+	3·3
55 -59	B	3·0
50 -54	B-	2·7
45 -49	C+	2·3
40 -44	C	2·0
35 -39	C-	1·7
30 -34	D+	1·3
25 -29	D	1·0
00 -24	E	0·0

Students should complete all course units that they are registered for and if they fail to complete a particular course unit, it will be indicated in the transcript as "absent" and a zero (0·0) grade point value will be assigned to it.

2.3   Repeating a Course Unit Examination

A student who does not obtain a grade C or better in a particular course unit may re-sit the examination of that course unit in the following academic year for the purpose of improving the grade. The best grade obtainable by a student in this instance would be C. In the event a student obtains a lower grade while attempting to better the grade, he/she will be entitled to the previous grade.

2.4   Grade Point Average
Grade Point Average (GPA) is the credit-weighted arithmetic mean of the Grade Point Values, which is determined by dividing the total credit-weighted Grade Point Value by the total number of credits. GPA shall be computed to the second decimal place.

Example: A student who has completed one course unit with two credits, three course units each of three credits and two course units each of 1 credit with grades A, C, B, D, C+ and A+ respectively would have the GPA of 2·48 as calculated below.

$$\frac{(2\times4\cdot0)+(3\times2\cdot0)+(3\times3\cdot0)+(3\times1\cdot0)+(1\times2\cdot3)+(1\times4\cdot0)}{2+3+3+3+1+1}=\frac{32\cdot3}{13}=\ 2\cdot4846$$

Grade Point Average   = 2·48

Grade point values and credit values of all registered course units in a study programme of a student shall be taken into account in calculating the final GPA, unless stated otherwise.

2.5   Bachelor of Science Degree (SLQF 5)
2.5.1   Eligibility for the Award of the Bachelor of Science Degree and Bachelor of Science in Physics and Electronics (PE) Degree.
To be eligible for the BSc Degree/BSc (PE) Degree a student must
   (i)   accumulate grades of D or better in course units, aggregating to at least 60 credits during the first two academic years, and aggregating to at least 90 credits during the entire three academic year period, including the stream compulsory units where applicable, of which at least 30 credits must be from each academic year separately,
  (ii)   obtain grades of C or better in course units aggregating to at least 72 credits of which at least 48 must be from two subjects with at least 24 credits from each of them, and grades of D or better in course units aggregating to at least further 18 credits, considered under (i) above, provided that at least one of the above two subjects is with a practical component,
 (iii)   obtain a GPA of 2·00 or greater, and
 (iv)   complete the relevant requirements within a period of five consecutive academic years.

2.5.2   Award of Classes
2.5.2.1   First Class
A student who is eligible for the BSc Degree/BSc (PE) Degree may be awarded First Class provided he/she
   (i)   obtains grades of C or better in course units aggregating to at least 90 credits, considered under 2.5.1 (ii),
  (ii)   obtains grades of A or better in course units aggregating to at least half the number of total credits for the course units considered under 2.5.1 (ii),
 (iii)   obtains a GPA of 3·70 or greater, and
 (iv)   completes the relevant requirements within three consecutive academic years.

2.5.2.2   Second Class (Upper Division)

A student who is eligible for the BSc Degree/BSc (PE) Degree may be awarded Second Class (Upper Division) provided he/she

- (i) obtains grades of C or better in course units aggregating to at least 80 credits and grades of D or better in the remaining course units, considered under 2.5.1 (ii),
- (ii) obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units considered under 2.5.1 (ii),
- (iii) obtains a GPA of 3·30 or greater, and
- (iv) completes the relevant requirements within three consecutive academic years.

2.5.2.3   Second Class (Lower Division)

A student who is eligible for the BSc Degree/BSc (PE) Degree may be awarded Second Class (Lower Division) provided he/she

- (i) obtains grades of C or better in course units aggregating to at least 80 credits and grades of D or better in the remaining course units, considered under 2.5.1 (ii),
- (ii) obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units considered under 2.5.1 (ii),
- (iii) obtains a GPA of 3·00 or greater, and
- (iv) completes the relevant requirements within three consecutive academic years.

2.6   Bachelor of Science in Environmental Conservation & Management Degree (ENCM)

2.6.1   Eligibility for the Award of the Bachelor of Science in Environmental Conservation & Management Degree

To be eligible for the BSc (ENCM) Degree, a student must

- (i) accumulate grades of D or better in course units, aggregating to at least 60 credits during the first two academic years, and aggregating to at least 90 credits during the entire three academic year period, of which at least 30 credits must be from each academic year separately,
- (ii) obtain grades of C or better in course units aggregating to at least 72 credits of which not less than 48 must be from compulsory course units and grades of D or better in course units aggregating to at least further 18 credits, considered under (i) above, with the proviso that he/she should not have obtained grades of D/D+/C- in course units aggregating to more than 6 credits in each of the three subject areas (ENCM course units; BOTA, MIBI and ZOOL course units; CHEM course units),
- (iii) obtain a GPA of 2·00 or greater, and
- (iv) complete the relevant requirements within a period of five consecutive academic years.

2.6.2   Award of Classes
2.6.2.1   First Class
A student who is eligible for the BSc (ENCM) Degree may be awarded First Class provided he/she
- (i)   obtains grades of C or better in course units aggregating to at least 90 credits, considered under 2.6.1 (ii),
- (ii)   obtains grades of A or better in course units aggregating to at least half the number of total credits for the course units considered under 2.6.1 (ii),
- (iii)   obtains a GPA of 3.70 or greater, and
- (iv)   completes the relevant requirements within three consecutive academic years.

2.6.2.2   Second Class (Upper Division)
A student who is eligible for the BSc (ENCM) Degree may be awarded Second Class (Upper Division) provided he/she
- (i)   obtains grades of C or better in course units aggregating to at least 80 credits and grades of D or better in the remaining course units, considered under 2.6.1 (ii),
- (ii)   obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units considered under 2.6.1 (ii),
- (iii)   obtains a GPA of 3·30 or greater, and
- (iv)   completes the relevant requirements within three consecutive academic years.

2.6.2.3   Second Class (Lower Division)
A student who is eligible for the BSc (ENCM) Degree may be awarded Second Class (Lower Division) provided he/she
- (i)   obtains grades of C or better in course units aggregating to at least 80 credits and grades of at least D in the remaining course units, considered under 2.6.1 (ii),
- (ii)   obtains grades of B or better in course units aggregating to at least half the number of total credits for the course units considered under 2.6.1 (ii),
- (iii)   obtains a GPA of 3·00 or greater, and
- (iv)   completes the relevant requirements within three consecutive academic years.

2.7   Bachelor of Science Honours Degree (SLQF 6)
2.7.1   Eligibility for the Award of the Bachelor of Science Honours Degree
To be eligible for the BSc Hons Degree, a student must
- (i)   accumulate grades of D or better,
    - (a)   in course units aggregating to at least 30 credits, including either at least 10 credits in the subject of specialization and the stream compulsory course units where applicable, or at least 10 credits each in the subjects of specialization and the stream compulsory course units where applicable, as the case may be, in each academic year, totalling to at least 60 credits, in the first two academic years, and

(b) aggregating to at least 66 credits in the third and the fourth academic year course units including at least 48 credits in level 4 course units in the subject/subjects of specialization, totalling to at least 126 credits, provided that he/she accumulates credits in the compulsory course units as stipulated by the relevant Department/Departments of study,

(ii) obtain grades of C or better in course units aggregating to at least 100 credits of which at least 40 credits should be in level 4 course units, and grades of D or better in course units aggregating to at least further 26 credits, with the proviso that he/she should not obtain grades of E in any of the course units in the subject/subjects of specialization, considered under (i) above,

(iii) obtain a GPA of 2·00 or greater, and

(iv) complete the relevant requirements within a period of six consecutive academic years.

2.7.2 Award of Classes
2.7.2.1 First Class
A student who is eligible for the BSc Hons Degree may be awarded First Class if he/she

(i) obtains grades of C or better in course units, including all the course units in the subject/subjects of specialization, aggregating to at least 126 credits, considered under 2.7.1 (ii),

(ii) obtains a GPA of 3.70 or greater,

(iii) obtains grades of A or better in level 4 course units in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,

(iv) obtains grades of A or better in level 4 and level 3 course units where applicable, in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units, and

(v) completes the relevant requirements within four consecutive academic years.

Note: A student who obtains grades of D/D+/C- aggregating to not more than 6 credits in level 4 course units, but fulfils all the other requirements stipulated under 2.7.2.1 may be considered by the Board of Examiners for the award of Second Class (Upper Division).

2.7.2.2 Second Class (Upper Division)
A student who is eligible for the BSc Hons Degree may be awarded Second Class (Upper Division) if he/she

(i) obtains grades of C or better in course units, including all the course units in the subject/subjects of specialization, aggregating to at least 116 credits, considered under 2.7.1 (ii),

(ii) obtains a GPA of 3·30 or greater,

(iii) obtains grades of B or better in level 4 course units in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,

(iv) obtains grades of B or better in level 4 and level 3 course units where applicable, in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units, and

(v) completes the relevant requirements within four consecutive academic years.

Note: A student who obtains grades of D/D+/C- aggregating to not more than 6 credits in level 4 course units, but fulfils all the other requirements stipulated under 2.7.2.2 may be considered by the Board of Examiners for the award of Second Class (Lower Division).

2.7.2.3   Second Class (Lower Division)
A student who is eligible for the BSc Hons Degree may be awarded Second Class (Lower Division) provided he/she
   (i) obtains grades of C or better in course units, including all the course units in the subject/subjects of specialization, aggregating to at least 116 credits, considered under 2.7.1 (ii),
  (ii) obtains a GPA of 3·00 or greater,
 (iii) obtains grades of B or better in level 4 course units in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,
 (iv) obtains grades of B or better in level 4 and level 3 course units where applicable, in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units, and
  (v) completes the relevant requirements within four consecutive academic years.

2.7.3   Option of reverting to the BSc Degree
A student reading for a BSc Hons Degree may request the award of the BSc Degree foregoing the BSc Hons Degree, upon satisfying the requirements for the award of the BSc Degree. This request should be made in the course of the 4th academic year or within 14 days from the date of final release of the results of the level 4 course units by the Faculty.

The results of the BSc Degree shall be determined solely on the basis of course units followed in the first three academic years.

2.8   Bachelor of Science Honours in Environmental Conservation & Management Degree (ENCM)
2.8.1   Eligibility for the Award of the Bachelor of Science Honours in Environmental Conservation & Management Degree
To be eligible for the BSc Hons (ENCM) Degree, a student must
   (i) accumulate grades of D or better,
      (a) in course units aggregating to at least 30 credits, including all compulsory course units in each academic year, totalling to at least 60 credits in the first two academic years, and
      (b) aggregating to at least 66 credits in the third and the fourth academic years, including all the compulsory course units, and at least 48 credits in the level 4 course units, to totalling at least 126 credits,
  (ii) obtain grades of C or better in course units aggregating to at least 100 credits of which at least 40 credits should be in level 4 course units including the final year research project, and grades of D or better in course units aggregating to at least further 26 credits, with the proviso that he/she should not obtain grades of D/D+/C- in course units aggregating to more than 6 credits in each of

the three subject areas (level 1, 2, & 3 ENCM course units; BOTA, MIBI and ZOOL course units; CHEM course units), or grades of E in any of the course units, considered under (i) above,

(iii) obtain a GPA of 2·00 or greater, and

(iv) complete the relevant requirements within a period of six consecutive academic years.

2.8.2   Award of Classes
2.8.2.1   First Class
A student who is eligible for the BSc Hons (ENCM) Degree may be awarded First Class if he/she

(i) obtains grades of C or better in course units, including all the compulsory course units in the subject of specialization, aggregating to at least 126 credits, considered under 2.8.1 (ii),

(ii) obtains a GPA of 3·70 or greater,

(iii) obtains grades of A or better in level 4 course units, aggregating to at least half the number of credits accumulated in such course units,

(iv) obtains grades of A or better in level 4 and level 3 course units, aggregating to at least half the number of credits accumulated in such course units, and

(v) completes the relevant requirements within four consecutive academic years.

Note: A student who obtains grades of D/D+/C- aggregating to not more than 6 credits in level 4 course units, but fulfils all the other requirements stipulated under 2.8.2.1 may be considered by the Board of Examiners for the award of Second Class (Upper Division).

2.8.2.2   Second Class (Upper Division)
A student who is eligible for the BSc Hons (ENCM) Degree may be awarded Second Class (Upper Division) if he/she

(i) obtains grades of C or better in course units, including the compulsory course units, aggregating to at least 116 credits, considered under 2.8.1 (ii),

(ii) obtains a GPA of 3·30 or greater,

(iii) obtains grades of B or better in level 4 course units, aggregating to at least half the number of credits accumulated in such course units,

(iv) obtains grades of B or better in level 4and level 3 course units, aggregating to at least half the number of credits accumulated in such course units, and

(v) completes the relevant requirements within four consecutive academic years.

Note: A student who obtains grades of D/D+/C- aggregating to not more than 6 credits in level 4 course units, but fulfils all the other requirements stipulated under 2.8.2.2 may be considered by the Board of Examiners for the award of Second Class (Lower Division).

2.8.2.3   Second Class (Lower Division)
A student who is eligible for the BSc Hons (ENCM) Degree may be awarded Second Class (Lower Division) provided he/she

(i) obtains grades of C or better in course units, including the compulsory course units, aggregating to at least 116 credits, considered under 2.8.1 (ii),

(ii) obtains a GPA of 3·00 or greater,

   (iii) obtains grades of B or better in level 4 course units, aggregating to at least half the number of credits accumulated in such course units,

   (iv) obtains grades of B or better in level 4 and level 3 course units, aggregating to at least half the number of credits accumulated in such course units, and

   (v) completes the relevant requirements within four consecutive academic years.

2.8.3   Option of reverting to the Bachelor of Science in Environmental Conservation & Management Degree (ENCM)

A student reading for a BSc Hons (ENCM) Degree may request the award of the BSc ENCM Degree foregoing the BSc Hons (ENCM) Degree, upon satisfying the requirements for the award of the BSc Degree. This request should be made in the course of the 4th academic year or within 14 days from the date of final release of the results of the level 4 course units by the Faculty.

The results of the BSc ENCM Degree shall be determined solely on the basis of course units followed in the first three academic years.

2.9   Bachelor of Science Honours in Management and Information Technology Degree (MIT)

2.9.1   Eligibility for the award of the Bachelor of Science Honours in Management and Information Technology Degree

To be eligible for the BSc Hons (MIT) Degree, a student must

   (i) accumulate grades of D or better, in course units including all core course units, totalling to a minimum of 120 credits of which at least 30 credits must be from each level separately, with

     (a) a minimum aggregate of at least 14 credits from optional courses from the Major area of study

   (ii) obtains grades of C or better in course units totalling to at least 104 credits with at least D grades for the remaining course units, and

   (iii) obtain grades of C or better in compulsory course units totalling to at least 90 credits with at least D grades for the remaining compulsory course units, and

   (iv) obtain grades of C or better for either MGTE 43216 or INTE 43216 course unit and for INTE 34242, INTE 34263 and GNCT 32216 course units, and

   (v) Pass GNCT 13212 and GNCT 23212 course units, and

   (vi) obtain a minimum GPA of 2·00, and

   (vii) complete the relevant requirements within a period of six consecutive academic years.

2.9.2   Award of Classes
2.9.2.1   First Class

A student who is eligible for the BSc Hons (MIT) Degree may be awarded First Class if he/she

   (i) obtains grades of C or better in all the course units considered for the calculation of the GPA, and

   (ii) obtains grades of A or better, aggregating to at least half the number of credits in the compulsory course units, and

   (iii)   obtains grades of A or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

   (iv)   obtains a minimum GPA of 3.70 and

   (v)   completes the relevant requirements within four consecutive academic years.

Note: A student who obtains grades of D, D+ and C- for a maximum of 4 credits in compulsory course units, and fulfils all the other requirements stipulated under 2.9.2.1 may be considered by the Board of Examiners for the award of Second Class (Upper Division).

2.9.2.2   Second Class (Upper Division)

A student who is eligible for the BSc Hons (MIT) Degree may be awarded Second Class (Upper Division) if he/she

   (i)   obtains grades of C or better in course units, including the compulsory course units, aggregating to at least 110 credits, and grades of D or better in the remaining course units considered for GPA calculation, and

   (ii)   obtains grades of B or better aggregating to at least half the number of credits in the compulsory course modules, and

   (iii)   obtains grades of B or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

   (iv)   obtains a minimum GPA of 3·30 and

   (v)   completes the relevant requirements within four consecutive academic years

Note: A student who obtains minimum grades of D, D+ and C- for a maximum of 4 credits in compulsory course units, and fulfils all the other requirements stipulated under 2.9.2.2 may be considered by the Board of Examiners for the award of Second Class (Lower Division).

2.9.2.3   Second Class (Lower Division)

A student who is eligible for the BSc Hons (MIT) Degree may be awarded Second Class (Lower Division) provided he/she

   (i)   obtains grades of C or better in course units, including all compulsory course units, aggregating to at least 110 credits, and grades of D or better in the remaining course units considered for GPA calculation, and

   (ii)   obtains grades of B or better in aggregating to at least half the number of credits in the compulsory course modules, and

   (iii)   obtains grades of B or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

   (iv)   obtains minimum GPA of 3·00 and

   (v)   completes the relevant requirements within four consecutive academic years.

2.10   Exit Point at the end of Level 3 for the Bachelor of Science Honours in Management and Information Technology Degree (MIT)

2.10.1   Eligibility for the award of the Bachelor of Science in Management and Information Technology Degree

To be eligible for the BSc (MIT) Degree, a student must

   (i)   accumulate grades of D or better, in course units including all core course units, totalling to a minimum of 90 credits, with aggregate of at least 30 credits from each level and

(ii) obtains grades of C or better in course units totalling to at least 78 credits with at least D grades for the remaining course units, and

(iii) obtains grades of C or better in compulsory course units totalling to at least 68 credits with at least D grades for the remaining compulsory course units, and

(iv) obtains grades of C or better for INTE 34242, INTE 34263 and GNCT 32216 course units, and

(v) Pass GNCT 13212 and GNCT 23212 course units, and

(vi) obtain a minimum GPA of 2·00, and

(vii) complete the relevant requirements within a period of five consecutive academic years.

2.10.2 Award of Classes
2.10.2.1 First Class
A student who is eligible for the BSc (MIT) Degree may be awarded First Class if he/she

(i) obtains grades of C or better in all the course units considered for the calculation of the GPA, and

(ii) obtains grades of A or better, aggregating to at least half the number of credits in the compulsory course units, and

(iii) obtains grades of A or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

(iv) obtains a minimum GPA of 3·70 and

(v) completes the relevant requirements within three consecutive academic years.

2.10.2.2 Second Class (Upper Division)
A student who is eligible for the BSc (MIT) Degree may be awarded Second Class (Upper Division) if he/she

(i) obtains grades of C or better in course units, including the compulsory course units, aggregating to at least 80 credits, and grades of D or better in the remaining course units considered for GPA calculation, and

(ii) obtains grades of B or better aggregating to at least half the number of credits in the compulsory course modules, and

(iii) obtains grades of B or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

(iv) obtains a minimum GPA of 3·30 and

(v) completes the relevant requirements within three consecutive academic years

2.10.2.3 Second Class (Lower Division)
A student who is eligible for the BSc (MIT) Degree may be awarded Second Class (Lower Division) provided he/she

(i) obtains grades of C or better in course units, including all compulsory course units, aggregating to at least 80 credits, and grades of D or better in the remaining course units considered for GPA calculation, and

(ii) obtains grades of B or better in aggregating to at least half the number of credits in the compulsory course modules, and

(iii) obtains grades of B or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

(iv) obtains minimum GPA of 3·00 and

(v) completes the relevant requirements within three consecutive academic years.

2.11   Bachelor of Science Honours in Software Engineering Degree (SENG)
2.11.1   Eligibility for the award of the Bachelor of Science Honours in Software Engineering Degree (SENG)

To be eligible for the BSc Hons (SENG) Degree, a student must

(i) accumulate grades of D or better, in course units including all core course units, totalling to a minimum of 120 credits of which at least 30 credits must be from each level separately, with

(a) a minimum aggregate of at least 9 credits from one selected domain

(ii) obtain grades of C or better in course units totalling to at least 104 credits with at least D grades for the remaining course units, and

(iii) obtain grades of C or better in compulsory course units and course units from the one selected domain totalling to at least 90 credits with at least D grades for the remaining compulsory course units and the selected domain course units, and

(iv) obtain grades of C or better for SENG 31242, SENG 34213, SENG 32216, SENG 43216 course units and

(v) pass GNCT 13212 and GNCT 23212 course units, and

(vi) obtain a minimum GPA of 2·00, and

(vii) complete the relevant requirements within a period of six consecutive academic years.

2.11.2   Award of Classes
2.11.2.1 First Class

A student who is eligible for the BSc Hons (SENG) Degree may be awarded First Class if he/she

(i) obtains grades of C or better in all the course units considered for the calculation of the GPA, and

(ii) obtains grades of A or better aggregating to at least half the number of credits in the compulsory course units, and

(iii) obtains grades of A or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

(iv) obtains a minimum GPA of 3·70, and

(v) completes the relevant requirements within four consecutive academic years.

Note: A student who obtains grades of D+ for a maximum of 4 credits and fulfils all the other requirements stipulated under 2.11.2.1 may be considered by the Board of Examiners for the award of Second Class (Upper Division).

2.11.2.2 Second Class (Upper Division)

A student who is eligible for the BSc Hons (SENG) Degree may be awarded Second Class (Upper Division) if he/she

(i) obtains grades of C or better in course units including all compulsory course units aggregating to at least 110 credits and grades of D or better in the remaining course units considered for GPA calculation, and

(ii) obtains grades of B or better aggregating to at least half the number of credits in the compulsory course modules, and

(iii) obtains grades of B or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

(iv) obtains a minimum GPA of 3·30, and

(v) completes the relevant requirements within four consecutive academic years.

Note: A student who obtains minimum grades of D for a maximum of 4 credits in compulsory course units, and fulfils all the other requirements stipulated under 2.11.2.2 may be considered by the Board of Examiners for the award of Second Class (Lower Division).

2.11.2.3 Second Class (Lower Division)

A student who is eligible for the BSc Hons (SENG) Degree may be awarded Second Class (Lower Division) provided he/she

(i) obtains grades of C or better in course units including all compulsory course units aggregating to at least 110 credits and grades of D or better in the remaining course units considered for GPA calculation, and

(ii) obtains grades of B or better aggregating to at least half the number of credits in the compulsory course modules, and

(iii) obtains grades of B or better aggregating to at least half the number of credits accumulated and considered for the calculation of the GPA, and

(iv) obtains a minimum GPA of 3·00, and

(v) completes the relevant requirements within four consecutive academic years.

2.12   Award of the Degree

A student who intends to enhance the grade(s) obtained at the examination(s) of a course unit(s) should request the Dean/Science in writing to refrain from processing her/his results, within a week of completion of releasing the results of all the course unit examinations in the relevant semester.

On successful completion of the BSc Degree, BSc in Environmental Conservation and Management Degree, BSc in Physics and Electronics Degree, BSc Hons in Biochemistry, BSc Hons in Botany, BSc Hons in Chemistry, BSc Hons in Computer Science, BSc Hons in Computer Studies, BSc Hons in Environmental Conservation and Management, BSc Hons in Management and Information Technology, BSc Hons in Mathematical Physics, BSc Hons in Mathematics, BSc Hons in Microbiology, BSc Hons in Molecular Biology & Plant Biotechnology, BSc Hons in Physics, BSc Hons in Software Engineering, BSc Hons in Statistics, and BSc Hons in Zoology, and after the confirmation of results by the University Senate, a student is entitled to have an official transcript giving the grades in the respective course units.

**3. COURSE STRUCTURE
BSc DEGREE**

3.1   Course Structure for BSc Degree
          Biological Sciences

3.1.1   BSc Degree Programme – Year 1 (SLQF LEVEL 3)
           Biological Sciences
           Available combinations to select course units

Course code	Course unit combination (BSY1)								
	1	2	3	4	5	6	7	8	9
BIOL 11512	C	C	C	C	C	C	C	C	C
BIOL 11522	C	C	C	C	C	C	C	C	C
BIOL 11532	C	C	C	C	C	C	C	C	C
BIOL 11542	C	C	C	C	C	C	C	C	C
DELT 11222[1]	C	C	C	C	C	C	C	C	C
BIOC 12513						C		C	C
BIOC 12522						C		C	C
BIOC 12531						C		C	C
BOTA 12514	C	C		C			C	C	
BOTA 12522	C	C		C			C	C	
CHEM 11511[1]	C	C	C	C	C	C	C	C	C
CHEM 11522	C	C	C	C	C	C	C	C	C
CHEM 11532	C	C	C	C	C	C	C	C	C
CHEM 11541	C	C	C	C	C	C	C	C	C
CHEM 12552	C	C	C	C	C	C	C	C	C
CHEM 12562	C	C	C	C	C	C	C	C	C
CHEM 12571	C	C	C	C	C	C	C	C	C
COST 11513	O	C	C	O	O	O	O	O	O
COST 11522	O	C	C	O	O	O	O	O	O
COST 12533		C	C						
COST 12542		C	C						
IMGT 14512	A	A	A	A	A	A	A	A	A
IMGT 21511	A	A	A	A	A	A	A	A	A
MIBI 12514				C	C	C			
MIBI 12522				C	C	C			
MBBT 12513							C		
MBBT 12522							C		
MGMT 11022[1,2]	C	C	C	C	C	C	C	C	C
PMAT 11703	A	A	A	A	A	A	A	A	A
PMAT 12713	A	A	A	A	A	A	A	A	A
STAT 14552	A	A	A	A	A	A	A	A	A
ZOOL 12512	C		C		C				C
ZOOL 12523	C		C		C				C
ZOOL 12531	C		C		C				C
No of Credits from Compulsory Units	30	34	34	30	30	30	29	30	30

[1]**Credits not counted for the GPA calculation**
[2]Should offer during the three year period of the Degree Programme

Students may take course units up to a maximum of 6 credits with not more than 2 credits per semester from other faculties.

3.1.2 BSc Degree Programme – Year 2 (SLQF LEVEL 4)
Biological Sciences
Available combinations to select course units

Course code	Course unit combination (BSY2)								
	1	2	3	4	5	6	7	8	9
BIOC 21512						C		C	C
BIOC 21522						C		C	C
BIOC 21531						C		C	C
BIOC 22542						C		C	C
BIOC 22552						C		C	C
BIOC 22561						C		C	C
BOTA 21513	C	C		C			C	C	
BOTA 21522	C	C		C			C	C	
BOTA 21531	C	C		C			C	C	
BOTA 22544	C	C		C			C	C	
BOTA 22552	C	C		C			C	C	
CHEM 21512	C	C	C	C	C	C	C	C	C
CHEM 21522	C	C	C	C	C	C	C	C	C
CHEM 21531	C	C	C	C	C	C	C	C	C
CHEM 22542	C	C	C	C	C	C	C	C	C
CHEM 22552	C	C	C	C	C	C	C	C	C
CHEM 22561	C	C	C	C	C	C	C	C	C
CHEM 22571	C	C	C	C	C	C	C	C	C
COST 21513		C	C						
COST 22523		C	C						
COST 22534		C	C						
DELT 22232[1]	C	C	C	C	C	C	C	C	C
IMGT 14512	A	A	A	A	A	A	A	A	A
IMGT 21511	A	A	A	A	A	A	A	A	A
MIBI 21514				C	C	C			
MIBI 21522				C	C	C			
MIBI 22534				C	C	C			
MIBI 22542				C	C	C			
MBBT 21513							C		
MBBT 21523							C		
MBBT 22533							C		
MBBT 22543							C		
MGMT 11022[1,2]	C	C	C	C	C	C	C	C	C
PHYS 25553	O	O	O	O	O	O	O	O	O
PMAT 11703	A	A	A	A	A	A	A	A	A
PMAT 12713	A	A	A	A	A	A	A	A	A
STAT 14552	A	A	A	A	A	A	A	A	A
ZOOL 21512	C		C		C				C
ZOOL 21521	C		C		C				C
ZOOL 21532	C		C		C				C
ZOOL 22543	C		C		C				C
ZOOL 22552	C		C		C				C
ZOOL 22561	C		C		C				C
No of Credits from Compulsory Units	34	33	32	35	34	33	35	33	32

[1]Credits not counted for the GPA calculation
[2]Should offer during the three year period of the Degree programme

Students may take course units up to a maximum of 6 credits with not more than 2 credits per semester from other faculties

3.1.3 BSc Degree Programme – Year 3 (SLQF LEVEL 5)
Biological Sciences
Available combinations to select course units

Course code	Course unit combination (BSY3)								
	1	2	3	4	5	6	7	8	9
BIOC 31511						C		C	C
BIOC 31522						C		C	C
BIOC 31532						C		C	C
BIOC 31541						C		C	C
BIOC 32552						O		O	O
BIOC 32561						O		O	O
BOTA 31514	C	C		C			C	C	
BOTA 31522	C	C		C			C	C	
BOTA 32534	O	O		O				O	
BOTA 32542	O	O		O				O	
BOTA 32554	O	O		O			O	O	
CHEM 31511	C	C	C	C	C	C	C	C	C
CHEM 31522	O	O	O	O	O	O	O	O	O
CHEM 31532	O	O	O	O	O	O	O	O	O
CHEM 32542	O	O	O	O	O	O	O	O	O
CHEM 32552	O	O	O	O	O	O	O	O	O
CHEM 32561	O	O	O	O	O	O	O	O	O
COST 31513		O	O						
COST 31523		C	C						
COST 32532		O	O						
COST 32543		O	O						
IMGT 14512	O	O	O	O	O	O	O	O	O
IMGT 21511	O	O	O	O	O	O	O	O	O
MIBI 31514				C	C	C			
MIBI 31522				C	C	C			
MIBI 32556				O	O	O			
MIBI 33534				O	O	O			
MIBI 33541				O	O	O			
MIBI 33562				O	O	O			
MBBT 31513							C		
MBBT 31522							C		
MBBT 32534							O		
MBBT 32542							O		
MGMT 11022[1,2]	C	C	C	C	C	C	C	C	C
PHYS 32582	O	O	O	O	O	O	O	O	O
PMAT 11703	A	A	A	A	A	A	A	A	A
PMAT 12713	A	A	A	A	A	A	A	A	A
PRPL 31992	O	O	O	O	O	O	O	O	O
STAT 14552	A	A	A	A	A	A	A	A	A
ZOOL 31512[3]	O		O		O				O
ZOOL 31523[3]	O		O		O				O
ZOOL 31532[3]	O		O		O				O
ZOOL 32543[3]	O		O		O				O
ZOOL 32552[3]	O		O		O				O
ZOOL 32563[3]	O		O		O				O
No of Credits from Compulsory Units	7	10	4	13	7	13	12	13	7

[1]Should offer during the three year period of the Degree Programme

[2]**Credits not counted for the GPA calculation**

[3]In order to claim Zoology as a subject for the BSc Degree programme, student should accumulate a minimum of 7 credits from the level 3 ZOOL optional course units

Students may take course units up to a maximum of 6 credits with not more than 2 credits per semester from other faculties

3.2 **Course Structure for BSc Degree**
Physical Sciences

3.2.1 **BSc Degree Programme – Year 1 (SLQF LEVEL 3)**
Physical Science
Available combination to select course units

Course code	Course unit combination (PSY1)									
	1	2	3	4	5	6	7	8	9	10
AMAT 11513	C			C			C		C	
AMAT 11522	C			C			C		C	
AMAT 12532	C			C			C		C	
AMAT 12543	C			C			C		C	
BOTA 11532[1]	A	A	A	A	A	A	A	A	A	A
DELT 12262[2]	C	C	C	C	C	C	C	C	C	C
CHEM 11511[2]						O	O			O
CHEM 11522						C	C			C
CHEM 11532						C	C			C
CHEM 11541						C	C			C
CHEM 12552						C	C			C
CHEM 12562						C	C			C
CHEM 12571						C	C			C
COSC 11513		C		C	C	C				
COSC 11522		C		C	C	C				
COSC 12533		C		C	C	C				
COSC 12542		C		C	C	C				
COST 11513								C		C
COST 11522								C		C
COST 12533								C		C
COST 12542								C		C
ELEC 11513			C					C		
ELEC 11521			C					C		
ELEC 12534			C					C		
ELEC 12541			C					C		
PHYS 11512	C	C	C					C		
PHYS 11521	C	C	C					C		
PHYS 11532	C	C	C					C		
PHYS 12542	C	C	C					C		
PHYS 12552	C	C	C					C		
PHYS 12561	C	C	C					C		
MAPS 11512	A	A	A	A	A	A	A	A	A	A
PMAT 11513	C	C	C	C	C	C	C		C	C
PMAT 11522	C	C	C	C	C	C	C		C	C
PMAT 12532	C	C	C	C	C	C	C		C	C
PMAT 12543	C	C	C	C	C	C	C		C	C
STAT 11514						C			C	
STAT 11521						C			C	
STAT 12533						C			C	
STAT 12542						C			C	
No of Credits from Compulsory Units	30	30	29	30	30	30	30	29	30	30

[1]Offered during alternate academic years for non-biology students
[2]Credits not counted for the GPA calculation

3.2.2 BSc Degree Programme – Year 2 (SLQF LEVEL 4)
Physical Sciences
Available combinations to select course units

Course code	Course unit combination (PSY2)									
	1	2	3	4	5	6	7	8	9	10
AMAT 21552	C			C			C		C	
AMAT 21562	C			C			C		C	
AMAT 22572	C			C			C		C	
AMAT 22582	C			C			C		C	
BOTA 11532[1]	A	A	A	A	A	A	A	A	A	A
CHEM 21512						C	C			C
CHEM 21522						C	C			C
CHEM 21531						C	C			C
CHEM 22542						C	C			C
CHEM 22552						C	C			C
CHEM 22561						C	C			C
CHEM 22571						C	C			C
COSC 21513		C		C	C	C				
COSC 21523		C		C	C	C				
COSC 22532		C		C	C	C				
COSC 22543		C		C	C	C				
COST 21513								C		C
COST 22523								C		C
COST 22534								C		C
ELEC 21513			C					C		
ELEC 21521			C					C		
ELEC 22534			C					C		
ELEC 22541			C					C		
PHYS 21513	C	C	C					C		
PHYS 21521	C	C	C					C		
PHYS 22533	C	C	C					C		
PHYS 22541	C	C	C					C		
PHYS 22553	C	O	C					C		
MAPS 22603	A	A	A	A	A	A	A	A	A	A
PMAT 21553	C	C	C	C	C	C	C		C	C
PMAT 21562	C	C	C	C	C	C	C		C	C
PMAT 22572	C	C	C	C	C	C	C		C	C
PMAT 22583	C	C	C	C	C	C	C		C	C
STAT 21513				C					C	
STAT 21522				C					C	
STAT 22533				C					C	
STAT 22542				C					C	
No of Credits from Compulsory Units	29	29	30	29	31	32	29	30	28	31

[1]Offered during alternate academic years for non-biology students

3.2.3 BSc Degree Programme – Year 3 (SLQF LEVEL 5)
Physical Sciences
Available combinations to select course units

Course code	Course unit combination (PSY3)									
	1	2	3	4	5	6	7	8	9	10
AMAT 31603	O			O			O		O	
AMAT 31613	C			C			C		C	
AMAT 32593	C			C			C		C	
AMAT 32623	O			O			O		O	
AMAT 32633	O			O			O		O	
AMAT 32643	O			O			O		O	
BOTA 11532[1]	A	A	A	A	A	A	A	A	A	A
CHEM 31511						C	C			C
CHEM 31522						O	O			O
CHEM 31532						O	O			O
CHEM 32542						O	O			O
CHEM 32552						O	O			O
CHEM 32561						O	O			O
COSC 31513		C		C	C	C				
COSC 31522		O		O	O	O				
COSC 31533		O		O	O	O				
COSC 31542		O		O	O	O				
COSC 32553		O		O	O	O				
COSC 32562		O		O	O	O				
COSC 32572		O		O	O	O				
COSC 32582		O		O	O	O				
COST 31513								O		O
COST 31523								C		C
COST 32532								O		O
COST 32543								O		O
ELEC 31513			C					C		
ELEC 31521			C					C		
ELEC 32534			O					O		
ELEC 33542			C					C		
MDGP 31982	O	O	O	O	O	O	O	O	O	O
PHYS 31512	C	C	C					C		
PHYS 31521	C	C	C					C		
PHYS 31532[2]	O	O	O					O		
PHYS 31544[2]	O	O	O					O		
PHYS 32551[3]	C	C								
PHYS 32562[3]	C	C								
PHYS 32572[2]	O	O	O					O		
PHYS 32582[2,4]	O	O	O					O		
PRPL 31992	O	O	O	O	O	O	O	O	O	O
MAPS 32612	A	A	A	A	A	A	A	A	A	A
PMAT 31593	C	C	C	C	C	C	C		C	C
PMAT 31602	O	O	O	O	O	O	O		O	O
PMAT 32612	O	O	O	O	O	O	O		O	O
PMAT 32622	O	O	O	O	O	O	O		O	O
PMAT 32632	O	O	O	O	O	O	O		O	O
STAT 31513						C			C	
STAT 31522[5]						O			O	
STAT 31532						O			O	
STAT 32543[5]						O			O	
STAT 32552						O			O	
STAT 32562[5]						O			O	
No of Credits from Compulsory Units	15	12	12	12	9	7	10	12	12	7

[1]Offered during alternate academic years for non-biology students
[2]Compulsory for BSc Hons (Physics) Degree
[3]Available only for the students who are NOT doing Electronics as a subject
[4]Availability of the course unit will be announced by the Department of Physics at the beginning of
  the each academic year
[5]Compulsory only for BSc Hons (Statistics) Degree

3.3 Course Structure for BSc (PE) Degree

Course code	Course unit combination (PE)					
	Year 1		Year 2		Year 3	
	1	2	1	2	1	2
AMAT 11513	C	C				
AMAT 12543	O	O				
AMAT 21552			O	O		
AMAT 32593					O	O
BFIN 12333[1]	C					
BFIN 22333[1]			C			
BFIN 31623[1]					C	
BOTA 11532[2]	A	A	A	A	A	A
COST 11522		C				
COST 12533		C				
COST 22534				C		
COST 32532						O
ELEC 11513	C	C				
ELEC 11521	C	C				
ELEC 12534	C	C				
ELEC 12541	C	C				
ELEC 21513			C	C		
ELEC 21521			C	C		
ELEC 22534			C	C		
ELEC 22541			C	C		
ELEC 31513					C	C
ELEC 31521					C	C
ELEC 32534					C	C
ELEC 33542					C	C
DELT 12262[3]	C	C				
MDGP 31982					O	O
PHYS 11512	C	C				
PHYS 11521	C	C				
PHYS 11532	C	C				
PHYS 12542	C	C				
PHYS 12552	C	C				
PHYS 12561	C	C				
PHYS 21513			C	C		
PHYS 21521			C	C		
PHYS 22533			C	C		
PHYS 22541			C	C		
PHYS 22553			C	C		
PHYS 31512					C	C
PHYS 31521					C	C
PHYS 31532					C	C
PHYS 31544					O	O
PHYS 32572					C	C
PHYS 32582					C	C
PRPL 31992					O	O
MAPS 11512	A	A				
MAPS 22603			A	A		
MAPS 32612					A	A
PMAT 11513	C	C				
PMAT 11522	C	C				
PMAT 12543	C	C				
PMAT 21553			C	C		
PMAT 22572			C	C		
PMAT 22583			C	C		
PMAT 31593					C	C
PMAT 31602					C	C
PMAT 32612					O	O
No of Credits from Compulsory Units	33	35	31	32	27	24

[1]Offered by the Faculty of Commerce & Management Studies
[2]Offered during alternate academic years for non-biology students
[3]Credits not counted for the GPA calculation.

3.4 Course Structure for BSc (ENCM) Degree

Course code	Course unit combination (ENCM)		
	Year 1	Year 2	Year 3
BOTA 22563		C	
BOTA 22573		C	
DELT 11242	C		
CHEM 11522	C		
CHEM 11541	C		
CHEM 12552	C		
CHEM 12562	C		
CHEM 12571	C		
CHEM 21522		C	
CHEM 22571		C	
CHEM 32552			C
CHEM 32561			C
ENCM 11512	C		
ENCM 11522	C		
ENCM 11532	C		
ENCM 11543	C		
ENCM 12553	C		
ENCM 12562	C		
ENCM 12572	C		
ENCM 21513		C	
ENCM 21522		C	
ENCM 21533		C	
ENCM 21542		C	
ENCM 21552		C	
ENCM 21562		C	
ENCM 22572		C	
ENCM 31513[1]			C
ENCM 31522			C
ENCM 31532			C
ENCM 31543			C
ENCM 31552			C
ENCM 31592			C
ENCM 32572[2]			O
ENCM 32582[2]			O
ENCM 32605[1]			C
ENCM 33564[1]			C
MIBI 22554		C	
MIBI 22562		C	
ZOOL 12523	C		
ZOOL 12531	C		
ZOOL 32563			C
No of Credits from Compulsory Units	**30**	**31**	**29**

[1]Not offered for the BSc Hons (ENCM) Degree programme
[2]Student should accumulate credits for at least one optional course units offered in the third year

**4. COURSE STRUCTURE
 BSc Hons DEGREE**

4.1 Honours Degree Biological Sciences (HDBS) – Course Structure
Biochemistry, Botany, Chemistry, Computer Studies, Environmental Conservation and Management, Microbiology, Molecular Biology & Plant Biotechnology and Zoology

Course code	Course combination (HDBS)							
	1	2	3	4	5	6	7	8
BIOC 32552	O					O		
BIOC 32561	O					O		
BIOC 43764								C
BIOC 43774								C
BIOC 43784								C
BIOC 43794								C
BIOC 43802								C
BIOC 43812								C
BIOC 43822								C
BIOC 43832								C
BIOC 43841[1]								C
BIOC 43854								C
BIOC 43864								C
BIOC 43874								C
BIOC 43884								C
BIOC 43891								C
BIOC 43908								C
PRPL 31992	O			O	O	O		
BOTA 31514	C							
BOTA 31522	C							
BOTA 32534	C							
BOTA 32542	C							
BOTA 41766	C							
BOTA 41784	C							
BOTA 41793	C							
BOTA 41803	C							
BOTA 41813	C							
BOTA 41823	C							
BOTA 42776	C							
BOTA 42853	C							
BOTA 42864	C							
BOTA 42873	C							
BOTA 43838	C							
BOTA 43842	C							
CHEM 31511	C			C	C	C		
CHEM 31522	O			O	O	O		
CHEM 31532	O			O	O	O		
CHEM 32542	O			O	O	O		
CHEM 32552	O		C	O	O	O		
CHEM 32561	O		C	O	O	O		
CHEM 43764		C						C
CHEM 43774		C						
CHEM 43784		C						
CHEM 43794		C						C
CHEM 43804		C						
CHEM 43812		C						C
CHEM 43822		C						
CHEM 43833		C						
CHEM 43843		C						C
CHEM 43853		C						
CHEM 43862		C						
CHEM 43872[1]		C						
CHEM 43884		C						
CHEM 43894		C						
CHEM 43904		C						
CHEM 43914		C						C
CHEM 43924		C						

Course code	Course combination (HDBS)							
	1	2	3	4	5	6	7	8
CHEM 43934		C						
CHEM 43948		C						
CHEM 43951		C						
COST 31513							C	
COST 31523							C	
COST 31554							C	
COST 31562							C	
COST 32532							C	
COST 32543							C	
COST 32574							C	
COST 41013							C	
COST 41164[2]							O	
COST 41174[2]							O	
COST 42022							C	
COST 44033							C	
COST 44043							C	
COST 44053							C	
COST 44062							C	
COST 44072							O	
COST 44083							C	
COST 44092							C	
COST 44102							C	
COST 44112							O	
COST 44122							C	
COST 44132							C	
COST 44143							C	
COST 44152							C	
COST 44184							O	
COST 44193							C	
COST 44203							O	
COST 44213							O	
COST 44223							O	
COST 43238							C	
ENCM 31522			C					
ENCM 31532			C			O		
ENCM 31543			C					
ENCM 31552			C					
ENCM 31592			C					
ENCM 32572[3]			O			O		
ENCM 32582[3]			O					
ENCM 41512			C					
ENCM 41523			C					
ENCM 41564			C					
ENCM 41574			C					
ENCM 41583			C					
ENCM 41592			C					
ENCM 42542			C					
ENCM 42553			C					
ENCM 42604			C					
ENCM 42612			C					
ENCM 42622			C					
ENCM 42632			C					
ENCM 42642			C					
ENCM 43532			C					
ENCM 43654			C					
ENCM 43668			C					

Course code	Course combination (HDBS)							
	1	2	3	4	5	6	7	8
MIBI 31514				C				
MIBI 31522				C				
MIBI 32556				C				
MIBI 33534				C				
MIBI 33541				C				
MIBI 33562				O				
MIBI 41784				C				
MIBI 41804				C				
MIBI 41824				C				
MIBI 43764				C				
MIBI 43774				C				
MIBI 43794				C				
MIBI 43814				C				
MIBI 43834				C				
MIBI 43846				C				
MIBI 43852				C				
MIBI 43868				C				
MBBT 31513					C			
MBBT 31522					C			
MBBT 32534					C			
MBBT 32542					C			
MBBT 41766					C			
MBBT 41784					C			
MBBT 41794					C			
MBBT 41805					C			
MBBT 41813					C			
MBBT 42776					C			
MBBT 42853					C			
MBBT 42864					C			
MBBT 43824					C			
MBBT 43832					C			
MBBT 43848					C			
ZOOL 31512						C		
ZOOL 31532						C		
ZOOL 32543						C		
ZOOL 32552						C		
ZOOL 32563			C			C		
ZOOL 41512						C		
ZOOL 41524						C		
ZOOL 41574						C		
ZOOL 41584						C		
ZOOL 41592						C		
ZOOL 41612[5]						O		
ZOOL 41622[5]						O		
ZOOL 42542						O		
ZOOL 42554[4]						O		
ZOOL 42564[4]						O		
ZOOL 42632						C		
ZOOL 42642						C		
ZOOL 42654						C		
ZOOL 42662[5]						O		
ZOOL 42672[5]						O		
ZOOL 42684[5]						O		
ZOOL 42692[5]						O		
ZOOL 43532						O		
ZOOL 43608						C		

[1]**Credits not counted for the GPA calculation**
[2]Students are allowed to register to follow either COST 41164 or COST 41174, but not both in Semester I of Level 4
[3]Students should accumulate for at least one optional course units offered in Level 3
[4]BSc Hons (Zoology) students must follow one of the two level 4 optional course units in the 3rd year
[5]The student should accumulate only 8 credits from level 4 optional ZOOL course units in the 4th year

4.2 Honours Degree Physical Sciences (HDPS) – Course Structure
Computer Science, Computer Studies, Mathematics, Mathematical Physics, Physics, Statistics

Course code	Course combination (HDPS)							
	1	2	3	4	5	6	7	8
AMAT 21562				O	O			
AMAT 31613		O	C					
AMAT 32643	O	O						
AMAT 41763	C	O						
AMAT 41773	C	O						
AMAT 41813	O	O						
AMAT 41823	C							
AMAT 41833	C							
AMAT 42783	C	O						
AMAT 42793	C		C					
AMAT 42843	O		C					
AMAT 42853	O		C					
AMAT 43976	C		C					
COSC 21523⁵						C		
COSC 31513							C	
COSC 31522							C	
COSC 31533							C	
COSC 31542							O	
COSC 32553						O	C	
COSC 32562							C	
COSC 32572							O	
COSC 32582							C	
COSC 41022							O	
COSC 41254							O	
COSC 42032							C	
COSC 43268							C	
COSC 44042						C	C	
COSC 44052						O	C	
COSC 44063							C	
COSC 44073							C	
COSC 44083							C	
COSC 44093							C	
COSC 44103							C	
COSC 44112							C	
COSC 44123							C	
COSC 44133							O	
COSC 44143							C	
COSC 44153							O	
COSC 44163							O	
COSC 44173							O	
COSC 44183							O	
COSC 44193							O	
COSC 44203							O	
COSC 44214							O	
COSC 44224							O	
COSC 44233							O	
COSC 44243							C	
COST 31513								C
COST 31523								C
COST 31554¹								C
COST 31562								C
COST 32532								C
COST 32543								C
COST 32574²								C
COST 41013								C
COST 41164³								O
COST 41174³								O

Course code	Course combination (HDPS)							
	1	2	3	4	5	6	7	8
COST 42022								C
COST 43238								C
COST 44033								C
COST 44043								C
COST 44053								C
COST 44062								C
COST 44072								O
COST 44083								C
COST 44092								C
COST 44102								C
COST 44112								O
COST 44122								C
COST 44132								C
COST 44143								C
COST 44152								C
COST 44184								O
COST 44193								C
COST 44203								O
COST 44213								O
COST 44223								O
ELEC 31513					C			
ELEC 31521					C			
PHYS 31512			C	C	C			
PHYS 31521			C	C	C			
PHYS 31532			O	C	C			
PHYS 31544			C	C	C			
PHYS 32551			C	C				
PHYS 32562			C	C				
PHYS 32572			O	C	C			
PHYS 32582			C	C	C			
PHYS 43793				C	C			
PHYS 43875				C	C			
PHYS 43888			C	C	C			
PHYS 44764			C	C	C			
PHYS 44774			C	C	C			
PHYS 44784			C					
PHYS 44804			C	C	C			
PHYS 44814				C				
PHYS 44824			C	C	C			
PHYS 44834	C		C	C	C			
PHYS 44854			C	C	C			
PHYS 44864			C	C	C			
PMAT 31593				C	C			
PMAT 32612				C				
PMAT 32622			C			C	C	
PMAT 32632	O	O	O					
PMAT 41763	C	C	C					
PMAT 41783	O	O	O					
PMAT 41813	C	C	C			O		
PMAT 41823⁴	C	C	O					
PMAT 41962	C	C	O					
PMAT 42793	C	C	C					
PMAT 42803	O	O	O					
PMAT 42833	C	C						
PMAT 42843	C	C						
PMAT 42983	O	O						
PMAT 43976	C	C						

Course code	Course combination (HDPS)							
	1	2	3	4	5	6	7	8
PRPL 31992			O	O	O	O		O
STAT 11514[2]							C	
STAT 11521[2]							C	
STAT 31513		C				C		
STAT 31522		C				C		
STAT 31532		O				O		
STAT 32543						C		
STAT 32552						O		
STAT 32562						C		
STAT 41763		C				C		
STAT 41783						C		
STAT 42803		C				C		
STAT 42813						C		
STAT 42823		C				C		
STAT 42843		C				C		
STAT 43878						C		
STAT 44774		C				C		
STAT 44794		O				C		
STAT 44833		C				C		
STAT 44853						O		
STAT 44863						O		
STAT 44884						O		
STAT 44893						O		

[1]Compulsory only for students entered to the Honours Degree Programme from the Biological Science stream
[2]Compulsory for all students who have not followed the course units STAT 11514 and STAT 11521 in Level 1
[3]Students are allowed to register to follow either COST 41164 or COST 41174, but not both in Semester I of Level 4
[4]Students in the Mathematical Physics programme are strongly advised to attend this course
[5]Compulsory for all students who have not followed the course unit COSC 21523 in Level 2

Combination 1: A student should take either AMAT 43976 or PMAT 43976
Combination 3: A student should take either AMAT 43976 or PHYS 43888

Note: Some of the optional course units will be offered depending on the staff availability. Students are requested to consult the Head of the Department prior to their registrations for the Level 4 course units

4.3   Honours Degree Management and Information Technology (HDMIT) – Course Structure Information Technology, Management and Technology

Course code	Course Combination (HDMIT)				Course code	Course Combination (HDMIT)			
	1	2	3	4		1	2	3	4
DELT 11232	C	C	C	C	MGTE 11213	C	C	C	C
DELT 12282	C	C	C	C	MGTE 11222	C	C	C	C
GNCT 13212[1]	C	C	C	C	MGTE 11232	C	C	C	C
GNCT 23212[1]	C	C	C	C	MGTE 12212	C	C	C	C
GNCT 32216	C	C	C	C	MGTE 12222	C	C	C	C
INTE 11213	C	C	C	C	MGTE 21212	C	C	C	C
INTE 11223	C	C	C	C	MGTE 21222	C	C	C	C
INTE 12213	C	C	C	C	MGTE 21233	C	C	C	C
INTE 12223	C	C	C	C	MGTE 22212	C	C	C	C
INTE 21213	C	C	C	C	MGTE 22222	C	C	C	C
INTE 21223	C	C	C	C	MGTE 24213	C	C	C	C
INTE 21233	C	C	C	C	MGTE 31212	C	C	C	C
INTE 21243	O	O	O	O	MGTE 31222	C	C	C	C
INTE 22222	C	C	C	C	MGTE 31233			C	C
INTE 22232	C	C	C	C	MGTE 31243			C	O
INTE 24213	C	C	C	C	MGTE 31252			C	C
INTE 31253	C	C			MGTE 31262			O	O
INTE 31262	C				MGTE 31272			O	O
INTE 31273	C				MGTE 31283			O	O
INTE 31293	O				MGTE 31293			O	O
INTE 31303		C			MGTE 31303				C
INTE 31312		C			MGTE 34213	C	C	C	C
INTE 31322			O	O	MGTE 41212	C	C	C	C
INTE 31332		O			MGTE 41222		O	C	
INTE 31342	O	O	O	O	MGTE 41233			C	O
INTE 34223	C	C	C	C	MGTE 41243		O	O	O
INTE 34233	O	O	O	O	MGTE 41252				C
INTE 34242	C	C	C	C	MGTE 42213			C	
INTE 34253	O	O			MGTE 42223			O	O
INTE 34263	C	C	C	C	MGTE 42232			O	
INTE 41213	C				MGTE 42243			O	
INTE 41223	O	O			MGTE 42252				C
INTE 41233	O				MGTE 42292	O			
INTE 41242	C				MGTE 43216[2]	C	C	C	C
INTE 41252	O				MGTE 44212			O	
INTE 41263	O	O			MGTE 44223			O	O
INTE 41273		C			MGTE 44232				C
INTE 41282		C		O	MGTE 44242				C
INTE 42213	C	O			MGTE 44252				O
INTE 42243	O	O			MGTE 44262				C
INTE 42253	O				PMAT 11212	C	C	C	C
INTE 42263		C			PMAT 12212	C	C	C	C
INTE 42272		O							
INTE 42282		O							
INTE 43216[2]	C	C	C	C					
INTE 44212			O	O					
INTE 44222	O								

[1]**Credits earned will not be considered for GPA**
[2]Students should offer either MGTE 43216 or INTE 43216
Course Combinations of HDMIT: 1-Information Technology (IT), 2-Information Systems (IS), 3-Business Systems Engineering (BSE), and 4-Operations and Supply Chain Management (O&SCM)

4.4   **Honours Degree - Course Structure**
         Software Engineering

Course code	Course Combination (HDSE)
BOTA 11532[1]	A
DELT 11232	C
DELT 12282	C
GNCT 13212[2]	C
GNCT 23212[2]	C
PMAT 11212	C
PMAT 12212	C
PMAT 22213	O
SENG 11213	C
SENG 11223	C
SENG 11232	C
SENG 11243	C
SENG 12213	C
SENG 12223	C
SENG 12233	C
SENG 12242	C
SENG 21213	C
SENG 21222	C
SENG 21233	C
SENG 21243	C
SENG 21253	C
SENG 21263	O
SENG 21272	C
SENG 22212	C
SENG 22223	C
SENG 22233	C
SENG 22243	C
SENG 22253	O
SENG 24213	C
SENG 31212	C
SENG 31222	C
SENG 31232	C
SENG 31242	C
SENG 31252	C
SENG 34262	C
SENG 31272	O
SENG 31282	O
SENG 31292	O

Application Domains	AD1	AD2	AD3	AD4	AD5	AD6
SENG 31313[3]	O					
SENG 31323[3]		O				
SENG 31333[3]			O			
SENG 31343[3]				O		
SENG 31353[3]					O	
SENG 31363[3]						O
SENG 32216			C			
SENG 34213			C			
SENG 34222			C			

Application Domains	AD1	AD2	AD3	AD4	AD5	AD6
SENG 41212			C			
SENG 41222			C			
SENG 41233			O			
SENG 41242			O			
SENG 41252			O			
SENG 41262			O			
SENG 41272			O			
SENG 41283[4]	O					
SENG 41293[4]		O				
SENG 41303[4]			O			
SENG 41313[4]				O		
SENG 41323[4]					O	
SENG 41333[4]						O
SENG 42212			C			
SENG 42222			O			
SENG 42232			O			
SENG 42242			O			
SENG 42252			O			
SENG 42273[4]	O					
SENG 42283[4]		O				
SENG 42293[4]			O			
SENG 42303[4]				O		
SENG 42313[4]					O	
SENG 42323[4]						O
SENG 43216			C			

[1]Offered during alternate academic years for non-biology students
[2]Credits earned will not be considered for GPA
[3]One course unit from this group should be selected based on the preferred application domain
[4]Two course units from this group should be selected based on the preferred application domain

AD1   - Net Centric Applications domain
AD2   - Mobile Computing Applications domain
AD3   - Data Science and Engineering Applications domain
AD4   - Health Informatics Applications domain
AD5   - Digital Gaming and Animation Applications domain
AD6   - Business Engineering Applications domain

Note: Some of the optional course units will be offered depending on the staff availability. Students are requested to consult the Head of the Software Engineering Teaching Unit prior to their registrations for the level 3 and level 4 course units.

5. COURSE UNITS

Course Units offered for BSc, BSc (ENCM), BSc (PE), BSc Hons (MIT) and BSc Hons (SENG) programmes

	Compulsory Course Units for Biological Science Stream		Status
	Course Units		**Status**
Year 1 Sem 1	BIOL 11512 Scope and Fundamentals of Microbiology		C
	BIOL 11522 Genetics		C
	BIOL 11532 Basic Biochemistry		C
	BIOL 11542 Animal Form, Function and Behaviour		C
	DELT 11222 English for Biology[1]		C
Year 2 Sem 2	DELT 22232 English for Communication and Further Studies[1]		C
Year 1, 2 or 3	MGMT 11022 Communication Skills and Personality Development[1,2]		C

[1]Credits not counted for the GPA calculation
[2]Should offer during the three-year period of the Degree Programme

	Compulsory Course Units for Physical Science Stream		Status
	Course Units		**Status**
Year 1	DELT 12262 English for Physical Science[1]		C

[1]Credits not counted for the GPA calculation

	Stream Compulsory Course Units for BSc (PE) Degree		Status
	Course Units		**Status**
Year 1	DELT 12262 English for Physical Science[1]		C
	BFIN 12333 Management Functions and Practices[2] **OR** COST 11522 Introduction to Programming Concepts COST 12533 Programming in C		C
Year 2 Sem II	BFIN 22333 Strategic Management[2] **OR** COST 22534 Web Technology and e-Commerce Applications		C
Year 3 Sem I	BFIN 31623 Organizational Behaviour[2]		C

[1]Credits not counted for the GPA calculation
[2]Offered by the Faculty of Commerce & Management Studies

	Compulsory Course Units for BSc Hons (MIT) Degree and (SENG) Degree Programmes		Status
	Course Units		**Status**
Year 1 Sem 1	DELT 11232 English for Professionals		C
Year 1 Sem 2	DELT 12282 Communication Skills for Professionals		C

	Compulsory Course Units for BSc (ENCM) Degree Programme		Status
	Course Units		**Status**
Year 1 Sem 1	DELT 11242 English for Environmental Science		C

Subject: Applied Mathematics (AMAT)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	AMAT 11513 Vector Analysis	C	A/L Combined Mathematics	-
	AMAT 11522 Mechanics I	C	A/L Combined Mathematics	-
Year 1 Sem 2	AMAT 12532 Vector Methods in Geometry	C	AMAT 11513	-
	AMAT 12543 Numerical Methods I[1]	C/O	AMAT 11513	-
Year 2 Sem 1	AMAT 21552 Scientific Computing using Appropriate Software I[1]	C/O	AMAT 12543	-
	AMAT 21562 Mechanics II	C	AMAT 11522	-
Year 2 Sem 2	AMAT 22572 Numerical Methods II	C	AMAT 12543	-
	AMAT 22582 Scientific Computing using Appropriate Software II	C	AMAT 21552	AMAT 22572
Year 3 Sem 1	AMAT 31603 Mathematics for Finance I	O	PMAT 11522	-
	PRPL 31992 Professional Placement	O	All AMAT course units offered in Level 1 & 2	-
	AMAT 31613 Computational Mathematics	C	AMAT 22582	-
Year 3 Sem 2	AMAT 32593 Mathematical Modelling	C	PMAT 22572	-
	AMAT 32623 Introduction to Fluid Dynamics	O	PMAT 22583	-
	AMAT 32633 Mathematics for Finance II	O	AMAT 31603	-
	AMAT 32643 Mechanics III	O	AMAT 21562	-

[1]Optional for Physics and Electronic students only.

Subject: Applied Mathematics (AMAT)				
BSc Hons				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 3 Sem 1	AMAT 41763 Qualitative and Quantitative Behaviour of the Solutions of Ordinary Differential Equations	C	PMAT 22572	-
	AMAT 41773 Advanced Computational Mathematics	C	AMAT 22582	-
Year 3 Sem 2	AMAT 42783 Advanced Mathematical Modelling	C	AMAT 41763	-
	AMAT 42793 Fluid Dynamics	C	PMAT 41763	-
Year 4 Sem 1	AMAT 41813 Financial Mathematics	O	PMAT 11522	-
	AMAT 41823 Quantum Mechanics	C	AMAT 11513	-
	AMAT 41833 Linear & Non – Linear Programming	C	PMAT 21553	-
	AMAT 43976 Research/Study Project[1]	C	-	-
Year 4 Sem 2	AMAT 42843 Quantum Field Theory	O	AMAT 41823	-
	AMAT 42853 Tensors and General Relativity	O	PMAT 21553	-

[1]Compulsory for the student who have not offered PMAT 43976.

	Course Units	Status	Pre-requisite	Co-requisite
	Subject: Biochemistry[1] (BIOC)			
BSc				
Year1 Sem 1	BIOL 11532 Basic Biochemistry (Lecture cum Laboratory) - (for BS stream)	C	A/L Chemistry and Biology	-
Year 1 Sem 2	BIOC 12513 Functional Biochemistry[2]	C/O	BIOL 11532	BIOC 12531
	BIOC 12522 Metabolism of Biomolecules[2]	C/O	BIOL 11532	BIOC 12531
	BIOC 12531 Functional Biochemistry Laboratory[2]	C/O	BIOL 11532	BIOC 12513
Year 2 Sem 1	BIOC 21512 Molecular Biology[2]	C/O	BIOC 12513	BIOC 21521
	BIOC 21522 Analytical Biochemistry[2]	C/O	BIOC 12513	BIOC 21531
	BIOC 21531 Molecular Biochemistry Laboratory[2]	C/O	BIOC 12531	BIOC 21512 BIOC 21522
Year 2 Sem 2	BIOC 22542 Biotechnology[2]	C/O	BIOC 21512	BIOC 22561
	BIOC 22552 Environmental and Agricultural Biochemistry[2]	C/O	BIOC 21513	BIOC 22561
	BIOC 22561 Environmental and Agricultural Biochemistry Laboratory[2]	C/O	BIOC 21531	BIOC 22552/ BIOC 22542
Year 3 Sem 1	BIOC 31511 Seminar	C	BIOC 22552	-
	BIOC 31522 Immunochemistry & Neurochemistry[2]	C/O	BIOC 22542	-
	BIOC 31532 Pharmaceutical Chemistry[2]	C/O	BIOC 31522	BIOC 31541
	BIOC 31541 Pharmaceutical Chemistry Laboratory[2]	C/O	BIOC 21531	BIOC 31532
	PRPL 31992 Professional Placement	O	All BIOC compulsory units offered in Levels 1 & 2	-
Year 3 Sem 2	BIOC 32552 Food and Nutritional Biochemistry	O	BIOC 12513/CHEM 22152	BIOC 32561
	BIOC 32561 Food and Nutritional Biochemistry Laboratory	O	BIOC 12513/ CHEM 22152	BIOC 32552

[1]Limited enrolment

[2]Compulsory for students following Biochemistry as a subject

	Course Units	Status
	Subject: Biochemistry (BIOC)	
BSc Hons		
Year 3	BIOC 43764 Advanced Tools in Molecular Biology and Bioinformatics	C
	BIOC 43774 Food Technology and Nutrition	C
	BIOC 43784 Advanced Molecular Genetics and Cell Biology	C
	BIOC 43794 Biophysics and Molecular Modelling	C
	BIOC 43802 Clinical Biochemistry	C
	BIOC 43812 Advanced Biochemistry Laboratory	C
	BIOC 43822 Advanced Molecular Biology Laboratory	C
	BIOC 43832 Concepts in Biochemistry	C
	BIOC 43841 Industrial Training[1]	C
Year 4	BIOC 43854 Medicinal Chemistry	C
	BIOC 43864 Toxicology, Current Topics in Biochemistry	C
	BIOC 43874 Molecular Markers and Transgenic Technology	C
	BIOC 43884 Bioprocess Technology	C
	BIOC 43891 Seminar	C
	BIOC 43908 Research Project/Dissertation	C

[1]Credits not counted for the GPA calculation

Subject: Botany (BOTA)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	BIOL 11522 Genetics	C	G.C.E. A/L (Biology)	-
	BOTA 11532 Organic Gardening[1]	A	-	-
Year 1 Sem 2	BOTA 12514 Morphology, Anatomy and Taxonomy of Angiosperms	C	All BIOL course units	BOTA 12522
	BOTA 12522 Morphology, Anatomy and Taxonomy of Angiosperms Laboratory	C	-	BOTA 12514
Year 2 Sem 1	BOTA 21513 Plant Physiology	C	BOTA 12514	BOTA 21522
	BOTA 21522 Plant Physiology Laboratory	C	-	BOTA 21513
	BOTA 21531 Statistics and Data Analysis	C	-	-
Year 2 Sem 2	BOTA 22544 Plant Evolution and Diversity	C	BOTA 12514	BOTA 22552
	BOTA 22552 Plant Evolution and Diversity Laboratory	C	-	BOTA 22544
	BOTA 22563 Floristic Resources and Management[2]	C	ENCM 11512 & ENCM 11522	-
	BOTA 22573 Plant Diversity[2]	C	ENCM 11512 & ENCM 11522	-
Year 3 Sem 1	BOTA 31514 Ecology and Environmental Resources Management	C	BOTA 22544	BOTA 31522
	BOTA 31522 Ecology and Environmental Resources Management Laboratory	C	-	BOTA 31514
	PRPL 31992 Professional Placement	O	-	-
Year 3 Sem 2	BOTA 32534 Plant Pathology, Tissue Culture and Gene Technology	O	BOTA 21513	BOTA 32542
	BOTA 32542 Plant Pathology, Tissue Culture and Gene Technology Laboratory	O	-	BOTA 32534
	BOTA 32554 Horticulture and Post-harvest Biology	O	BOTA 21513	-

[1]Offered during alternate academic years for non-Biology students
[2]Offered for ENCM Programme

Subject: Botany (BOTA)			
BSc Hons			
	Course Units	**Status**	**Pre-requisite**
Year 3 Sem 1	BOTA 41766 Plant Systematics and Bioinformatics		All BOTA compulsory course units
Year 3 Sem 2	BOTA 42776 Plant Physiology and Biochemistry		
Year 4 Sem 1	BOTA 41784 Plant Pathology	C	All BOTA compulsory course units and BOTA 32534
	BOTA 41793 Applied Microbiology		
	BOTA 41803 Economic Botany		
	BOTA 41813 Plant Breeding		
	BOTA 41823 Forest Management and Soil Nutrient Dynamics		
	BOTA 43838 Research Project		
	BOTA 43842 Term Paper		
Year 4 Sem 2	BOTA 42853 Ecology of Sustainability		
	BOTA 42864 Molecular and Microbial Genetics		
	BOTA 42873 Fungal Ecophysiology and Applied Mycology		

Subject: Chemistry (CHEM)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year1 Sem 1	CHEM 11511 Calculations in Chemistry[1, 2]	C/O	A/L Chemistry	-
	CHEM 11522 General Chemistry and Basic Analytical Chemistry	C	A/L Chemistry	-
	CHEM 11532 Basic Physical Chemistry	C	A/L Chemistry	-
	CHEM 11541 Basic Chemical Analysis Laboratory	C	A/L Chemistry	CHEM 11522
Year1 Sem 2	CHEM 12552 Basic Inorganic Chemistry I	C	CHEM 11522	-
	CHEM 12562 Basic Organic Chemistry	C	CHEM 11522	-
	CHEM 12571 Introductory Organic Chemistry Laboratory	C	CHEM 11541	CHEM 12562
Year 2 Sem 1	CHEM 21512 Basic Physical Chemistry II	C	CHEM 11532	-
	CHEM 21522 Analytical Chemistry	C	CHEM 11522	-
	CHEM 21531 Physical Chemistry Laboratory	C	CHEM 11541/CHEM 11532	CHEM 21512
Year 2 Sem 2	CHEM 22542 Basic Inorganic Chemistry II	C	CHEM 12552	-
	CHEM 22552 Organic Spectroscopy, Synthetic and Natural Product Chemistry	C	CHEM 12562	CHEM 22561
	CHEM 22561 Organic Spectroscopy, Synthetic and Natural Product Chemistry Laboratory	C	CHEM 12571	CHEM 22552
	CHEM 22571 Analytical Chemistry Laboratory	C	CHEM 21522	-
Year 3 Sem 1	CHEM 31511 Inorganic Synthesis and Analysis Laboratory	C	CHEM 11541	-
	CHEM 31522 Material Chemistry and Introduction to Quality Management	O	CHEM 22542	-
	CHEM 31532 Applied Organic Chemistry	O	CHEM 22552	-
	PRPL 31992 Professional Placement	O	All CHEM compulsory course units offered in Levels 1 & 2	-
Year 3 Sem 2	CHEM 32542 Polymer Chemistry	O	CHEM 21522	-
	CHEM 32552 Introduction to Environmental Chemistry	O	CHEM 11522/CHEM 21522	CHEM 32561
	CHEM 32561 Environmental Chemistry Laboratory	O	-	CHEM 32552

[1]Compulsory for Biological Science stream

[2]Credits not counted for the GPA calculation

Subject: Chemistry (CHEM)		
BSc Hons		
	Course Units	**Status**
Year3	CHEM 43764 Advanced Analytical Chemistry[1]	C
	CHEM 43774 Advanced Biochemistry I	C
	CHEM 43784 Advanced Inorganic Chemistry I	C
	CHEM 43794 Advanced Organic Chemistry I[1]	C
	CHEM 43804 Advanced Physical Chemistry I	C
	CHEM 43812 Analytical and Environmental Chemistry Laboratory[1]	C
	CHEM 43822 Biochemistry Laboratory	C
	CHEM 43833 Inorganic Chemistry Laboratory	C
	CHEM 43843 Organic Chemistry Laboratory[1]	C
	CHEM 43853 Physical Chemistry Laboratory	C
	CHEM 43862 Concepts in Chemistry	C
	CHEM 43872 Industrial/Professional Placement[2]	C
Year 4	CHEM 43884 Advanced Biochemistry II	C
	CHEM 43894 Advanced Environmental Chemistry	C
	CHEM 43904 Advanced Inorganic Chemistry II	C
	CHEM 43914 Advanced Organic Chemistry II[1]	C
	CHEM 43924 Advanced Physical Chemistry II	C
	CHEM 43934 Materials Chemistry	C
	CHEM 43948 Research Project - Dissertation	C
	CHEM 43951 Seminar	C

[1]Course units offered for the BSc Hons (Biochemistry) and (Chemistry)
[2]Credits not counted for the GPA calculation

Subject: Computer Science[1] (COSC)			
BSc			
	Course Units	**Status**	**Pre-requisite**
Year 1 Sem 1	COSC 11513 Introduction to Computer Science	C	G.C.E. A/L
	COSC 11522 Introduction to Programming Concepts	C	G.C.E. A/L
Year 1 Sem 2	COSC 12533 Programming in C	C	COSC 11522, COSC 11513
	COSC 12542 Systems Analysis & Design	C	COSC 11522
Year 2 Sem 1	COSC 21513 Data structures and Algorithms	C	COSC 12533
	COSC 21523 Database Management Systems	C	COSC 12533
Year 2 Sem 2	COSC 22532 Object Oriented Programming	C	COSC 12533
	COSC 22543 Computer Organization and Operating Systems	C	COSC 11513
Year 3 Sem 1	PRPL 31992 Professional Placement	O	All Level 1and 2 course modules
	COSC 31513 Data communication and Networks	C	COSC 11513
	COSC 31522 Software Project Management	O	COSC 12542
	COSC 31533 Visual Programming	O	COSC 12533
	COSC 31542 Information Security	O	COSC 31513
Year 3 Sem 2	COSC 32553 Web & Internet Technologies	O	COSC 12533, COSC 31513
	COSC 32562 Mobile Application Development	O	COSC 31513
	COSC 32572 Systems and Network Administration	O	COSC 31513, COSC 22543
	COSC 32582 Introduction to Artificial Intelligence	O	COSC 11513

[1]Limited Enrolment

Subject: Computer Science1 (COSC)			
BSc Hons			
	Course Units	**Status**	**Pre-requisite**
Year 3 Sem 1	PRPL 31992 Professional Placement	O	All Level 1and 2 course modules
	COSC 31513 Data communication and Networks	C	COSC 11513
	COSC 31522 Software Project Management	C	COSC 12542
	COSC 31533 Visual Programming	C	COSC 12533
	COSC 31542 Information Security	O	COSC 31513
Year 3 Sem 2	COSC 32553 Web & Internet Technologies	C	COSC 12533, COSC 31513
	COSC 32562 Mobile Application Development	C	COSC 31513
	COSC 32572 Systems and Network Administration	O	COSC 31513, COSC 22543
	COSC 32582 Introduction to Artificial Intelligence	C	COSC 11513
Year 3 and Year 4	COSC 41022 Human-Computer Interaction	O	COSC 32553
	COSC 42032 Theory of Programming Languages	C	COSC 12533
	COSC 44042 Advanced Database Concepts	C	COSC 21523
	COSC 44052 Advanced Database Applications	C	COSC 21523
	COSC 44063 Object-Oriented Analysis and Design	C	COSC 22532
	COSC 44073 Computer Architecture and Design	C	COSC 22543
	COSC 44083 Logic Programming and Deductive Reasoning	C	COSC 12533
	COSC 44093 Wireless Communication and Networks	C	COSC 31513
	COSC 44103 Machine Learning	C	COSC 32582
	COSC 44112 Research Methodology and Scientific Communication	C	COSC 11513
	COSC 44123 Network and Information Security	C	COSC 31513
	COSC 44133 Software Engineering	O	COSC 12533
	COSC 44143 Theoretical Aspects of Computer Graphics	C	COSC 11513
	COSC 44153 Digital Image Processing and Computer Vision	O	COSC 32582
	COSC 44163 Multimedia Systems Development	O	COSC 31513, COSC 32553
	COSC 44173 Data mining and Warehousing	O	COSC 44042
	COSC 44183 Natural Language Processing	O	COSC 44083
	COSC 44193 e-Business Technologies	O	COSC 32553
	COSC 44203 Semantic Web and Ontological Modelling	O	COSC 32553
	COSC 44214 Distributed Systems and Cloud Computing	O	COSC 31513
	COSC 44224 Emerging Technologies in Computer Science	O	All COSC Compulsory course units of Level 3
	COSC 44233 Theory of Compilers	O	COSC 22543
	COSC 44243 Theory of Computation	C	COSC 11513
	COSC 41254 Industrial Training	O	All COSC
	COSC 43268 Research Project	C	Compulsory course units of Level 3

Subject: Computer Studies[1] (COST)			
BSc			
	Course Units	**Status**	**Pre-requisite**
Year 1 Sem 1	COST 11513 Introduction to Computer Science	C	G.C.E. (A/L)
	COST 11522 Introduction to Programming Concepts	C	G.C.E. (A/L)
Year 1 Sem 2	COST 12533 Programming in C	C	COST 11513, COST 11522
	COST 12542 Internet and its Services	C	COST 11513
Year 2 Sem 1	COST 21513 Database Management Systems	C	COST 12533
Year 2 Sem 2	COST 22523 Structured Systems Analysis and Design	C	COST 11522
	COST 22534 Web Technology and e-Commerce Applications	C	COST 12533, COST 12542
Year 3 Sem 1	COST 31513 Visual Programming	O	COST 12533
	COST 31523 Management Information Systems	C	COST 11513
	PRPL 31992 Professional Placement	O	All COST course units in Levels 1 & 2
Year 3 Sem 2	COST 32532 Web Programming	O	COST 22534
	COST 32543 Multimedia Technologies	O	COST 22534

[1]Limited Enrolment

Subject: Computer Studies[1] (COST)			
BSc Hons			
	Course Units	**Status**	**Pre-requisite**
Year 3 Sem 1	COST 31513 Visual Programming	C	COST 12533
	COST 31523 Management Information Systems	C	COST 11513
	COST 31554 Mathematics for Information Technology[2]	C	G.C.E.(A/L)
	COST 31562 Social and Professional Issues in Computing	C	COST 11513
	PRPL 31992 Professional Placement	O	All COST course units in level 1 and 2
	COST 41013 Data Structures and Algorithms	C	COST 12533
Year 3 Sem 2	COST 32532 Web Programming	C	COST 22534
	COST 32543 Multimedia Technologies	C	COST 22534
	COST 32574 Statistics for Information Technology[3]	C	G.C.E.(A/L)
	COST 42022 Object Oriented Programming	C	COST 12533
Year 3/4 Sem 1 and Sem 2	COST 44033 Operating Systems	C	COST 11513
	COST 44043 Object Oriented Analysis and Design	C	COST 42022
	COST 44053 Computer Architecture and Organization	C	COST 44033
	COST 44062 Advanced Database Concepts	C	COST 21513
	COST 44072 Advanced Database Applications	O	COST 21513
	COST 44083 Logic Programming	C	COST 11513
	COST 44092 Human-Computer Interaction	C	COST 22534
	COST 44102 Research Methodology and Scientific Communication	C	COST 11513
	COST 44112 Mobile Application Development	O	COST 12533
	COST 44122 Software Quality Assurance	C	COST 22523
	COST 44132 Software Project Management	C	COST 22523
	COST 44143 Data Communication and Networks	C	COST 12542
	COST 44152 Network and Systems Administration	C	COST 44143, COST 44033
	COST 41164 e-Business Technologies	O	COST 22534
	COST 41174 Industrial Training	O	All COST course units in level 1, 2 and 3
	COST 44184 Distributed Systems and Cloud Computing	O	COST 44143
	COST 44193 Information Security	C	COST 44143
	COST 44203 Data mining and Warehousing	O	COST 44062
	COST 44213 Semantic Web and Ontological Modelling	O	COST 22534
	COST 44223 Emerging Technologies in IT	O	All COSC compulsory course units of Level 3
	COST 43238 Research Project	C	All COST compulsory course units

Note:

Students are allowed to register to follow either COST 41164 or COST 41174, but not both in Semester I of Level 4.

Other Level 4 course units will be offered either in Semester I or Semester II of Level 3 or Level 4.

[1]Limited enrolment.

[2]Compulsory only for students entered to the BSc Hons Degree Programme from the Biological Science stream.

[3]Compulsory for all students who have not followed the course units STAT 11514 and STAT 11521 in Level 1.

Subject: Electronics[1] (ELEC)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	ELEC 11513 Basic Electronics	C	A/L Physics	ELEC 11521
	ELEC 11521 Basic Electronics Laboratory	C	A/L Physics	ELEC 11513
Year 1 Sem 2	ELEC 12534 Analogue Electronics	C	A/L Physics	ELEC 12541
	ELEC 12541 Analogue Electronics Laboratory	C	ELEC 11521	ELEC 12534
Year 2 Sem 1	ELEC 21513 Digital Electronics	C	ELEC 12534	ELEC 21521
	ELEC 21521 Digital Electronics Laboratory	C	ELEC 12541	ELEC 12534
Year 2 Sem 2	ELEC 22534 Signal Processing and Data Acquisition	C	ELEC 21513	ELEC 22541
	ELEC 22541 Signal Processing and Data Acquisition Laboratory	C	ELEC 21521	ELEC 21513
Year 3 Sem 1	PRPL 31992 Professional Placement	O		
	ELEC 31513 Computer Organization and Architecture	C	ELEC 22534	ELEC 31521
	ELEC 31521 Computer Architecture Laboratory	C	ELEC 22541	ELEC 31513
	ELEC 32534 Special Topics in Electronics	O	ELEC 31513	-
Year 3 Sem 2	ELEC 33542 Research Project	C	All ELEC Compulsory Course Units	-

[1]Limited enrolment

	Course Units	Status	Pre-requisite	Co-requisite
	Subject: Environmental Conservation and Management (ENCM)			
	BSc (ENCM)			
Year 1 Sem 1	ENCM 11512 Evolution of Earth and Biogeography	C	G.C.E. (A/L) Biology	-
	ENCM 11522 Introduction to Environmental Management	C	G.C.E. (A/L) Biology	-
	ENCM 11532 Hydrology and Meteorology	C	G.C.E. (A/L) Biology	-
	ENCM 11543 Soil and Mineral Resources	C	G.C.E. (A/L) Biology	-
Year 1 Sem 2	ENCM 12553 Pollution and Environmental Health	C	ENCM 11522	-
	ENCM 12562 Sustainable Utilization of Energy Resources	C	ENCM 11522	-
	ENCM 12572 Forest Resources	C	ENCM 11522	-
Year 2 Sem 1	ENCM 21513 Principles of Geo-informatics	C	ENCM 11522	-
	ENCM 21522 Environmental Policies and Legislations	C	ENCM 11522	-
	ENCM 21533 Applied Ecology	C	ZOOL 12523	ENCM 21542
	ENCM 21542 Applied Ecology Laboratory	C	ZOOL 12531	ENCM 21533
	ENCM 21552 Parasites, Vectors and Environmental Health	C	ZOOL12523	-
	ENCM 21562 Solid Waste Management	C	ENCM 12553	-
Year 2 Sem 2	ENCM 22572 Waste Water Management	C	ENCM 11522	-
Year 3 Sem 1	ENCM 31513 Environmental Economics[1]	C	ENCM 11522 & ENCM 12553	-
	ENCM 31522 Environmental Impact Assessment	C	ENCM 21533	-
	ENCM 31532 Environmental Monitoring	C	ENCM 21542	-
	ENCM 31543 Environment Management Systems and Green Technology	C	ENCM 11522 & ENCM 21522	-
	ENCM 31552 Hazardous Waste Management	C	ENCM 22572	-
	ENCM 31592 Water Resources Management	C	ENCM 21533	-
	ENCM 33564 Environmental Project[1]	C	All level I &II ENCM course units	-
Year 3 Sem 2	ENCM 32572 Natural Disaster Management[2]	O	ENCM 11512 & ENCM 11532	-
	ENCM 32582 Urban Environment Management[2]	O	ENCM 11522	-
	ENCM 32605 In-Plant Training[1]	C	All level I &II ENCM course units	-

[1]Not offered for the BSc Hons (ENCM) Degree programme
[2]Students should accumulate credits for at least one optional course units offered in the third year

Subject: Environmental Conservation and Management (ENCM)			
BSc Hons (ENCM)			
	Course Units	**Status**	**Pre-requisite**
Year 3 Sem 1	ENCM 31522 Environmental Impact Assessment	C	ENCM 21533
	ENCM 31532 Environmental Monitoring	C	ENCM 21542
	ENCM 31543 Environment Management Systems and Green Technology	C	ENCM 11522 & ENCM 21522
	ENCM 31552 Hazardous Waste Management	C	ENCM 22572
	ENCM 31592 Water Resources Management	C	ENCM 21533
	ENCM 41512 Statistics for Environmental Management	C	ENCM 21542
	ENCM 41523 Forest Resources Management	C	ENCM 12572 & ENCM 21522
	ENCM 43532 Essay and Seminar on Special Topics in Environmental Management	C	ENCM 21522
Year3 Sem 2	ENCM 32572 Natural Disaster Management[1]	O	ENCM 11512 & ENCM 11532
	ENCM 32582 Urban Environment Management[1]	O	ENCM 11522
	ENCM 42542 Research Methodology and Scientific Writing	C	ENCM 41512
	ENCM 42553 Geo-informatics for Environmental Management	C	ENCM 21523
Year 4 Sem 1	ENCM 41564 Applications in Environmental Economics	C	ENCM 31543
	ENCM 41574 Ecological Interactions and Behavioural Ecology	C	ENCM 21542
	ENCM 41583 Reserve Design and Protected Area Management	C	ZOOL 32563
	ENCM 41592 Professional Placement	C	All level II & III ENCM course units
Year 4 Sem 2	ENCM 42604 Ecology and Management of Wetlands	C	ENCM 21533
	ENCM 42612 Social Responsibility in Environmental Management	C	ENCM 31522
	ENCM 42622 Air Quality Management	C	ENCM 31543
	ENCM 42632 Global Climate Change	C	ENCM 21533
	ENCM 42642 Marine and Coastal Resources Management	C	ENCM 21533
	ENCM 43654 Environmental Toxicology and Risk Assessment[2]	C	ENCM 31532
	ENCM 43668 Research Project[2]	C	ENCM 41512 & ENCM 42542

[1]Students should accumulate credits for at least one optional course units offered in the third year
[2]Offered throughout the year

Subject: Generic Competencies (GNCT)		
BSc Hons		
	Course Units	**Status**
Year 1 Sem 1	GNCT 11012 Philosophy of Science	C
Year 1 Sem 1&2	GNCT 13212 Personal Progress Development I[1]	C
Year 2 Sem 1&2	GNCT 23212 Personal Progress Development II[1]	C
Year 3 Sem 2	GNCT 32216 Internship	C

[1]Credits earned will not be considered for GPA

Subject: Industrial Management (IMGT)		
	Course Units	**Status**
Year 1	IMGT 14512 Management Theory and Practice[1]	A
Year 2	IMGT 21511 Introduction to Intellectual Property	A

[1]Can take either IMGT 14512 or MGMT 11012

Subject: Information Technology (INTE)			
BSc Hons (MIT)			
	Course Units	**Status**	**Pre-requisite**
Level 1	INTE 11213 Fundamentals of Computing	C	None
	INTE 11223 Programming Concepts	C	None
	INTE 12213 Object Oriented Programming	C	INTE 11223
	INTE 12223 Database Design and Development	C	INTE 11213
Level 2	INTE 21213 Information Systems Modelling	C	INTE 11213
	INTE 21223 Interactive Application Development	C	INTE 12213 INTE 22232
	INTE 21233 Web Application Development	C	INTE 11213
	INTE 21243 Computer Architecture and Operating Systems	O	INTE 11213
	INTE 22222 Business Information Systems	C	INTE 11213
	INTE 22232 Human Factors in Information Technology	C	INTE 11213
	INTE 24213 Data Structures and Algorithms	C	INTE 11223
Level 3	INTE 31253 Software Engineering Concepts	C	INTE 21213
	INTE 31262 Advanced Web Application Development	C	INTE 21233
	INTE 31273 Integrative Programming and Technologies	C	INTE 21213
	INTE 31293 Multimedia Technologies	O	INTE 22232
	INTE 31303 Requirement Engineering	C	INTE 21213
	INTE 31312 Information Technology Infrastructure	C	INTE 11213
	INTE 31322 Enterprise Systems	O	INTE 22222
	INTE 31332 IS Auditing and Control	O	INTE 22222
	INTE 31342 Big Data Analytics	O	-
	INTE 34223 Computer Networks	C	INTE 11213
	INTE 34233 Embedded Systems Development	O	INTE 21243
	INTE 34242 System Design Project	C	INTE 21213
	INTE 34253 Mobile Application Development	O	INTE 12213
	INTE 34263 System Development Project	C	-
Level 4	INTE 41213 System Administration and Maintenance	C	INTE 11213
	INTE 41223 Advanced Databases	O	INTE 12223
	INTE 41233 Software Verification and Validation	O	INTE 31253
	INTE 41242 Artificial Intelligence	C	INTE 22222

INTE 41252 Advanced Networking	O	INTE 31212
INTE 41263 Data Mining & Warehousing	O	INTE 12223
INTE 41273 Enterprise Architecture	C	INTE 31312
INTE 41282 E-Business	C	INTE 22222
INTE 42213 Information Assurance and Security	O	INTE 22222
INTE 42243 Distributed Systems and Cloud Computing	O	-
INTE 42253 Semantic web and Ontological Engineering	O	INTE 31262
INTE 42263 Information Systems Strategy& Management	C	INTE 22222
INTE 42272 Information Technology Resource Management	O	INTE 31312
INTE 42282 Knowledge Management	O	INTE 22222
INTE 43216 Research Project[1]	C	MGTE 31222
INTE 44212 Systems Modelling & Simulation	O	MGTE 12222
INTE 44222 Internet of Things	O	INTE 34233

[1]Students should offer either MGTE 43216 or INTE 43216

Subject: Management for Physical Science Students (MAPS)			
BSc			
	Course Units	**Status**	**Pre-Requisite**
Level 1 Sem 1	MAPS 11512 Management theory and Practices	A	-
Level 2 Sem 2	MAPS 22603 Principles of Human Resource Management and Leadership	A	-
Level 3 Sem 2	MAPS 32612 Innovation and Entrepreneurship	A	-

Subject: Management and Technology (MGTE)			
BSc Hons (MIT)			
	Course Units	**Status**	**Pre-Requisite**
Level 1	MGTE 11213 Statistics	C	None
	MGTE 11222 Principles of Management	C	None
	MGTE 11232 Industry & Technology	C	None
	MGTE 12212 Economics	C	None
	MGTE 12222 Optimization Methods in Management Science I	C	None
Level 2	MGTE 21212 Leadership and Management Communication	C	None
	MGTE 21222 Marketing Management	C	None
	MGTE 21233 Operations Management	C	None
	MGTE 22212 Human Resource Management	C	None
	MGTE 22222 Management of Technology	C	None
	MGTE 24213 Accounting Concepts and Costing	C	None
Level 3	MGTE 31212 Project Management	C	None
	MGTE 31222 Research Methods	C	None
	MGTE 31233 Strategic Management	C	MGTE 21222 MGTE 34213
	MGTE 31243 Optimization methods for Management Science II	C	-
	MGTE 31252 Advanced Operations Management	C	MGTE 21233
	MGTE 31262 Statistical Techniques for Data Analysis	C	MGTE 11213
	MGTE 31272 Computer based tools for Management Applications	O	-
	MGTE 31283 Strategic Marketing and International Trade	O	MGTE 21222
	MGTE 31293Computer Integrated Manufacturing	O	MGTE 21233
	MGTE 31303 Procurement/Supply Management	C	MGTE 21233
	MGTE 34213 Managerial Finance	C	MGTE 24213
Level 4	MGTE 41212 Professional Practice	C	None
	MGTE 41222 Business Process Engineering	C	MGTE 31252
	MGTE 41233 Corporate Finance	C	MGTE 34213
	MGTE 41243 Enterprise Resources Planning and Control Systems	O	MGTE 31252
	MGTE 41252 Logistics Systems and Transportation Management	C	MGTE 31252
	MGTE 42213 Industrial and Systems Engineering	C	MGTE 21233
	MGTE 42223 Investment Management	O	MGTE 41233
	MGTE 42232 Advanced Statistical Techniques for Industry	O	MGTE 11213
	MGTE 42243 Advanced Planning and Scheduling	O	MGTE 31252
	MGTE 42252 Strategic Quality Management and Lean Six Sigma	C	-
	MGTE 42292 Business and IT Law	C	INTE 22222
	MGTE 43216 Research Project[1]	C	MGTE 31222
	MGTE 44212 Advanced Optimization methods in Management Science	O	MGTE 31243
	MGTE 44223 Innovation and New Product Development	O	MGTE 21222
	MGTE 44232 Supply Chain Financing	C	MGTE 31303
	MGTE 44242 Warehouse and Distribution Management	C	MGTE 31252
	MGTE 44252 Management of Occupational Health, Safety and Environment	O	None
	MGTE 44262 Service Design and Delivery Management	C	-

[1]Students should offer either MGTE 43216 or INTE 43216

Subject: Microbiology[1] (MIBI)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	BIOL 11512 Basic Microbiology (Lecture cum Laboratory)	C	A/L Biology	-
Year 1 Sem 2	MIBI 12514 Diversity of Bacteria, Virus and Fungi	C	BIOL 11512	MIBI 12522
	MIBI 12522 Laboratory Techniques on taxonomy of Bacteria, Virus and Fungi	C	BIOL 11512	MIBI 12514
Year 2 Sem 1	MIBI 21514 Microbial Biochemistry and Physiology, Bacterial Genetics and its applications	C	MIBI 12514 MIBI 12522	MIBI 21522
	MIBI 21522 Laboratory aspects of Microbial Biochemistry and Physiology, Bacterial Genetics	C	MIBI 12514 MIBI 12522	MIBI 21514
Year 2 Sem 2	MIBI 22534 Fundamentals and Applications of Environmental and Agricultural Microbiology	C	MIBI 21514 MIBI 21522	MIBI 22542
	MIBI 22542 Laboratory aspects of Environmental and Agricultural Microbiology	C	MIBI 21514 MIBI 21522	MIBI 22534
	MIBI 22554 Microbiology for Environmental Management[2]	C	ENCM 12553	MIBI 22562
	MIBI 22562 Laboratory Microbiology for Environmental Management[2]	C	ENCM 12553	MIBI 22554
Year 3 Sem 1	PRPL 31992 Professional placement	O	All MIBI compulsory units offered in Levels 1 & 2	-
	MIBI 31514 Food Microbiology and Food Hygiene, Microbiology of Food Processing and Preservation	C	MIBI 21514 MIBI 21522	MIBI 31522
	MIBI 31522 Laboratory aspects of Food Microbiology, Food Processing and Preservation	C	MIBI 21514 MIBI 21522	MIBI 31514
Year 3 Sem 2	MIBI 32556 Industrial Training in Microbiology[3]	C/O	MIBI 31514 MIBI 31522	-
	MIBI 33534 Medical and Veterinary Microbiology, Microbial Technology[3]	C/O	MIBI 21514 MIBI 21522	MIBI 33541
	MIBI 33541 Laboratory aspects of Medical and Veterinary Microbiology[3]	C/O	MIBI 21514 MIBI 21522	MIBI 33534
	MIBI 33562 Special topics in Microbiology	O	MIBI 31514 MIBI 31522	MIBI 33534

[1]Limited enrolment
[2]Compulsory only for the students who follow the BSc (ENCM) Degree Programme
[3]Compulsory only for the BSc Hons (Microbiology) students

Subject: Microbiology[1] (MIBI)			
BSc Hons			
	Course Units	**Status**	**Pre-requisite**
Year 3	MIBI 43764 Advanced study on selected taxonomic groups of Bacteria and Archaea, Applied Virology and Applied Mycology	C	All MIBI compulsory course units
	MIBI 43774 Advanced Bacterial Genetics, Bioethics and Biosafety, Bioinformatics, Molecular Biology and Gene Technology		
Year 4	MIBI 41784 Industrial Microbiology and Environmental Biotechnology		
	MIBI 41804 Food Technology and Nutrition		
	MIBI 41824 Microbiology of Fish Diseases, Advanced Bacterial Biochemistry and Physiology		
	MIBI 43794 Specific Microbiological Standards and Testing, Quality Assurance of Foods		
	MIBI 43814 Medical Microbiology and Immunology, Pharmaceutical Microbiology		
	MIBI 43834 Veterinary Microbiology and Plant Pathology		
	MIBI 43846 Studies on contemporary research in Microbiology		
	MIBI 43852 Laboratory Microbiology		
	MIBI 43868 Research Project		

[1]Limited enrolment

Subject: Molecular Biology and Plant Biotechnology[1] (MBBT)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	BIOL 11522 Genetics	C	G.C.E. (A/L) Biology	-
Year 1 Sem 2	MBBT 12513 Introduction to Molecular and Cellular Biology	C	All BIOL course units	MBBT 12522
	MBBT 12522 Introduction to Molecular and Cellular Biology Laboratory	C	-	MBBT 12513
Year 2 Sem 1	MBBT 21513 Plant Biochemistry	C	BIOL 11532	-
	MBBT 21523 Principles of Gene Expression	C	MBBT 12513	-
Year 2 Sem 2	MBBT 22533 Microbial Biology	C	BIOL 11512	-
	MBBT 22543 Molecular Plant Breeding	C	MBBT 12513	-
Year 3 Sem 1	MBBT 31513 Principles and Techniques in Plant Biotechnology	C	MBBT 12513	MBBT 31522
	MBBT 31522 Principles and Techniques in Plant Biotechnology Laboratory	C	-	MBBT 31513
	PRPL 31992 Professional Placement	O	-	-
Year 3 Sem 2	MBBT 32534 Plant Pathology and Tissue Culture	O	MBBT 22533	MBBT 32542
	MBBT 32542 Plant Pathology and Tissue Culture Laboratory	O	-	MBBT 32534

[1]Limited enrolment

Subject: Molecular Biology and Plant Biotechnology[1] (MBBT)			
BSc Hons			
	Course Units	**Status**	**Pre-requisites**
Year 3 Sem 1	MBBT 41766 Plant Genetic Engineering		All MBBT compulsory course units
Year 3 Sem 2	MBBT 42776 Advanced Microbial Genetics		
Year 4 Sem 1	MBBT 41784 Molecular Plant Pathology	C	All MBBT compulsory course units and MBBT 32534
	MBBT 41794 Genetic Manipulation of Microorganisms		
	MBBT 41805 Developmental Gene Regulation		
	MBBT 41813 Bioinformatics in Molecular Biology		
	MBBT 43824 Modern Trends in Molecular Biology		
	MBBT 43832 Term Paper		
	MBBT 43848 Research Project		
Year 4 Sem 2	MBBT 42853 Ethics of Biotechnology, Biosafety and intellectual property rights		
	MBBT 42864 Plant Genomics and Proteomics		

[1]Limited enrolment

Subject: Physics[1] (PHYS)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	PHYS 11512 Mechanics and Properties of Matter	C	A/L Physics	PHYS 11521
	PHYS 11521 Elementary Physics Laboratory I	C	A/L Physics	PHYS 11512 PHYS 11532
	PHYS 11532 Electric Circuit Fundamentals	C	A/L Physics	PHYS 11521
Year 1 Sem 2	PHYS 12542 Atomic and Nuclear Physics	C	A/L Physics	PHYS 12561
	PHYS 12552 Special Theory of Relativity & Quantum Mechanics	C	A/L Physics	PHYS 12561
	PHYS 12561 Elementary Physics Laboratory II	C	PHYS 11521	PHYS 12542 PHYS 12552
Year 2 Sem 1	PHYS 21513 Waves and Optics	C	PHYS 12542 PHYS 12552	PHYS 21521
	PHYS 21521 General Physics Laboratory I	C	PHYS 12561	PHYS 21513
Year 2 Sem 2	PHYS 22533 Solid State and Thermodynamics	C	PHYS 21513	PHYS 22541
	PHYS 22541 General Physics Laboratory II	C	PHYS 21521	PHYS 22553
	PHYS 22553 Environmental Physics[2]	C	A/L Physics or Chemistry	-
Year 3 Sem 1	PRPL 31992 Professional Placement	O	-	-
	PHYS 31512 Electromagnetic Theory	C	PHYS 11532	PHYS 31521
	PHYS 31521 General Physics Laboratory III	C	PHYS 22541	PHYS 11532
	PHYS 31532 Introductory Biophysics[3]	O/C	A/L Physics	-
	PHYS 31544 Mathematical Methods in Physics[3]	O/C	All Level 1 and 2 PHYS Compulsory Units	-
Year 3 Sem 1	PHYS 32551 Electronics Laboratory[4]	C	PHYS 31521	PHYS 31512
	PHYS 32562 Electronics[4]	C	PHYS 31512	PHYS 31521
	PHYS 32572 Nanoscience[3]	O/C	PHYS 12542 PHYS 12552	-
	PHYS 32582 Introduction to Cosmology and Astrophysics[3,5,6]	O/C	A/L Physics	-

[1]Limited enrolment
[2]Compulsory for students who have followed Electronics as a subject
[3]Compulsory for students following BSc Hons (Physics) Degree
[4]Offered for students who have not followed Electronics as a subject
[5]Availability of the course unit will be announced by the Department at the beginning of the each academic year
[6]Compulsory for students following BSc Hons (Mathematical Physics) Degree

Subject: Physics (PHYS)			
BSc Hons			
	Course Units	**Status**	**Pre-requisite**
Level 4	PHYS 43793 Advanced Physics Laboratory - I	C	All PHYS Compulsory Course Units
	PHYS 43875 Advanced Physics Laboratory - II		
	PHYS 43888 Research Project		
	PHYS 44764 Classical Mechanics		
	PHYS 44774 Quantum Mechanics		
	PHYS 44784 Advanced Electronics[1]		
	PHYS 44804 Statistical Physics		
	PHYS 44814 Special Topics in Physics[2]		
	PHYS 44824 Condensed Matter Physics		
	PHYS 44834 Theory of Relativity and Cosmology		
	PHYS 44854 Electrodynamics		
	PHYS 44864 Nuclear Physics and Fundamental Particles		

[1]Offered for students who have not followed Electronics as a subject
[2]Offered for students who have followed Electronics as a subject

Subject: Pure Mathematics (PMAT)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	PMAT 11513 Discrete Mathematics I	C	A/L Combined Mathematics	-
	PMAT 11522 Matrix Algebra	C	A/L Combined Mathematics	-
	PMAT 11212 Discrete Mathematics for Computing I[a]	C	-	-
	PMAT 11703 Topics in Basic Mathematics[1]	A	-	-
Year 1 Sem 2	PMAT 12532 Discrete Mathematics II	C	PMAT 11513	-
	PMAT 12543 Theory of Calculus	C	PMAT 11513	-
	PMAT 12212 Discrete Mathematics for Computing II[b]	C	PMAT 11212	-
	PMAT 12713 Introduction to Calculus[1]	A	-	-
Year 2 Sem 1	PMAT 21553 Linear Algebra	C	PMAT 11522	-
	PMAT 21562 Infinite Series	C	PMAT 12543	-
Year 2 Sem 2	PMAT 22572 Ordinary Differential Equations	C	PMAT 12543	-
	PMAT 22583 Functions of Several Variables	C	PMAT 21553	-
	PMAT 22213 Mathematical Methods for Computing[c]	O	-	-
Year 3 Sem 1	PMAT 31593 Complex Variables	C	PMAT 22583	-
	PMAT 31602 Abstract Algebra	O	PMAT 21553	-
	PRPL 31992 Professional Placement	O	-	-
Year 3 Sem 2	PMAT 32612 Theory of Riemann Integration	O	PMAT 12543	-
	PMAT 32622 Mathematical Methods	C/O	PMAT 22583	-
	PMAT 32632 Geometry	O	PMAT 22583	-

[1]Available only for students who have not offered combined Mathematics for GCE (A/L) Examination
[a]For BSc Hons (MIT) and (SENG) programmes
[b]For BSc Hons (MIT) and (SENG) programmes
[c]For BSc Hons (SENG) programme

Subject: Pure Mathematics (PMAT)			
BSc Hons			
	Course Units	**Status**	**Pre-requisite**
Year 3 Sem 1	PMAT 41763 Complex Analysis	C	PMAT 22583
	PMAT 41783 Differential Geometry	O	PMAT 22583
Year 3 Sem 2	PMAT 42793 Advanced Theory of Riemann Integration	C	PMAT 12543
	PMAT 42803 Advanced Mathematical Methods	O	PMAT 22583 PMAT 22572
	PMAT 42983 Graph Theory	O	PMAT 21553
Year 4 Sem 1	PMAT 41813 Functional Analysis[1]	C/O	PMAT 21553
	PMAT 41823 Topology[2]	C	PMAT 21553
	PMAT 41962 Research Methodology	C	-
	PMAT 43976 Research Project[3]	C	-
Year 4 Sem 2	PMAT 42833 Measure Theory	C	PMAT 42793
	PMAT 42843 Group Theory	C	PMAT 21553

[1]Optional for students in the BSc Hons (Statistics)
[2]Students in the Mathematical Physics program are strongly advised to attend these lectures
[3]Compulsory for the student who have not offered AMAT 43976

Subject: Software Engineering (SENG)			
BSc Hons (SENG)			
	Course Units	Status	Pre-requisite
Level 1	SENG 11213 Fundamentals of Computing	C	None
	SENG 11223 Programming Concepts	C	None
	SENG 11232 Engineering Foundation	C	None
	SENG 11243 Statistics	C	None
	SENG 12213 Data Structures and Algorithms	C	SENG 11223
	SENG 12223 Database Design and Development	C	None
	SENG 12233 Object Oriented Programming	C	SENG 11223
	SENG 12242 Management for Software Engineering I	C	None
Level 2	SENG 21213 Computer Architecture and Operating Systems	C	SENG 11213, SENG 11223
	SENG 21222 Software Construction	C	SENG 12213, SENG 12233
	SENG 21233 Requirement Engineering	C	SENG 12223, SENG 12233
	SENG 21243 Software Modelling	C	SENG 11213
	SENG 21253 Web Application Development	C	SENG 11233, SENG 12223
	SENG 21263 Interactive Application Development	O	SENG 12233
	SENG 21272 Management for Software Engineering II	C	SENG 21242
	SENG 22212 Software Architecture and Design	C	SENG 21233
	SENG 22223 Human Computer Interaction	C	SENG 11223, SENG 12233
	SENG 22233 Software Verification and Validation	C	SENG 21533, SENG 22212
	SENG 22243 Mobile Application Development	C	SENG 12233
	SENG 22253 Embedded Systems Development	O	SENG 21213
	SENG 24213 Computer Networks	C	SENG 11213
Level 3	SENG 31212 Software Quality	C	SENG 21533, SENG 22212, SENG 34222
	SENG 31222 Information Security	C	SENG 24213, SENG 21213, SENG 12223, SENG 11223
	SENG 31232 Software Project Management	C	SENG 12242, SENG 21272
	SENG 31242 System Design Project	C	All SENG Modules
	SENG 31252 Professional Practice	C	None
	SENG 34262 Research Methods	C	SENG 11243
	SENG 31272 Internet of Things	O	SENG 22253
	SENG 31282 Computer Network Management	O	SENG 24213
	SENG 31292 Enterprise Information Systems	O	SENG 11213
	SENG 31313 Advanced Web Applications Development	O	SENG 21253
	SENG 31323 Mobile Computing Technology	O	SENG 22243
	SENG 31333 Business Intelligence and Management Support Systems	O	SENG 12233
	SENG 31343 Health Information Management	O	SENG 21233
	SENG 31353 Game Development Technology	O	SENG 11213
	SENG 31363 Business Systems Modelling and Optimization	O	SENG 11243
	SENG 32216 Internship	C	All Previous SENG Modules

	SENG 34213 System Development Project	C	SENG 31242
	SENG 34222 Software Process	C	SENG 21533
Level 4	SENG 41212 Software Evolution	C	SENG 22212
	SENG 41222 Software Metrics and Measurements	C	SENG 21533, SENG 22233
	SENG 41233 Digital Image Processing	O	SENG 11213, SENG 11223, SENG 12233, PMAT 22213
	SENG 41242 Advanced Databases	O	SENG 12223
	SENG 41252 Advanced Computer Networks	O	SENG 24213
	SENG 41262 Speech Interfaces	O	SENG 22223, SENG 22212
	SENG 41272 Formal Methods	O	SENG 12213
	SENG 41283 Distributed and Cloud Computing	O	SENG 31313
	SENG 41293 Mobile Web Application Development	O	SENG 31323
	SENG 41303 Big Data Infrastructure	O	SENG 31333
	SENG 41313 Health Information Systems Design and Development	O	SENG 31343
	SENG 41323 Games Design, Artwork and Programming	O	SENG 12213, SENG 31353
	SENG 41333 Computer-based Operations Management	O	SENG 31363
	SENG 42212 Software Safety and Reliability	C	SENG 22212, SENG 22233
	SENG 42222 Usability Engineering	O	SENG 22223
	SENG 42232 Software Management	O	SENG 22212
	SENG 42242 Machine Learning	O	SENG 12213
	SENG 42252 Computer Graphics	O	SENG 11213, SENG 11223, SENG 12233, PMAT 11212, PMAT 12212 , PMAT 22213
	SENG 42273 Semantic Web and Ontological Engineering	O	SENG 41283
	SENG 42283 Mobile Networks	O	SENG 24213, SENG 31323
	SENG 42293 Big Data Analytics	O	SENG 41303
	SENG 42303 Medical Imaging and Biomedical Signal Processing	O	SENG 41313
	SENG 42313 Advanced Topics in Game Design and Animation	O	SENG 41323
	SENG 42323 Business Process Engineering	O	SENG 41333
	SENG 43216 Software Engineering Research Project	C	SENG 34262

Subject: Statistics[1] (STAT)			
BSc			
	Course Units	**Status**	**Pre-requisite**
Year 1 Sem 1	STAT 11514 Fundamentals of Statistics	C	A/L Combined Mathematics/ Mathematics
	STAT 11521 Statistical Laboratory	C	A/L Combined Mathematics/ Mathematics
Year 1 Sem 2	STAT 12533 Probability Distributions and Applications I	C	STAT 11514
	STAT 12542 Optimization I	C	A/L Combined Mathematics/ Mathematics
	STAT 14552 Statistics for Natural Sciences	A	-
Year 2 Sem 1	STAT 21513 Probability Distributions and Applications II	C	STAT 12533
	STAT 21522 Optimization II	C	STAT 12542
Year 2 Sem 2	STAT 22533 Inferential Statistics	C	STAT 21513
	STAT 22542 Survey Methods and Sampling Techniques	C	STAT 21513
Year 3 Sem 1	STAT 31513 Statistical Models	C	STAT 22533
	STAT 31522 Time Series Analysis[1]	C/O	STAT 22533
	STAT 31532 Statistical Quality Control	O	STAT 12533, STAT 22542
	PRPL 31992 Professional Placement	O	Core courses covered in the first two years
Year 3 Sem 2	STAT 32543 Research Methodology, Data Analysis & Report Writing[1]	C/O	-
	STAT 32552 Non- parametric Statistics	O	STAT 22542
	STAT 32562 Statistical Simulation[1]	C/O	STAT 22533

[1]Compulsory only for BSc Hons (Statistics)

Subject: Statistics (STAT)			
BSc Honours			
	Course Units	**Status**	**Pre-requisite**
Year 3	STAT 41763 Stochastic Processes I	C	Core courses covered in the first two years and STAT 22533
	STAT 41783 Mathematical Optimization	C	STAT 21522
	STAT 42803 Bayesian Inference & Decision theory	C	STAT 22533
	STAT 42813 Advanced Topics in Time Series Analysis	C	STAT 31522
	STAT 42823 Stochastic Processes II	C	STAT 41763
	STAT 44774 Categorical Data Analysis	C	Core courses covered in the first two years and STAT 22542
	STAT 44794 Actuarial Mathematics	C	STAT 22533
Year 4	STAT 42843 Design and Analysis of Experiments	C	STAT 31513
	STAT 43878 Research Project/Independent Study	C	Core courses covered in the first three years
	STAT 44833 Multivariate Data Analysis	C	Core courses covered in the first three years
	STAT 44853 Econometrics	O	STAT 31513
	STAT 44863 Special Topics in Statistics	O	Core courses covered in the first three years
	STAT 44884 Industrial Training	O	Core courses covered in the first three years
	STAT 44893 Statistical Data Mining	O	STAT 31513 & STAT 42803

Subject: Zoology (ZOOL)				
BSc				
	Course Units	**Status**	**Pre-requisite**	**Co-requisite**
Year 1 Sem 1	BIOL 11542 Animal Form, Function and Behaviour	C	G.C.E. (A/L) Biology	-
Year 1 Sem 2	ZOOL 12512 Evolutionary Biology and Zoogeography	C	G.C.E. (A/L) Biology	-
	ZOOL 12523 Animal Diversity and Sri Lankan Fauna	C	G.C.E. (A/L) Biology	ZOOL 12531
	ZOOL 12531 Animal Diversity and Sri Lankan Fauna Laboratory	C	G.C.E. (A/L) Biology	ZOOL 12523
Year 2 Sem 1	ZOOL 21512 Animal Histology and Physiology	C	BIOL 11542	ZOOL 21521
	ZOOL 21521 Animal Histology and Physiology Laboratory	C	BIOL 11542	ZOOL 21512
	ZOOL 21532 Developmental Biology and Human Genetics	C	BIOL 11542	-
Year 2 Sem 2	ZOOL 22543 Applied Ecology	C	ZOOL 12523	ZOOL 22552
	ZOOL 22552 Applied Ecology Laboratory	C	ZOOL 12531	ZOOL 22543
	ZOOL 22561 Geo-informatics for Zoological Studies	C	BIOL 11542	ZOOL 22543
Year 3 Sem 1	ZOOL 31512 Fisheries Biology and Management[1]	C/O	ZOOL 12523	-
	ZOOL 31523 Entomology and Pest Management[2]	O	ZOOL 12523	-
	ZOOL 31532 Environmental Impact Assessment[1]	C/O	ZOOL 22543/ENCM 21543	-
	PRPL 31992 Professional Placement	O	All level 1 & 2 ZOOL course units	-
Year 3 Sem 2	ZOOL 32543 Aquaculture[1]	C/O	ZOOL 12523	-
	ZOOL 32552 Parasitology[1]	C/O	ZOOL 12523	-
	ZOOL 32563 Conservation Biology and Wildlife Management[1]	C/O	ZOOL 12523 & ZOOL 22543	-

[1]Compulsory for the BSc Hons (Zoology) Degree programme In order to claim Zoology as a subject for the BSc Degree programme, student should accumulate a minimum of 7 credits from the Level 3 ZOOL optional course units

[2]Not offered for the BSc Hons (Zoology) Degree programme

Subject: Zoology (ZOOL)			
BSc Honours			
	Course Units	**Status**	**Pre-requisite**
Year 3 Sem 1	ZOOL 41512 Statistical Methods in Zoology	C	ZOOL 22543
	ZOOL 41524 Insect Systematics and Biology	C	ZOOL 12523
	ZOOL 43532 Essay and Seminar on Special Topics in Zoology	C	ZOOL 12523 & ZOOL 22543
Year 3 Sem 2	ZOOL 42542 Research Methodology and Scientific Writing	C	ZOOL 41512
	ZOOL 42554 Molecular Genetics[1]	O	ZOOL 21532
	ZOOL 42564 Environmental Physiology and Ecotoxicology[1]	O	ZOOL 21512
Year 4 Sem 1	ZOOL 41574 Aquaculture Management	C	ZOOL 32543
	ZOOL 41584 Ecological Interactions and Behavioural Ecology	C	ZOOL 22543
	ZOOL 41592 Zoology in Practice	C	All level 1 & 2 ZOOL course units
	ZOOL 41612 Herpetology[2]	O	ZOOL 12523
	ZOOL 41622 Nematode Pest Management[2]	O	ZOOL 12523
	ZOOL 43608 Research Project	C	ZOOL 41512 & ZOOL 42542
Year 4 Sem 2	ZOOL 42632 Agricultural Entomology	C	ZOOL 41524
	ZOOL 42642 Medical and Veterinary Entomology	C	ZOOL 41524
	ZOOL 42654 Fish Stock Assessment and Fisheries Management	C	ZOOL 31512
	ZOOL 42662 Immunology[2]	O	ZOOL 21512
	ZOOL 42672 Ornithology[2]	O	ZOOL 12523
	ZOOL 42684 Ecology and Management of Wetlands[2]	O	ZOOL 22543
	ZOOL 42692 Marine and Coastal Resources Management[2]	O	ZOOL 22543

[1]In the second semester, the student should accumulate only 4 credits from level 4 optional ZOOL course units
[2]The student should accumulate only 8 credits from level 4 optional ZOOL course units in the 4th year

6. List of Course Units Offered by Other Faculties to the Students in the Faculty of Science

Auxiliary Course Units Offered by the Faculty of Humanities

BUDDHIST CULTURE
Level One
BUCU 11032   Ancient Buddhist Monasteries of Sri Lanka
BUCU 12062   Buddhist Art and Architecture in Sri Lanka
Level Two
BUCU 21042   An Introduction to Buddhist Art and Antiquities in South Asia
BUCU 22092   An Introduction to Buddhist Rights and Ceremonies
Level Three
BUCU 31032   Buddhism and Environment
BUCU 31042   An Introduction to Development of Buddhist Culture in Sri Lanka
BUCU 32082   An Introduction to Buddhism and other Religions

BUDDHIST PHILOSOPHY
Level One
BUPH 12072   Buddhism and Social Issues
Level Two
BUPH 21032   The Buddhist Concept of Communication
BUPH 22062   The Buddhist Attitude Towards Law, Crime and Punishment
Level Three
BUPH 32062   Buddhist Attitude to the Economy, Politics and Health.

CHINESE
Level One
CHIN 13252   Chinese Language and Culture I
Level Two
CHIN 23252   Chinese Language and Culture II
Level Three
CHIN 33252   Chinese Language and Culture III

CHRISTIAN CULTURE
Level One
CHCU 12252   Introduction to the Bible
CHCU 12262   Introduction to Christianity

FRENCH
Level One
FREN 13252   French Grammar & Vocabulary
Level Two
FREN 23252   Grammar, Composition and Expression
Level Three
FREN 33252   French Grammar, Expression and Culture

GERMAN
Level One
GERM 13252   German Language and Culture I
Level Two
GERM 23252   German Language and Culture II
Level Three
GERM 33252   German Language and Culture III

HINDI
Level One
HIND 11232   Proficiency in Hindi language I
HIND 12262   Proficiency in Hindi language II
Level Two
HIND 21232   Proficiency in Hindi language III
HIND 22262   Proficiency in Hindi language IV
Level Three
HIND 31232   Introduction to North Indian Culture
HIND 32262   Introduction to Modern Hindi Prose & Verse (Prescribed)

JAPANESE
Level One
JPNS 13252   Japanese Grammar & Vocabulary I
Level Two
JPNS 23252   Japanese Grammar & Vocabulary II
Level Three
JPNS 33252   Japanese Grammar & Vocabulary III

KOREAN
Level One
KORE 13262   Korean Language and Culture I
LEVEL TWO
KORE 23332   Korean Language and Culture II
Level Three
KORE 33402   Korean Language and Culture III

PALI
Level One
PALI 11032   Source Criticism
Level Two
PALI 21032   Pali Grammer - II
PALI 22072   Sri Lankan Historical Sources in Pali
Level Three
PALI 31032   Preaching Skills

RUSS
Level One
RUSS 13252   Russian Language & Culture I
Level Two
RUSS 23252   Russian Language & Culture II
Level Three
RUSS 33252   Introduction to Russian Literature III

SANSKRIT
Level One
SANS 11032   Introduction to Sanskrit Language and Literature I
SANS 12062   Introduction to Sanskrit Language and Literature II
Level Two
SANS 21032   Sanskrit Composition and Literature I
SANS 22062   Sanskrit Composition and Literature II
Level Three
SANS 31232   Sanskrit Literary Criticism and Dramaturgy
SANS 32262   Sanskrit Technical Terms
SANS 32272   Sanskrit Exposition of Conflict Resolution

SINHALA
Level Two
SINH 22232   Practical Sinhala II
SINH 22242   Modern Sinhala Writing Skills

WESTERN CLASSICAL CULTURE
Level One
WCCU 11232   Appreciating Greek and Roman Art
Level Two
WCCU 22252   Greek and Roman Drama
Level three
WCCU 32252   Greek and Roman Literary Theory/Criticism

Auxiliary Course Units Offered by the Department of English Language Teaching (DELT)

Level Two
DELT 21212   English in Today's World
DELT 22222   Introduction to Literature
Level Three
DELT 33212   English for Professional Purposes

General Education (GE) Course Units Offered by the Faculty of Social Sciences

Level One
GESO 11212   Social Integration
GESR 11222   Japanese Management Tools
GESR 11232   Fitness and Wellness
GESO 12242   Contemporary Social issues in Sri Lanka
GEAR 12252   Basic concept of Tourism
GEAR 12262   Adventure Tourism

Level Two
GEGE 21212   Map Reading
GEEC 21222   Sri Lankan Economy
GESS 21232   Elements of Mathematics
GEAR 21242   Archeological Tourism
GEAR 22252   Archeological Heritage of Sri Lanka
GEGE 22262   Geo-Environment and Natural Resources of Sri Lanka
GEPH 22272   Child Psychology
GEHI 22282   History of Sri Lanka
GEAR 22292   Hospitality Management

Level Three
GESR 31022   Event Management
GEAR 31032   Tourism in Asian Countries
GEGE 32042   Introduction to Geographical Information System (GIS)
GESR 32052   Personality and Leadership Development
GEPE 32062   Conflict and Conflict Management
GESR 32072   Olympic Movement and Olympism
GEAR 32082   Anthropological Tourism

Auxiliary Course Units Offered by the Faculty of Commerce & Management

Level One
MGMT 11012[1]   Principles of Management
MGMT 11022   Communication Skills and Personality Development
MGMT 12012   Fundamentals of Organizational Behaviour
MGMT 12022   Business Accounting

Level Two
MGMT 21012   Human Resource Management
MGMT 22022   Marketing Management

Level Three
MGMT 32012   Japanese Management Approach
MGMT 32022   Financial Management

[1]Can take either IMGT 14512 or MGMT 11012

7.   List of Certificate Courses Offered by Other Faculties to the Students in the Faculty of Science

The students may register for the courses, which are not considered for the award of the (BSc/Honours) Degree.

Certificate Courses Offered by the Faculty of Humanities

Certificate Course in Modern Languages (two years) Offered by the Department of Modern Languages

Chinese
French
German
Japanese
Korean
Russian
Spanish

The Certificate Course in Hindi Language (two years) Offered by the Department of Hindi Studies

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