



# **FACULTY OF SCIENCE**

**UNIVERSITY OF KELANIYA, SRI LANKA**



## **STUDENT HANDBOOK**

**Academic Year 2019/2020**



# **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  
INFORMATION TECHNOLOGY  
DEGREE PROGRAMME**

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

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

**2019/2020**



# **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.

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**BSc and BSc Hons  
Degree Programmes**

### 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 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 16 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 Chemistry,
- (iii) Bachelor of Science Honours in Computer Science,
- (iv) Bachelor of Science Honours in Computer Studies,
- (v) Bachelor of Science Honours in Environmental Conservation and Management,
- (vi) Bachelor of Science Honours in Information Technology,
- (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 Plant Biology,
- (xiv) Bachelor of Science Honours in Software Engineering,
- (xv) Bachelor of Science Honours in Statistics, and
- (xvi) 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 the end of course examinations conducted within 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 that 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 Years of Study, namely; Year of Study 1, Year of Study 2, Year of Study 3, and Year of Study 4.

For Years of Study 1, 2, and 3 course units, and 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 Year of Study 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 Year of Study 4 with 30 hours of laboratory or field work carry a credit rating of one. A Year of Study 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, comprised of 12 Years of Study. SLQF recognizes the volume of learning of students and identifies the learning outcomes that are to be achieved by the qualification holders.

SLQF Level I	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 Level** 3, 4, and 5 correspond sequentially to the first, second, and third years of study of an undergraduate study programme leading to Bachelors qualification. The **SLQF Level** 6 corresponds to the fourth year of study of an undergraduate study programme leading to a 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 the 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 compulsory 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 Year of Study 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:

Academic Literacy	ACLT
Academic Literacy Prerequisite	ACPR
Applied Mathematics	AMAT
Biochemistry*	BIOC
Biological Science Compulsory Course Units*	BIOL
Plant Biology*	PLBL
Business Finance <sup>1</sup>	BFIN
Chemistry*	CHEM
Complementary Skill Development	CMSK
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

<sup>1</sup> – 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 specific course units 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**

The UGC selects 221 students with the additional intake from the GCE A/L Biological Science stream. All the students must follow all the stream compulsory course units (page 31.) as specified for the first semester of the first Year of Study. All students can follow the Computer Studies course unit COST 11012 during the first semester of the first Year of Study. Those who wish to follow Computer Studies as a subject must follow COST 11012 and COST 11023 during the first semester of the first Year of Study.

In the Biological Science streams, selection of students for Biochemistry (BIOC), Computer Studies (COST), and Microbiology (MIBI) subjects will be carried out at the beginning of the second semester of the first Year of Study 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**

The UGC selection of 109 students with the additional intake is made from the GCE A/L Biological Science stream in a separate window. According to the UGC regulations, students cannot change their degree programme to any other degree programme after registration. The course structure for this programme is given on page 39.

### **1.4.3 Physical Science**

The UGC selects 362 students with the additional intake from the GCE 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 Year of Study 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. The course structure for this programme is given on page 34

#### 1.4.4 Physics and Electronics

The UGC makes selections of students from the GCE A/L, and the number is limited to **76** students with the additional intake. The course structure for this programme is given on page 37.

Students following the BSc Degree, BSc (ENCM) Degree, and BSc (PE) Degree are required to follow only the Years of Study 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 15 to 18 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 a 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 on some Honours programmes through a direct intake, whereas for the others, students are enrolled at the end of the second Year of Study 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 Year of Study, 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 Year of Study 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/Information Technology (IT) 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 first/second academic year, the students may select different paths as follows.

**(i) Management and Information Technology (MIT)/Information Technology (IT)**

This four year Honours Degree Programmes offer a wide range of knowledge and skills as a blend of management and information technology disciplines. The students who get selected will have to opt for either the BSc Hons in MIT degree programme or the BSc Hons in Information Technology degree programme at the end of the first Year of Study. The final assignment of the student into the degree programme will be done based on student performance and preference. The subsequent three years of the BSc Hons in IT degree programme will focus on building the information technology competencies of the students, depending on their career objectives. The programme is designed taking into consideration the increasing national and international need for computing professionals. The curriculum of the programme follows the latest guidelines of recognized professional bodies such as the ACM and IEEE and aims at equipping students with the necessary knowledge and skills to choose a career in the field of information technology, including software engineering, data science, systems engineering, database administration, network engineering, business analysis, and software quality engineering.

Those selected students for the BSc Hons in MIT programme have the opportunity to specialize in one of the following areas at the end of the second Year of Study; Business Systems Engineering (BSE), Operations and Supply Chain Management (OSCM), and Information Systems (IS).

**a) Business Systems Engineering (BSE)**

Business Systems Engineering is a detailed approach to identifying and implementing the business processes, tasks, and transactions required to successfully operate a business. To compete in the global market, it is essential that our organizations re-engineer their processes with world-class management best practices, enabled by the use of Information Technology in order to exploit these business opportunities.

**b) Operations and Supply Chain Management (OSCM)**

The curriculum of this programme is based on Information Technology enabled application of world-class best practices for the management of supply chain operations. Hence, the programme aims to deliver professional knowledge and skills in Business Process Management customized to applications in the field of Operations and Supply Chain Management.

**c) Information Systems (IS)**

Information systems play a strategic role in ensuring that key decision-makers are provided timely information to make business decisions. It enhances operational effectiveness in delivering products and services to its customers and assists to maximize returns to stakeholders. Therefore, the management of information technology resources becomes crucial if the business succeeds in this dynamic and competitive environment. The prime objective of the 'Information Systems' specialization is to develop professionals equipped with the necessary knowledge and skills to assess technology needs, procure, maintain and improve information systems that are tightly bound with

organizational strategies and processes while managing the necessary human and physical resources.

Apart from the knowledge and skills, both degree programmes also inculcate the necessary soft skills required for the graduates to be successfully absorbed into the professional world.

Students may opt for the three year BSc (MIT)/BSc (IT) degree by requesting the end of their third Year of Study provided that they have completed the necessary requirements for the award of the degree mentioned under 2.11.

**(ii) Software Engineering (SENG)**

The software engineering programme has been designed to provide the necessary flexibility for the students to develop competencies in specific application domains relevant to current human resource requirements. During their third Year of Study, 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 Year of Study**

At the end of the second Year of Study, a student may apply to follow the BSc Hons Degree Programme in any one of the following subjects: Biochemistry, Plant Biology, 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 the Years of Study 1 and 2, including BIOL 11532 Basic Biochemistry and B grades for additional 02 credits from any of the following course units; CHEM 11622 General Chemistry/CHEM 11631 Basic Chemical Analysis Laboratory/CHEM 12661 Basic Organic Chemistry Laboratory/ CHEM 21672 Analytical Chemistry/CHEM 22712 Organic Synthesis, Spectroscopy and Aromaticity/CHEM 22721 Analytical Chemistry Laboratory. In addition, a student should obtain grades of C or better for all remaining chemistry course units mentioned above and should not have obtained either D/D+/C- grades in course units offered in the Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2.

**(ii) Chemistry**

A student should have obtained a GPA of 3.00 or greater for compulsory course units in Chemistry offered in the Years of Study 1 and 2, aggregating to 20 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 the Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2.

**(iii) Computer Science**

A student should have obtained grades of B or better in compulsory course units offered in the Years of Study 1 and 2 in Computer Science aggregating to at least 22 credits and followed Pure Mathematics as a subject in the Years of Study 1 and 2. In addition, a student should not have obtained either D/D+/C- grades in course units offered in the Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2.

**(iv) Computer Studies**

A student should have obtained at least B grades for course units in Computer Studies (COST) offered in the Years of Study 1 and 2, aggregating to 21 credits in the Years of Study 1 and 2. In addition, a student should not have obtained either D/D+/C- grades in course units offered in the Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2.

**(v) Environmental Conservation and Management (ENCM)**

A student should have obtained grades of C or better in all PLBL, CHEM, ENCM, MIBI, and ZOOL compulsory course units offered in the Years of Study 1 and 2 prescribed for the Degree programme and obtained grades of B or better, aggregating to at least 40 credits from PLBL, ENCM, MIBI, and ZOOL course units.

**(vi) Mathematical Physics**

A student should have followed Applied Mathematics, Physics and Pure Mathematics as subjects in the Years of Study 1 and 2 and should have obtained a GPA of 3.00 or better in compulsory course units offered in the Years of Study 1 and 2 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 Years of Study 1 and 2, aggregating to more than 8 credits or E grades in course units offered in the Years of Study 1 and 2.

**(vii) 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 Years of Study 1 and 2 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 Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2.

(viii) **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 Years of Study 1 and 2. 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 Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2.

(ix) **Microbiology**

A student should have obtained grades of B or better for compulsory course units offered in the Years of Study 1 and 2 in Microbiology and BIOL 11512 Scope and Fundamentals of 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 Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2.

(x) **Molecular Biology & Plant Biotechnology**

A student should have obtained grades of B or better in the Years of Study 1 and 2 compulsory course units in Plant Biology (PLBL), BIOL 11512-Scope and Fundamentals of Microbiology and BIOL-11522 Genetics aggregating to 22 credits, with grades of B+ or above for BIOL 11522-Genetics and PLBL-21541 Fundamentals of Molecular Biology. In addition, a student should not have obtained either D/D+/C- grades in the Years of Study 1 and 2 course units aggregating to more than 8 credits, or E grades in the Years of Study 1 and 2 course units.

(xi) **Physics**

A student should have obtained a GPA of 3.00 or greater for compulsory course units in Physics offered in the Years of Study 1 and 2, 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 Years of Study 1 and 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and 2. The maximum number of students for the BSc Hons Degree Programme is determined by the Department depending on the facilities available each year.

(xii) **Plant Biology**

A student should have obtained grades of B or better in the Years of Study 1 and 2 compulsory course units in Plant Biology (PLBL), 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 the Years of Study 1 and 2 course units aggregating to more than 8 credits or E grades in the Years of Study 1 and 2 course units.

(xiii) **Statistics**

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

(xiv) **Zoology**

A student should have obtained grades of B or better in compulsory course units in Zoology offered in the Years of Study 1 and 2 and BIOL 11552 Evolutionary Biology and Biogeography, 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 Years of Study 1 and 2 aggregating to more than 8 credits or E grades in course units offered in the Years of Study 1 and 2.

Selection criteria may be varied at the discretion of the Department concerned. A student selected for the BSc Hons Degree Programme must 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 Year of Study, 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 Year of Study 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 Year of Study. 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 between the grades obtained for a particular course unit and attendance.

For the Years of Study 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 are allocated based on the attendance at the lectures. For the Year of Study 4 theory course units, 100% of the marks are 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 relevant Department will announce the method of assessment at the commencement of a course unit. A dissertation and an oral presentation assess the research projects of the BSc Hons Degree Programme.

## 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 of C or better in a particular course unit may re-sit the examination of that course unit in the following academic year to improve the grade. The best grade obtainable by a student in this instance would be C. If 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.

$$\frac{(2 \times 4.0) + (3 \times 2.0) + (3 \times 3.0) + (3 \times 1.0) + (1 \times 2.3) + (1 \times 4.0)}{2 + 3 + 3 + 3 + 1 + 1} = \frac{32.3}{13} = 2.4846$$

**Grade Point Average**

**= 2.48**

**Grade point values and credit values of all registered course units in a student's study programme shall be considered 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 to be eligible for the BSc 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,
- (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 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,
- (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 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,
- (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 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,
- (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; PLBL, MIBI, and ZOOL course units; CHEM course units),
- (iii) obtain a GPA of 2.00 or greater,
- (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,
- (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,
- (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,
- (iv) completes the relevant requirements within three consecutive academic years.

## **2.7 Bachelor of Science in Physics and Electronics (PE) Degree. (SLQF 5)**

### **2.7.1 Eligibility for the Award of the Bachelor of Science in Physics and Electronics (PE) Degree.**

**To be eligible for the BSc 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, physics (PHYS) and Electronics (ELEC), 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,
- (iv) complete the relevant requirements within a period of five consecutive academic years.

## **2.7.2 Award of Classes**

### **2.7.2.1 First Class**

A student who is eligible for the 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 2.7.1 (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 2.7.1 (ii),
- (iii) obtains a GPA of 3.70 or greater,
- (iv) completes the relevant requirements within three consecutive academic years.

### **2.7.2.2 Second Class (Upper Division)**

A student who is eligible for the 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 2.7.1 (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 2.7.1 (ii),
- (iii) obtains a GPA of 3.30 or greater,
- (iv) completes the relevant requirements within three consecutive academic years.

### **2.7.2.3 Second Class (Lower Division)**

A student who is eligible for the 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 2.7.1 (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 2.7.1 (ii),
- (iii) obtains a GPA of 3.00 or greater,
- (iv) completes the relevant requirements within three consecutive academic years.

## **2.8 Bachelor of Science Honours Degree (SLQF 6)**

### **2.8.1 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 Year of Study, totalling to at least 60 credits, in the Years of Study 1 and 2, and

- b. aggregating to at least 66 credits in the Years of Study 3 and 4 course units including at least 48 credits in the Year of Study 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 the Year of Study 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,
- (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 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 2.8.1 (ii),
- (ii) obtains a GPA of 3.70 or greater,
- (iii) obtains grades of A or better in the Year of Study 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 the Years of Study 3 and 4 course units where applicable, in the subject/subjects of specialization, course units,
- (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 the Year of Study 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 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 2.8.1 (ii),
- (ii) obtains a GPA of 3.30 or greater,

- (iii) obtains grades of B or better in the Year of Study 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 the Years of Study 3 and 4 course units where applicable, in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,
- (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 the Year of Study 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 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 2.8.1 (ii),
- (ii) obtains a GPA of 3.00 or greater,
- (iii) obtains grades of B or better in the Year of Study 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 the Years of Study 3 and 4 course units where applicable, in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,
- (v) completes the relevant requirements within four consecutive academic years.

### **2.8.3 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 4<sup>th</sup> academic year or within 14 days from the date of the final release of the results of the Year of Study 4 course units by the Faculty.

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

## **2.9 Bachelor of Science Honours in Environmental Conservation & Management Degree (ENCM)**

### **2.9.1 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 Years of Study 1 and 2, 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 Year of Study 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 the Year of Study 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 (Year of Study 1, 2, & 3 ENCM course units; PLBL, 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,
- (iv) 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 (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 2.9.1 (ii),
- (ii) obtains a GPA of 3.70 or greater,
- (iii) obtains grades of A or better in the Year of Study 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 the Years of Study 3 and 4 course units, aggregating to at least half the number of credits accumulated in such course units,
- (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 the Year of Study 4 course units but 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 (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 2.9.1 (ii),
- (ii) obtains a GPA of 3.30 or greater,
- (iii) obtains grades of B or better in the Year of Study 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 the Years of Study 3 and 4 course units, aggregating to at least half the number of credits accumulated in such course units,
- (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 the Year of Study 4 course units but 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 (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 2.9.1 (ii),
- (ii) obtains a GPA of 3.00 or greater,
- (iii) obtains grades of B or better in the Year of Study 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 the Years of Study 3 and 4 course units, aggregating to at least half the number of credits accumulated in such course units,
- (v) completes the relevant requirements within four consecutive academic years.

### **2.9.3 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 4<sup>th</sup> academic year or within 14 days from the date of the final release of the results of the Year of Study 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.

## **2.10 Bachelor of Science Honours in Management and Information Technology Degree (MIT)/Bachelor of Science Honours in Information Technology Degree (IT)**

### **2.10.1 (a) 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 compulsory course units, totalling to a minimum of 126 credits of which at least 30 credits must be from each Year of Study separately, with 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 100 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 31356 and GNCT 32216 course units, and
- (v) Pass GNCT 11212, GNCT 12212, GNCT 21212, and GNCT 22212 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.

### **(b) Eligibility for the award of the Bachelor of Science Honours in Information Technology Degree**

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

- (i) accumulate grades of D or better, in course units including all compulsory course units, totalling to a minimum of 126 credits, of which at least 30 credits must be from each Year of Study separately.
- (ii) obtains grades of C or better in course units totalling to at least 100 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 76 credits with at least D grades for the remaining compulsory course units, and
- (iv) obtain grades of C or better for INTE 43216 course unit and for INTE 31356 and GNCT 32216 course units, and
- (v) Pass GNCT 11212, GNCT 12212, GNCT 21212, and GNCT 22212 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

## **2.10.2 Award of Classes**

### **2.10.2.1 First Class**

A student who is eligible for the BSc Hons (MIT) Degree/BSc Hons (IT) 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
- (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 2.10.2.1 may be considered by the Board of Examiners for the award of Second Class (Upper Division).

### **2.10.2.2 Second Class (Upper Division)**

- (i) A student who is eligible for the BSc Hons (MIT) Degree/BSc Hons (IT) Degree may be awarded Second Class (Upper Division) if he/she
- (ii) obtains grades of C or better in course units, including the compulsory course units, aggregating to at least 116 credits, and grades of D or better in the remaining course units considered for GPA calculation, and
- (iii) obtains grades of B or better aggregating to at least half the number of credits in the compulsory course modules, and
- (iv) 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
- (v) obtains a minimum GPA of 3.30
- (vi) 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 2.10.2.2 may be considered by the Board of Examiners for the award of Second Class (Lower Division).

### **2.10.2.3 Second Class (Lower Division)**

- (i) A student who is eligible for the BSc Hons (MIT) Degree/BSc Hons (IT) Degree may be awarded Second Class (Lower Division) provided he/she
- (ii) obtains grades of C or better in course units, including all compulsory course units, aggregating to at least 116 credits, and grades of D or

- better in the remaining course units considered for GPA calculation, and
- (iii) obtains grades of B or better in aggregating to at least half the number of credits in the compulsory course modules, and
- (iv) 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
- (v) obtains minimum GPA of 3.00
- (vi) completes the relevant requirements within four consecutive academic years.

## **2.11 Exit Point at the end of Year of Study 3 for the Bachelor of Science in Management and Information Technology Degree (MIT)/Bachelor of Science in Information Technology Degree (IT)**

### **2.11.1 (a) 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 compulsory course units, totalling to a minimum of 90 credits, with aggregate of at least 30 credits from each Year of Study and
- (ii) obtains grades of C or better in course units totalling to at least 72 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 70 credits with at least D grades for the remaining compulsory course units, and
- (iv) obtains grades of C or better for INTE 31356 and GNCT 32216 course units, and
- (v) Pass GNCT 11212, GNCT 12212, GNCT 21212, and GNCT 22212 course units, and
- (vi) obtain a minimum GPA of 2.00,
- (vii) complete the relevant requirements within a period of five consecutive academic years.

### **(b) Eligibility for the award of the Bachelor of Science in Information Technology Degree**

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

- (i) accumulate grades of D or better, in course units including all compulsory course units, totalling to a minimum of 90 credits, with aggregate of at least 30 credits from each Year of Study and
- (ii) obtains grades of C or better in course units totalling to at least 72 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 31356 and GNCT 32216 course units, and



- (v) Pass GNCT 11212, GNCT 12212, GNCT 21212, and GNCT 22212 course units, and
- (vi) obtain a minimum GPA of 2.00,
- (vii) complete the relevant requirements within a period of five consecutive academic years.

## **2.11.2 Award of Classes**

### **2.11.2.1 First Class**

A student who is eligible for the BSc (MIT) Degree/BSc (IT) 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
- (v) completes the relevant requirements within three 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 2.11.2.1, 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 (MIT) Degree/BSc (IT) 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
- (v) completes the relevant requirements within three 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 2.11.2.2 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 (MIT) Degree/BSc (IT) 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
- (v) completes the relevant requirements within three consecutive academic years.

## **2.12 Bachelor of Science Honours in Software Engineering Degree (SENG)**

### **2.12.1 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 compulsory course units, totalling to a minimum of 120 credits, of which at least 30 credits must be from each Year of Study separately, with
- (ii) a minimum aggregate of at least 9 credits from one selected domain
- (iii) 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
- (iv) 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
- (v) obtain grades of C or better for SENG 31242, SENG 34213, SENG 32216, SENG 43216 course units and
- (vi) pass GNCT 13212 and GNCT 23212 course units, and
- (vii) obtain a minimum GPA of 2.00,
- (viii) complete the relevant requirements within a period of six consecutive academic years.

### **2.12.2 Award of Classes**

#### **2.12.2.1 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,
- (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 2.12.2.1 may be considered by the Board of Examiners for the award of Second Class (Upper Division).

#### **2.12.2.2 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,
- (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 2.12.2.2 may be considered by the Board of Examiners for the award of Second Class (Lower Division).

#### **2.12.2.3 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,
- (v) completes the relevant requirements within four consecutive academic years.

## **2.13 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 Plant Biology, BSc Hons in Chemistry, BSc Hons in Computer Science, BSc Hons in Computer Studies, BSc Hons in Environmental Conservation and Management, BSc Hons in Information Technology, 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 of Study 1 Biological Sciences Available combinations to select course units

Course code	Course unit combination (BSY1)							
	1	2	3	4	5	6	7	8
ACLT 11012 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C
ACLT 12022 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C
ACLT 21032 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C
BIOC 12612						C	C	C
BIOC 12622						C	C	C
BIOC 12632						C	C	C
BIOL 11512	C	C	C	C	C	C	C	C
BIOL 11522	C	C	C	C	C	C	C	C
BIOL 11532	C	C	C	C	C	C	C	C
BIOL 11552	C	C	C	C	C	C	C	C
CHEM 11601 <sup>1</sup>	C	C	C	C	C	C	C	C
CHEM 11612	C	C	C	C	C	C	C	C
CHEM 11622	C	C	C	C	C	C	C	C
CHEM 11631	C	C	C	C	C	C	C	C
CHEM 12642	C	C	C	C	C	C	C	C
CHEM 12652	C	C	C	C	C	C	C	C
CHEM 12661	C	C	C	C	C	C	C	C
CMSK 14012 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
CMSK 14022 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
CMSK 14032 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
CMSK 14042 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
COST 11012	O	C	C	O	O	O	O	O
COST 11023	O	C	C	O	O	O	O	O
COST 12032		C	C					
COST 12043		C	C					
DELT 11222 <sup>1</sup>	C	C	C	C	C	C	C	C
IMGT 14512	A	A	A	A	A	A	A	A
IMGT 21511	A	A	A	A	A	A	A	A
MGMT 11022 <sup>1,2</sup>	C	C	C	C	C	C	C	C
MIBI 12514				C	C	C		
MIBI 12522				C	C	C		
PLBL 12513	C	C		C			C	
PLBL 12521	C	C		C			C	
PLBL 12533	C	C		C			C	
PMAT 11703	A	A	A	A	A	A	A	A
PMAT 12713	A	A	A	A	A	A	A	A
STAT 14552	A	A	A	A	A	A	A	A
ZOOL 12703	C		C		C			C
ZOOL 12711	C		C		C			C
ZOOL 12722	C		C		C			C
<b>No of Credits from Compulsory Units</b>	<b>31</b>	<b>35</b>	<b>34</b>	<b>31</b>	<b>30</b>	<b>30</b>	<b>31</b>	<b>30</b>

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Should offer during the three year period of the Degree Programme

<sup>3</sup>One of the three stages should be completed within the Years of Study 1 and 2.

<sup>4</sup>One of the CMSK course units should be completed within the first two Years of Study.

**Students may take auxiliary course units up to a maximum of 6 credits during the Years of Study 1, 2 and 3 with not more than 2 credits per semester from other faculties.**

**3.1.2 BSc Degree Programme – Year of Study 2****Biological Sciences****Available combinations to select course units**

Course code	Course unit combination (BSY2)							
	1	2	3	4	5	6	7	8
ACLT 11012 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C
ACLT 12022 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C
ACLT 21032 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C
BIOC 21612						C	C	C
BIOC 21622						C	C	C
BIOC 21631						C	C	C
BIOC 22642						C	C	C
BIOC 22652						C	C	C
BIOC 22661						C	C	C
CHEM 21672	C	C	C	C	C	C	C	C
CHEM 21682	C	C	C	C	C	C	C	C
CHEM 21691	C	C	C	C	C	C	C	C
CHEM 22702	C	C	C	C	C	C	C	C
CHEM 22712	C	C	C	C	C	C	C	C
CHEM 22721	C	C	C	C	C	C	C	C
CMSK 14012 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
CMSK 14022 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
CMSK 14032 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
CMSK 14042 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C
COST 21053		C	C					
COST 21063		C	C					
COST 22073		C	C					
COST 22082		C	C					
DELT 22232 <sup>1</sup>	C	C	C	C	C	C	C	C
IMGT 14512	A	A	A	A	A	A	A	A
IMGT 21511	A	A	A	A	A	A	A	A
MGMT 11022 <sup>1,2</sup>	C	C	C	C	C	C	C	C
MIBI 21514				C	C	C		
MIBI 21522				C	C	C		
MIBI 22534				C	C	C		
MIBI 22542				C	C	C		
PHYS 25553	O	O	O	O	O	O	O	O
PLBL 21513	C	C		C			C	
PLBL 21521	C	C		C			C	
PLBL 21531	C	C		C			C	
PLBL 21541	C	C		C			C	
PLBL 22554	C	C		C			C	
PLBL 22561	C	C		C			C	
PMAT 11703	A	A	A	A	A	A	A	A
PMAT 12713	A	A	A	A	A	A	A	A
STAT 14552	A	A	A	A	A	A	A	A
ZOOL 21702	C		C		C			C
ZOOL 21711	C		C		C			C
ZOOL 21722	C		C		C			C
ZOOL 22732	C		C		C			C
ZOOL 22742	C		C		C			C
ZOOL 22752	C		C		C			C
<b>No of Credits from Compulsory Units</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>33</b>	<b>33</b>	<b>32</b>	<b>31</b>	<b>31</b>

<sup>1</sup>The credits that are not counted for GPA<sup>2</sup>Should offer during the three year period of the Degree programme<sup>3</sup>One of the three stages should be completed within the Years of Study 1 and 2.<sup>4</sup>One of the CMSK course units should be completed within the first two years of the study.

**Students may take auxiliary course units up to a maximum of 6 credits during the Years of Study 1, 2 and 3 with not more than 2 credits per semester from other faculties.**



**3.1.3 BSc Degree Programme – Year of Study 3**  
**Biological Sciences**  
**Available combinations to select course units**

Course code	Course unit combination (BSY3)							
	1	2	3	4	5	6	7	8
BIOC 31611						C	C	C
BIOC 31622						C	C	C
BIOC 31632						C	C	C
BIOC 31641						C	C	C
BIOC 32652						O	O	O
BIOC 32661						O	O	O
CHEM 31731	C	C	C	C	C	C	C	C
CHEM 31742	O	O	O	O	O	O	O	O
CHEM 31752	O	O	O	O	O	O	O	O
CHEM 32762	O	O	O	O	O	O	O	O
CHEM 32771	O	O	O	O	O	O	O	O
CHEM 32782	O	O	O	O	O	O	O	O
COST 31093		C	C					
COST 31102		O	O					
COST 31112		O	O					
COST 31122		O	O					
COST 32143		C	C					
COST 32152		O	O					
COST 32162		O	O					
COST 32182		O	O					
IMGT 14512	O	O	O	O	O	O	O	O
IMGT 21511	O	O	O	O	O	O	O	O
MGMT 11022 <sup>1,2</sup>	C	C	C	C	C	C	C	C
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		
PHYS 32582	O	O	O	O	O	O	O	O
PLBL 31514	C	C		C			C	
PLBL 31521	C	C		C			C	
PLBL 32533	O	O		O			O	
PLBL 32542	O	O		O			O	
PLBL 32552	O	O		O			O	
PMAT 11703	A	A	A	A	A	A	A	A
PMAT 12713	A	A	A	A	A	A	A	A
PRPL 31992	O	O	O	O	O	O	O	O
STAT 14552	A	A	A	A	A	A	A	A
ZOOL 31703 <sup>3</sup>	O		O		O			O
ZOOL 31713 <sup>3</sup>	O		O		O			O
ZOOL 31722 <sup>3</sup>	O		O		O			O
ZOOL 32733 <sup>3</sup>	O		O		O			O
ZOOL 32742 <sup>3</sup>	O		O		O			O
ZOOL 32752 <sup>3</sup>	O		O		O			O
ZOOL 32762 <sup>3</sup>	O		O		O			O
<b>No of Credits from Compulsory Units</b>	<b>6</b>	<b>12</b>	<b>7</b>	<b>12</b>	<b>7</b>	<b>13</b>	<b>12</b>	<b>7</b>

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Should offer during the three year period of the Degree Programme

<sup>3</sup>In order to claim Zoology as a subject for the BSc Degree programme, a student should accumulate a minimum of 7 credits from the Year of Study 3 ZOOL optional course units with at least 3 credits from each semester.

**Students may take auxiliary course units up to a maximum of 6 credits during the Years of Study 1, 2, and 3 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 of Study 1 Physical Science

Available combination to select course units

Course code	Course unit combination (PSY1)									
	1	2	3	4	5	6	7	8	9	10
ACLT 11012 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C	C	C
ACLT 12022 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C	C	C
ACLT 21032 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C	C	C
AMAT 11513	C			C			C		C	
AMAT 11522	C			C			C		C	
AMAT 12532	C			C			C		C	
AMAT 12543	C			C			C		C	
CHEM 11601 <sup>1</sup>						O	O			O
CHEM 11612						C	C			C
CHEM 11622						C	C			C
CHEM 11631						C	C			C
CHEM 12642						C	C			C
CHEM 12652						C	C			C
CHEM 12661						C	C			C
CMSK 14012 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
CMSK 14022 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
CMSK 14032 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
CMSK 14042 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
COSC 11012		C		C	C	C				
COSC 11023		C		C	C	C				
COSC 12033		C		C	C	C				
COSC 12043		C		C	C	C				
COST 11012								C		C
COST 11023								C		C
COST 12032								C		C
COST 12043								C		C
DELT 12262 <sup>1</sup>	C	C	C	C	C	C	C	C	C	C
ELEC 11513			C					C		
ELEC 11521			C					C		
ELEC 12534			C					C		
ELEC 12541			C					C		
MAPS 11512	A	A	A	A	A	A	A	A	A	A
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		
PLBL 11532 <sup>5</sup>	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	
<b>No of Credits from Compulsory Units</b>	<b>30</b>	<b>31</b>	<b>29</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>30</b>	<b>29</b>	<b>30</b>	<b>30</b>

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Should offer during the three year period of the Degree Programme

<sup>3</sup>One of the three stages should be completed within the Years of Study 1 and 2.

<sup>4</sup>One of the CMSK course units should be completed within the first two Years of Study.

<sup>5</sup>Offered during alternate academic years for non-biology students

## 3.2.2

**BSc Degree Programme – Year of Study 2****Physical Sciences****Available combinations to select course units**

Course code	Course unit combination (PSY2)									
	1	2	3	4	5	6	7	8	9	10
ACLT 11012 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C	C	C
ACLT 12022 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C	C	C
ACLT 21032 <sup>1,2,3</sup>	C	C	C	C	C	C	C	C	C	C
AMAT 21552	C			C			C		C	
AMAT 21562	C			C			C		C	
AMAT 22572	C			C			C		C	
AMAT 22582	C			C			C		C	
CHEM 21672						C	C			C
CHEM 21682						C	C			C
CHEM 21691						C	C			C
CHEM 22702						C	C			C
CHEM 22712						C	C			C
CHEM 22721						C	C			C
CMSK 14012 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
CMSK 14022 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
CMSK 14032 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
CMSK 14042 <sup>1,2,4</sup>	C	C	C	C	C	C	C	C	C	C
COSC 21052		C		C	C	C				
COSC 21063		C		C	C	C				
COSC 22073		C		C	C	C				
COSC 22083		C		C	C	C				
COST 21053								C		C
COST 21063								C		C
COST 22073								C		C
COST 22082								C		C
ELEC 21513			C					C		
ELEC 21521			C					C		
ELEC 22534			C					C		
ELEC 22541			C					C		
MAPS 22603	A	A	A	A	A	A	A	A	A	A
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		
PLBL 11532 <sup>5</sup>	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	
<b>No of Credits from Compulsory Units</b>	<b>29</b>	<b>32</b>	<b>30</b>	<b>32</b>	<b>34</b>	<b>34</b>	<b>28</b>	<b>31</b>	<b>28</b>	<b>31</b>

<sup>1</sup>The credits that are not counted for GPA<sup>2</sup>Should offer during the three year period of the Degree Programme<sup>3</sup>One of the three stages should be completed within the Years of Study 1 and 2.<sup>4</sup>One of the CMSK course units should be completed within the first two Years of Study.<sup>5</sup>Offered during alternate academic years for non-biology students

**3.2.3 BSc Degree Programme – Year of Study 3****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	
CHEM 31731						C	C			C
CHEM 31742						O	O			O
CHEM 31752						O	O			O
CHEM 32762						O	O			O
CHEM 32771						O	O			O
CHEM 32782						O	O			O
COSC 31093		C		C	C	C				
COSC 31103		O		O	O	O				
COSC 31112		O		O	O	O				
COSC 31122		O		O	O	O				
COSC 32133		C		C	C	C				
COSC 32142		O		O	O	O				
COSC 32152		O		O	O	O				
COSC 32162		O		O	O	O				
COST 31093								C		C
COST 31102								O		O
COST 31112								O		O
COST 31122								O		O
COST 32143								C		C
COST 32152								O		O
COST 32162								O		O
COST 32182								O		O
ELEC 31513			C					C		
ELEC 31521			C					C		
ELEC 32534			O					O		
ELEC 33542			C					C		
MAPS 32612	A	A	A	A	A	A	A	A	A	A
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 <sup>2</sup>	O	O	O					O		
PHYS 31544 <sup>2</sup>	O	O	O					O		
PHYS 32551 <sup>3</sup>	C	C								
PHYS 32562 <sup>3</sup>	C	C								
PHYS 32572 <sup>2</sup>	O	O	O					O		
PHYS 32582 <sup>2,4</sup>	O	O	O					O		
PLBL 11532 <sup>1</sup>	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
PRPL 31992	O	O	O	O	O	O	O	O	O	O
STAT 31513					C				C	
STAT 31522 <sup>5</sup>					O				O	
STAT 31532					O				O	
STAT 32543 <sup>5</sup>					O				O	
STAT 32552					O				O	
STAT 32562 <sup>5</sup>					O				O	
<b>No of Credits from Compulsory Units</b>	<b>15</b>	<b>15</b>	<b>12</b>	<b>15</b>	<b>12</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>12</b>	<b>10</b>

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

### 3.3 Course Structure for BSc (PE) Degree

Course code	Course unit combination (PE)					
	Year of Study 1		Year of Study 2		Year of Study 3	
	Path 1	Path 2	Path 1	Path 2	Path 1	Path 2
ACLT 11012 <sup>3,4,5</sup>	C	C	C	C		
ACLT 12022 <sup>3,4,5</sup>	C	C	C	C		
ACLT 21032 <sup>3,4,5</sup>	C	C	C	C		
AMAT 11513	C					
AMAT 12543	O					
AMAT 21552			O			
AMAT 32593					O	
BFIN 12333 <sup>1</sup>	C					
BFIN 22333 <sup>1</sup>			C			
BFIN 31623 <sup>1</sup>					C	
CMSK 14012 <sup>3,4,6</sup>	C	C	C	C		
CMSK 14022 <sup>3,4,6</sup>	C	C	C	C		
CMSK 14032 <sup>3,4,6</sup>	C	C	C	C		
CMSK 14042 <sup>3,4,6</sup>	C	C	C	C		
COST 11012		C				
COST 11023		C				
COST 12032		C				
COST 12043		C				
COST 21053				C		
COST 21063				C		
COST 22073				C		
COST 22082				C		
COST 31093						C
COST 31102						O
COST 31112						O
COST 31122						O
COST 32143						O
COST 32152						O
COST 32162						O
COST 32182						O
DELT 12262 <sup>3</sup>	C	C				
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
MAPS 11512	A	A				
MAPS 22603			A	A		
MAPS 32612					A	A
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
PLBL 11532 <sup>2</sup>	A	A	A	A	A	A
PMAT 11513	C	C				
PMAT 11522	C	C				
PMAT 12543	C					
PMAT 21553			C	C		
PMAT 22572			C			
PMAT 22583			C			
PMAT 31593					C	
PMAT 31602					C	C
PMAT 32612					O	
PRPL 31992					O	O
<b>No of Credits from Compulsory Units</b>	<b>33</b>	<b>34</b>	<b>31</b>	<b>34</b>	<b>27</b>	<b>24</b>

<sup>1</sup>Offered by the Faculty of Commerce & Management Studies

<sup>2</sup>Offered during alternate academic years for non-biology students

<sup>3</sup>**The credits that are not counted for GPA**

<sup>4</sup>Should offer during the three year period of the Degree Programme

<sup>5</sup>One of the three stages should be completed within the Years of Study 1 and 2.

<sup>6</sup>One of the CMSK course units should be completed within the first two Years of Study.

### 3.4 Course Structure for BSc (ENCM) Degree

Course code	Course unit combination (ENCM)		
	Year 1	Year 2	Year 3
ACLT 11012 <sup>3,4,5</sup>	C	C	
ACLT 12022 <sup>3,4,5</sup>	C	C	
ACLT 21032 <sup>3,4,5</sup>	C	C	
CHEM 11612	C		
CHEM 11622	C		
CHEM 11631	C		
CHEM 12652	C		
CHEM 12661	C		
CHEM 21672		C	
CHEM 22721		C	
CHEM 32762			C
CHEM 32771			C
CMSK 14012 <sup>3,4,6</sup>	C	C	
CMSK 14022 <sup>3,4,6</sup>	C	C	
CMSK 14032 <sup>3,4,6</sup>	C	C	
CMSK 14042 <sup>3,4,6</sup>	C	C	
DELT 11242 <sup>3</sup>	C		
ENCM 11702	C		
ENCM 11713	C		
ENCM 11722	C		
ENCM 12732	C		
ENCM 12742	C		
ENCM 12752	C		
ENCM 21703		C	
ENCM 21711		C	
ENCM 21722		C	
ENCM 21732		C	
ENCM 21743		C	
ENCM 21752		C	
ENCM 22762		C	
ENCM 22773		C	
ENCM 22782		C	
ENCM 22791		C	
ENCM 22802		C	
ENCM 31702			C
ENCM 31712			C
ENCM 31722			C
ENCM 31732			C
ENCM 31742			C
ENCM 31752			C
ENCM 31762			C
ENCM 32782 <sup>2</sup>			O
ENCM 32792 <sup>2</sup>			O
ENCM 32805 <sup>1</sup>			C
ENCM 33774 <sup>1</sup>			C
MIBI 22554		C	
MIBI 22562		C	
PLBL 11543	C		
PLBL 12543	C		
ZOOL 12733	C		
ZOOL 32752			C
<b>No of Credits from Compulsory Units</b>	<b>30</b>	<b>32</b>	<b>28</b>

<sup>1</sup>Not offered for the BSc Hons (ENCM) Degree programme

<sup>2</sup>Student should accumulate credits for at least one optional course unit offered in the third year

<sup>3</sup>The credits that are not counted for GPA

<sup>4</sup>Should offer during the three year period of the Degree Programme

<sup>5</sup>One of the three stages should be completed within the Years of Study 1 and 2.

<sup>6</sup>One of the CMSK course units should be completed within the first two Years of Study.

**4. COURSE STRUCTURE  
BSc Hons DEGREE**



**4.1 Honours Degree Biological Sciences (HDBS) – Course Structure**

**Biochemistry, Chemistry, Computer Studies, Environmental Conservation and Management, Microbiology, Molecular Biology & Plant Biotechnology, Plant Biology, and Zoology**

Course code	Course combination (HDBS)							
	1	2	3	4	5	6	7	8
BIOC 32652	O					O		
BIOC 32661	O					O		
BIOC 44703								C
BIOC 44724								C
BIOC 44734								C
BIOC 44742								C
BIOC 44752								C
BIOC 44761 <sup>1</sup>								C
BIOC 44771								C
BIOC 44783								C
BIOC 44794								C
BIOC 43803								C
BIOC 43818								C
BIOC 44824								C
BIOC 44833								C
BIOC 44844								C
BIOC 44853								C
BIOC 44862								C
CHEM 31731	C			C	C	C		
CHEM 31742	O			O	O	O		
CHEM 31752	O			O	O	O		
CHEM 32762	O		C	O	O	O		
CHEM 32771	O		C	O	O	O		
CHEM 32782	O			O	O	O		
CHEM 44704		C						C
CHEM 44714		C						
CHEM 44723		C						
CHEM 44733		C						C
CHEM 44743		C						
CHEM 44753		C						C
CHEM 44762		C						
CHEM 44772		C						
CHEM 44782		C						C
CHEM 44792		C						
CHEM 44802		C						
CHEM 44811 <sup>1</sup>		C						
CHEM 44821		C						
CHEM 44832		C						
CHEM 44843		C						
CHEM 44854		C						
CHEM 44863		C						
CHEM 44874		C						C
CHEM 44884		C						
CHEM 44893		C						
CHEM 44902		C						
CHEM 44912		C						
CHEM 43928		C						
COST 31093							C	
COST 31102							C	
COST 31112							C	
COST 31122							C	
COST 31133							C	
COST 32143							C	
COST 32152							C	
COST 32162							C	
COST 32173							C	
COST 32182							O	

Course code	Course combination (HDBS)							
	1	2	3	4	5	6	7	8
COST 44193							C	
COST 44203							C	
COST 44213							C	
COST 44223							C	
COST 44233							C	
COST 44243							C	
COST 44252							C	
COST 44262							C	
COST 44272							C	
COST 44283							O	
COST 44293							O	
COST 44303							O	
COST 44313							O	
COST 44322							O	
COST 44332							O	
COST 44342							O	
COST 44352							O	
COST 44364							C	
COST 43378							C	
ENCM 31702			C					
ENCM 31712			C					
ENCM 31722			C					
ENCM 31732			O					
ENCM 31742			O					
ENCM 31752			O					
ENCM 31762			O					
ENCM 32782			O					
ENCM 32792			O					
ENCM 41702			C					
ENCM 41713			C					
ENCM 41753			C					
ENCM 41763			C					
ENCM 41783			O					
ENCM 41793			O					
ENCM 41802			O					
ENCM 41813			O					
ENCM 41822			O					
ENCM 41832			O					
ENCM 41842			O					
ENCM 41852			O					
ENCM 42732			C					
ENCM 42745			C					
ENCM 42873			C					
ENCM 42883			C					
ENCM 43722			C					
ENCM 43774			C					
ENCM 43868			C					
MBBT 31514					C			
MBBT 31522					C			
MBBT 32533					C			
MBBT 32541					C			
MBBT 32552					C			
MBBT 41763					C			
MBBT 41773					C			
MBBT 41804					C			
MBBT 41813					C			
MBBT 41824					C			

Course code	Course combination (HDBS)							
	1	2	3	4	5	6	7	8
MBBT 41834					C			
MBBT 41844					C			
MBBT 42784					C			
MBBT 42793					C			
MBBT 42853					C			
MBBT 42863					C			
MBBT 43872					C			
MBBT 43888					C			
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				
PLBL 31514	C							
PLBL 31521	C							
PLBL 32533	C							
PLBL 32542	C							
PLBL 32552	C							
PLBL 41763	C							
PLBL 41773	C							
PLBL 41804	C							
PLBL 41814	C							
PLBL 41823	C							
PLBL 41833	C							
PLBL 41844	C							
PLBL 42783	C							
PLBL 42793	C							
PLBL 42853	C							
PLBL 42863	C							
PLBL 42872	C							
PLBL 43882	C							
PLBL 43898	C							

Course code	Course combination (HDBS)							
	1	2	3	4	5	6	7	8
PRPL 31992	O				O	O	O	
ZOOL 31703						C		
ZOOL 31722						C		
ZOOL 32733						C		
ZOOL 32742						C		
ZOOL 32752			C			C		
ZOOL 32762						C		
ZOOL 41703						C		
ZOOL 41711						C		
ZOOL 41722						C		
ZOOL 41732						C		
ZOOL 41752						C		
ZOOL 41762						C		
ZOOL 41792						C		
ZOOL 41802						C		
ZOOL 41813						C		
ZOOL 41823						C		
ZOOL 41832						C		
ZOOL 41842						C		
ZOOL 42773						C		
ZOOL 42784						C		
ZOOL 42853						C		
ZOOL 42862 <sup>3</sup>						O		
ZOOL 42872 <sup>3</sup>						O		
ZOOL 42882 <sup>3</sup>						O		
ZOOL 42892 <sup>3</sup>						O		
ZOOL 42902 <sup>4</sup>						O		
ZOOL 42912 <sup>4</sup>						O		
ZOOL 42922 <sup>4</sup>						O		
ZOOL 42932 <sup>4</sup>						O		
ZOOL 43742						C		
ZOOL 43948						C		

<sup>1</sup>The credits that not counted for GPA are also not counted to the total credits

<sup>2</sup>Student should accumulate for at least one optional course unit offered in the Year of Study 3

<sup>3,4</sup>In the 2<sup>nd</sup> semester of the Year of Study 4, the Zoology Hons student should accumulate at least 6 credits by selecting 3 course units either from<sup>4</sup> or<sup>5</sup>

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

Course code	Course combination (HDPS)									Course code	Course combination (HDPS)								
	1	2	3	4	5	6	7	8	9		1	2	3	4	5	6	7	8	9
AMAT 21562				O	O					COSC 44293							O		
AMAT 31613		O	C							COSC 44303							O		
AMAT 32643	O	O								COSC 44313							O		
AMAT 41763	C	O								COSC 44323							O		
AMAT 41773	C	O								COSC 44333							O		
AMAT 41813	O	O								COSC 44343							O		
AMAT 41823	C									COSC 44353							O		
AMAT 41833	C									COSC 44364							C		
AMAT 42783	C	O								COSC 43378							C		
AMAT 42793	C		C							COST 31093								C	
AMAT 42843	O		C							COST 31102								C	
AMAT 42853	O		C							COST 31112								C	
AMAT 43976	C		C							COST 31122								C	
CHEM 44704									C	COST 31133 <sup>1</sup>								C	
CHEM 44714									C	COST 32143								C	
CHEM 44723									C	COST 32152								C	
CHEM 44733									C	COST 32162								C	
CHEM 44743									C	COST 32173								C	
CHEM 44753									C	COST 32182								O	
CHEM 44762									C	COST 44193								C	
CHEM 44772									C	COST 44203								C	
CHEM 44782									C	COST 44213								C	
CHEM 44792									C	COST 44223								C	
CHEM 44802									C	COST 44233								C	
CHEM 44811 <sup>6</sup>									C	COST 44243								C	
CHEM 44821									C	COST 44252								C	
CHEM 44832									C	COST 44262								C	
CHEM 44843									C	COST 44272								C	
CHEM 44854									C	COST 44283								O	
CHEM 44863									C	COST 44293								O	
CHEM 44874									C	COST 44303								O	
CHEM 44884									C	COST 44313								O	
CHEM 44893									C	COST 44322								O	
CHEM 44902									C	COST 44332								O	
CHEM 44912									C	COST 44342								O	
CHEM 43928									C	COST 44352								O	
COSC 22083 <sup>5</sup>						C				COST 44364								C	
COSC 31093							C			COST 43378								C	
COSC 31103						O	O			ELEC 31513					C				
COSC 31112							O			ELEC 31521					C				
COSC 31122							O			PHYS 31512			C	C	C				
COSC 32133							C			PHYS 31521			C	C	C				
COSC 32142							C			PHYS 31532			O	C	C				
COSC 32152							O			PHYS 31544			C	C	C				
COSC 32162							O			PHYS 32551			C	C					
COSC 44172							C			PHYS 32562			C	C					
COSC 44183							C			PHYS 32572			O	C	C				
COSC 44193						O	C			PHYS 32582			C	C	C				
COSC 44202							C			PHYS 43793				C	C				
COSC 44213							C			PHYS 43875				C	C				
COSC 44223							C			PHYS 43888			C	C	C				
COSC 44232							C			PHYS 44764			C	C	C				
COSC 44243							C			PHYS 44774			C	C	C				
COSC 44252							C			PHYS 44784				C					
COSC 44263							C			PHYS 44804			C	C	C				
COSC 44273							O			PHYS 44814					C				
COSC 44283							O			PHYS 44824			C	C	C				

Course code	Course combination (HDPS)								
	1	2	3	4	5	6	7	8	9
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 41823 <sup>4</sup>	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							
PMAT 44962	C	C	O						
PRPL 31992			O	O	O	O	O	O	
STAT 11514 <sup>2</sup>							C		
STAT 11521 <sup>2</sup>							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			

<sup>1</sup>Compulsory only for students entered to the Honours Degree Programme from the Biological Science stream

<sup>2</sup>Compulsory for all students who have not followed the course units STAT 11514 and STAT 11521 in the Year of Study 1

<sup>3</sup>Students are allowed to register to follow either COST 41164 or COST 44174, but not both in Semester I of the Year of Study 4

<sup>4</sup>Students in the Mathematical Physics programme are strongly advised to attend this course

<sup>5</sup>Compulsory for all students who have not followed the course unit COSC 22083 in the Year of Study 2

<sup>6</sup>The credits that are not counted for GPA

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 Year of Study 4 course units

#### 4.3 Honours Degree Management and Information Technology (HDMIT)/Honours Degree Information Technology (HDIT) – Course Structure

Course code	Course Combination			
	HDIT	HDMIT		
		IS	BSE	OS CM
ACLT 11012 <sup>1,3,4</sup>	C	C	C	C
ACLT 12022 <sup>1,3,4</sup>	C	C	C	C
ACLT 21032 <sup>1,3,4</sup>	C	C	C	C
CMSK 14012 <sup>1,3,5</sup>	C	C	C	C
CMSK 14022 <sup>1,3,5</sup>	C	C	C	C
CMSK 14032 <sup>1,3,5</sup>	C	C	C	C
CMSK 14042 <sup>1,3,5</sup>	C	C	C	C
DELT 11232	C	C	C	C
DELT 21222	C	C	C	C
GNCT 11212 <sup>1</sup>	C	C	C	C
GNCT 12212 <sup>1</sup>	C	C	C	C
GNCT 21212 <sup>1</sup>	C	C	C	C
GNCT 22212 <sup>1</sup>	C	C	C	C
GNCT 32216	C	C	C	C
INTE 11213	C	C	C	C
INTE 11223	C	C	C	C
INTE 12213	C	C	C	C
INTE 12223	C	C	C	C
INTE 12232	C	C	C	C
INTE 21213	C	C	C	C
INTE 21223	C	C	C	C
INTE 21233	C	C	C	C
INTE 21243	C	O	O	O
INTE 21253	O	O	O	O
INTE 21263	C	O	O	O
INTE 21273	O	C	C	C
INTE 21282	O	C	C	C
INTE 21292	C	C	C	C
INTE 21303	O			
INTE 22212	C	O	O	O
INTE 22263	O	O	O	O
INTE 22273	O	O	O	O
INTE 22283	O	O	O	O
INTE 22293	O	O	O	O
INTE 22303	C	O	O	O
INTE 31213	O	O	O	O
INTE 31223	O			
INTE 31233	O			
INTE 31243	O			
INTE 31253		O	O	O
INTE 31273	C			
INTE 31283	O	O	O	O
INTE 31302		C		
INTE 31312		C		

Course code	Course Combination			
	HDIT	HDMIT		
		IS	BSE	OS CM
INTE 31332		C		
INTE 31356	C	C	C	C
INTE 31362	O	C		
INTE 31373	O			
INTE 31382	O			
INTE 41212			O	
INTE 41232		O		
INTE 41263		C	O	
INTE 41272		C		
INTE 41292	O			
INTE 41302	O	O	O	O
INTE 41312	O			
INTE 41323	O			
INTE 41333	O	O	O	
INTE 41342	O			
INTE 41352	O			
INTE 41363	O	O	O	O
INTE 42222	O			
INTE 42232	O	O		
INTE 42252	O			
INTE 42282		O		
INTE 42292	O			
INTE 42302	O			
INTE 42312	O	O		
INTE 42322	O			
INTE 42333	O			
INTE 42343	O			
INTE 43216 <sup>2</sup>	C	C		

Course code	Course Combination			
	HDIT	HDMIT		
		IS	BSE	OS CM
MGTE 11202	C	C	C	C
MGTE 11213	C	C	C	C
MGTE 11222	C	C	C	C
MGTE 12222	C	C	C	C
MGTE 12232	C	C	C	C
MGTE 12253	C	C	C	C
MGTE 21222		C	C	C
MGTE 21233		C	C	C
MGTE 22212		C	C	C
MGTE 22232		C	C	C
MGTE 22242	O	C	C	C
MGTE 22252		C	C	C
MGTE 31212	C	O	O	O
MGTE 31222	O	O	O	O
MGTE 31233			C	C
MGTE 31272		O	O	O
MGTE 31283		O	O	O
MGTE 31293			C	
MGTE 31303				C
MGTE 31312		O	C	C
MGTE 34213		C	C	C

Course code	Course Combination			
	HDIT	HDMIT		
		IS	BSE	OS CM
MGTE 41212	C	C	C	C
MGTE 41222		O	C	O
MGTE 41233			C	
MGTE 41252				C
MGTE 41262				C
MGTE 41273	O			O
MGTE 41282				O
MGTE 41292			O	O
MGTE 41303		C	O	O
MGTE 42213			C	
MGTE 42223		O	O	O
MGTE 42232		O	O	O
MGTE 42243			O	
MGTE 42252				C
MGTE 42292	O	O		
MGTE 43216 <sup>2</sup>			C	C
MGTE 44242				C
MGTE 44273				O
PMAT 11212	C	C	C	C
PMAT 12212	C	C	C	C
PMAT 31212	O			

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Students should offer either MGTE 43216 or INTE 43216

**Course Combinations of HDMIT:** Information Systems (IS), Business Systems Engineering (BSE), and Operations and Supply Chain Management (OSCM)

<sup>3</sup>Should offer during the three year period of the Degree Programme

<sup>4</sup>One of the three stages should be completed within the Years of Study 1 and 2.

<sup>5</sup>One of the CMSK course units should be completed within the first two Years of the Study.

**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 Year of Study 3 and Year of Study 4 course units

#### 4.4 Honours Degree - Course Structure Software Engineering (SENG)

Course code	Course Combination (HDSE)
ACLT 11012 <sup>1,5,6</sup>	C
ACLT 12022 <sup>1,5,6</sup>	C
ACLT 21032 <sup>1,5,6</sup>	C
CMSK 14012 <sup>1,5,7</sup>	C
CMSK 14022 <sup>1,5,7</sup>	C
CMSK 14032 <sup>1,5,7</sup>	C
CMSK 14042 <sup>1,5,7</sup>	C
DELT 11232	C
DELT 12282	C
GNCT 13212 <sup>2</sup>	C
GNCT 23212 <sup>2</sup>	C
PLBL 11532 <sup>2</sup>	A
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 <sup>3</sup>	O					
SENG 31323 <sup>3</sup>		O				
SENG 31333 <sup>3</sup>			O			
SENG 31343 <sup>3</sup>				O		
SENG 31353 <sup>3</sup>					O	
SENG 31363 <sup>3</sup>						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 <sup>4</sup>	O					
SENG 41293 <sup>4</sup>		O				
SENG 41303 <sup>4</sup>			O			
SENG 41313 <sup>4</sup>				O		
SENG 41323 <sup>4</sup>					O	
SENG 41333 <sup>4</sup>						O
SENG 42273 <sup>4</sup>	O					
SENG 42283 <sup>4</sup>		O				
SENG 42293 <sup>4</sup>			O			
SENG 42303 <sup>4</sup>				O		
SENG 42313 <sup>4</sup>					O	
SENG 42323 <sup>4</sup>						O
SENG 43216	C					
SENG 44212	C					
SENG 44222	O					
SENG 44232	O					
SENG 44242	O					
SENG 44252	O					

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Offered during alternate academic years for non-biology students

<sup>3</sup>One course unit from this group should be selected based on the preferred application domain

<sup>4</sup>Two course units from this group should be selected based on the preferred application domain

<sup>5</sup>Should offer during the three year period of the Degree Programme

<sup>6</sup>One of the three stages should be completed within the Years of Study 1 and 2.

<sup>7</sup>One of the CMSK course units should be completed within the first two Years of the Study.

- 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 Year of Study 3 and Year of Study 4 course units.



## **5. COURSE UNITS**

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

**Academic Literacy**

Every student who enrolls in the Faculty of Science must sit for the English placement test during the orientation period. Based on the performance at the placement test, a suitable stage to start the Academic Literacy programme (ACLT 11012, ACLT 12022, ACLT 21032) or Academic Literacy Prerequisite course (ACPR 11011) would be recommended. Academic Literacy programme stages are provided below. One of the three stages of the programme should be completed within the Years of Study 1 and 2. It is recommended that all students complete the Academic literacy programme during the undergraduate period. Attending the final examination with the requirement of a minimum of 80% attendance throughout the course will be compulsory to complete each stage. Credits earned in these course units shall not be considered for the calculation of the GPA. A certificate will be issued after the successful completion of the Academic Literacy programme.

<b>Academic Literacy Course Units for BSc, BSc (ENCM), BSc (PE), BSc Hons (IT), BSc Hons (MIT), and BSc Hons (SENG) Degree Programmes</b>		
	<b>Course Units</b>	<b>Status</b>
Year of Study 1	ACPR 11011 Academic Literacy Prerequisite <sup>1</sup>	O
	ACLT 11012 Academic Literacy I <sup>1</sup>	C
	ACLT 12022 Academic Literacy II <sup>1</sup>	C
Year of Study 2 or 3 Sem 3 or 5	ACLT 21032 Academic Literacy III <sup>1</sup>	C

<sup>1</sup>The credits that are not counted for GPA

**Complementary Skill Development**

These course units are offered by the Faculty of Science in collaboration with other faculties of the university adhered to the following conditions. Courses will be offered to students as Year of Study 1 course units of Complementary Skill Development (CMSK). Students can follow the course units at any Year of Study. Every student enrolled in the Faculty of Science must complete at least one course unit during the Years of Study 1 and 2. Names of the course units are provided below. Students should have participated in at least 80% of the course activities to complete the course unit successfully. Credits earned in these course units shall not be considered for the calculation of the GPA. Participated courses will be mentioned in the transcript.

<b>Complementary Skill Development Course Units BSc, BSc (ENCM), BSc (PE), BSc Hons (IT), BSc Hons (MIT), and BSc Hons (SENG) Degree Programmes</b>		
	<b>Course Units</b>	<b>Status</b>
Year of Study 1 and 2 Sem 1 to 4	CMSK 14012 Effective Leadership Through Sports <sup>1</sup>	C
	CMSK 14022 Photography for Social and Emotional Learning <sup>1, 2, 3</sup>	C
	CMSK 14032 Emotional Intelligence and Mindfulness <sup>1, 2, 3</sup>	C
	CMSK 14042 Introduction to Computer Hardware and Consumer Electronics <sup>1, 2, 3</sup>	C

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Restricted enrolment

<sup>3</sup>Offered only in one of the two semesters based on the student enrolment.

Compulsory Course Units for Biological Science Stream		
	Course Units	Status
Year of Study 1 Sem 1	BIOL 11512 Scope and Fundamentals of Microbiology	C
	BIOL 11522 Genetics	C
	BIOL 11532 Basic Biochemistry	C
	BIOL 11552 Evolutionary Biology and Biogeography	C
	DELT 11222 English for Biology <sup>1</sup>	C
Year of Study 2 Sem 4	DELT 22232 English for Communication and Further Studies <sup>1</sup>	C
Year of Study 1, 2 or 3	MGMT 11022 Communication Skills and Personality Development <sup>1,2</sup>	C

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Should offer during the three-year period of the Degree Programme

Compulsory Course Units for Physical Science Stream		
	Course Units	Status
Year of Study 1	DELT 12262 English for Physical Science <sup>1</sup>	C

<sup>1</sup>The credits that are not counted for GPA

Stream Compulsory Course Units for BSc (PE) Degree		
	Course Units	Status
Year of Study 1	DELT 12262 English for Physical Science <sup>1</sup>	C
	BFIN 12333 Management Functions and Practices <sup>2</sup>	C
Year of Study 2 Sem 4	BFIN 22333 Strategic Management <sup>2</sup>	C
Year of Study 3 Sem 5	BFIN 31623 Organizational Behaviour <sup>2</sup>	C

<sup>1</sup>The credits that are not counted for GPA

<sup>2</sup>Offered by the Faculty of Commerce & Management Studies

Compulsory Course Units for BSc Hons (MIT) Degree and BSc Hons (IT) Degree Programmes		
	Course Units	Status
Year of Study 1 Sem 1	DELT 11232 English for Professionals	C
Year of Study 2 Sem 3	DELT 21222 Communication Skills for Professionals	C

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

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

Subject: Applied Mathematics (AMAT)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 1 Sem 1	AMAT 11513 Vector Analysis	C	A/L Combined Mathematics	-
	AMAT 11522 Mechanics I	C	A/L Combined Mathematics	-
Year of Study 1 Sem 2	AMAT 12532 Vector Methods in Geometry	C	AMAT 11513	-
	AMAT 12543 Numerical Methods I <sup>1</sup>	C/O	AMAT 11513	-
Year of Study 2 Sem 3	AMAT 21552 Scientific Computing using Appropriate Software I <sup>1</sup>	C/O	AMAT 12543	-
	AMAT 21562 Mechanics II	C	AMAT 11522	-
Year of Study 2 Sem 4	AMAT 22572 Numerical Methods II	C	AMAT 12543	-
	AMAT 22582 Scientific Computing using Appropriate Software II	C	AMAT 21552	AMAT 22572
Year of Study 3 Sem 5	AMAT 31603 Mathematics for Finance I	O	PMAT 11522	-
	PRPL 31992 Professional Placement	O	All AMAT course units offered in the Year of Study 1 & 2	-
	AMAT 31613 Computational Mathematics	C	AMAT 22582	-
Year of Study 3 Sem 6	AMAT 32593 Mathematical Modelling	C/O	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	-

<sup>1</sup>Optional for Physics and Electronic students only.

Subject: Applied Mathematics (AMAT)				
BSc Hons				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 3 Sem 5	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 of Study 3 Sem 6	AMAT 42783 Advanced Mathematical Modelling	C	AMAT 41763	-
	AMAT 42793 Fluid Dynamics	C	PMAT 41763	-
Year of Study 4 Sem 7	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 <sup>1</sup>	C	-	-
Year of Study 4 Sem 8	AMAT 42843 Quantum Field Theory	O	AMAT 41823	-
	AMAT 42853 Tensors and General Relativity	O	PMAT 21553	-

<sup>1</sup>Compulsory for the student who has not offered PMAT 43976.

Subject: Biochemistry <sup>1</sup> (BIOC)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 1 Sem 1	BIOL11532 Basic Biochemistry (Lecture cum Laboratory- for biological science stream)	C	G C E A/L Chemistry and Biology	
Year of Study 1 Sem 2	BIOC 12612 Functional Biochemistry	C	BIOL 11532	BIOC 12632
	BIOC 12622 Metabolism of Biomolecules	C	BIOL11532	BIOC 12632
	BIOC 12632 Academic Research and Analytical Skills	C	BIOL 11532	BIOC 12612, BIOC 12622
Year of Study 2 Sem 3	BIOC 21612 Molecular Biology	C	BIOC 12612	BIOC 21631
	BIOC 21622 Analytical Biochemistry	C	BIOC 12612	BIOC 21631
	BIOC 21631 Molecular Biochemistry Laboratory	C	BIOC 12632	BIOC 21612, BIOC 21622
Year of Study 2 Sem 4	BIOC 22642 Biotechnology	C	BIOC 21612	BIOC 22661
	BIOC 22652 Environmental and Agricultural Biochemistry	C	BIOC 21612	BIOC 22661
	BIOC 22661 Environmental and Agricultural Biochemistry Laboratory	C	BIOC 21631	BIOC22642, BIOC 22652
Year of Study 3 Sem 5	BIOC 31611 Seminar	C	BIOC 22652	-
	BIOC 31622 Immunochemistry & Neurochemistry	C	BIOC 22642	-
	BIOC 31632 Pharmaceutical Chemistry	C	BIOC 22642	BIOC 31641
	BIOC 31641 Pharmaceutical Chemistry Laboratory	C	BIOC 21631	BIOC 31632
	PRPL 31992 Professional Placement	O	All BIOC compulsory course units offered in Years of Study 1 and 2	-
Year of Study 3 Sem 6	BIOC 32652 Food and Nutritional Biochemistry	O	BIOC 12612	BIOC 32661
	BIOC 32661 Food and Nutritional Biochemistry Laboratory	O	BIOC 12612	BIOC 32652

Subject: Biochemistry <sup>1</sup> (BIOC)		
BSc Hons		
	Course Units	Status
Year of Study 3	BIOC 44703 Biophysical Chemistry	C
	BIOC 44724 Cell Biology, Immunology, and Neurobiology	C
	BIOC 44734 Advanced Molecular Biology and Molecular Genetics	C
	BIOC 44742 Advanced Biochemistry Laboratory	C
	BIOC 44752 Advanced Molecular Biology Laboratory	C
	BIOC 44761 Industrial/ Professional Training <sup>1</sup>	C
	BIOC 44771 Scientific Communication	C
	BIOC 44783 Programming for Bioinformatics	C
Year of Study 4	BIOC 44794 Medicinal Chemistry and Clinical Biochemistry	C
	BIOC 43803 Bioinformatics and Molecular Modelling	C
	BIOC 43818 Research Project/ Dissertation	C
	BIOC 44824 Food and Nutritional Biochemistry	C
	BIOC 44833 Molecular Markers and Transgenic Technology	C
	BIOC 44844 Bioprocess Engineering	C
	BIOC 44853 Biochemical Engineering and Management Concepts in Biochemistry	C
	BIOC 44862 Applied Environmental Biochemistry	C

<sup>1</sup>Limited enrolment

Subject: Chemistry (CHEM)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 1 Sem 1	CHEM 11601 Calculations in Chemistry <sup>1,2</sup>	C/O	-	-
	CHEM 11612 Atomic Structure, Periodic Table	C	G.C.E. A/L Chemistry	-
	CHEM 11622 General Chemistry	C	G.C.E. A/L Chemistry	-
	CHEM 11631 Basic Chemical Analysis Laboratory	C	-	CHEM 11622
Year of Study 1 Sem 2	CHEM 12642 Physical Chemistry I	C	G.C.E. A/L Chemistry	-
	CHEM 12652 Stereochemistry and Reaction Mechanisms in Organic Chemistry	C	CHEM 11612	-
	CHEM 12661 Basic Organic Chemistry Laboratory	C	-	CHEM 12652
Year of Study 2 Sem 3	CHEM 21672 Analytical Chemistry	C	CHEM 11622	-
	CHEM 21682 Physical Chemistry II	C	CHEM 12642	-
	CHEM 21691 Physical Chemistry Laboratory	C	CHEM 12642	CHEM 21682
Year of Study 2 Sem 4	CHEM 22702 Inorganic Chemistry	C	CHEM 11622	-
	CHEM 22712 Organic Synthesis, Spectroscopy and Aromaticity	C	CHEM 12652	-
	CHEM 22721 Analytical Chemistry Laboratory	C	CHEM 21672	-
Year of Study 3 Sem 5	CHEM 31731 Organic and Inorganic Synthesis, Analysis and Natural Products Chemistry Laboratory	C	CHEM 11631, CHEM 12661	-
	CHEM 31742 Material Chemistry and Introduction to Quality Management	O	CHEM 22702	-
	CHEM 31752 Applied Natural Products Chemistry	O	CHEM 22712	-
	PRPL 31992 Applied Natural Products Chemistry Professional Placement	O	All CHEM compulsory course units offered in the Years of Study 1 and 2	-
Year of Study 3 Sem 6	CHEM 32762 Environmental Chemistry	O	CHEM 11622, CHEM 21672	CHEM 32771
	CHEM 32771 Environment Chemistry Laboratory	O	CHEM 22721	CHEM 32762
	CHEM 32782 Polymer Chemistry	O	-	-

<sup>1</sup>Compulsory for Biological Science stream<sup>2</sup>The credits that are not counted for GPA

Subject: Chemistry (CHEM)		
BSc Hons		
	Course Units	Status
Year of Study 3	CHEM 44704 Advanced Analytical Chemistry1	C
	CHEM 44714 Advanced Biochemistry I	C
	CHEM 44723 Advanced Inorganic Chemistry I	C
	CHEM 44733 Advanced Organic Chemistry I1	C
	CHEM 44743 Advanced Physical Chemistry I	C
	CHEM 44753 Analytical and Environmental Chemistry Laboratory1	C
	CHEM 44762 Biochemistry Laboratory	C
	CHEM 44772 Inorganic Chemistry Laboratory	C
	CHEM 44782 Organic Chemistry Laboratory1	C
	CHEM 44792 Physical Chemistry Laboratory	C
	CHEM 44802 Applications in Computational Chemistry	C
	CHEM 44811 Industrial/ Professional Placement2	C
	CHEM 44821 Seminar	C
	CHEM 44832 Earth Resources and Smart Materials	C
Year of Study 4	CHEM 44843 Advanced Biochemistry II	C
	CHEM 44854 Advanced Environmental Chemistry	C
	CHEM 44863 Advanced Inorganic Chemistry II	C
	CHEM 44874 Advanced Organic Chemistry II1	C
	CHEM 44884 Advanced Physical Chemistry II	C
	CHEM 44893 Chemical Engineering and Management Concepts in Industrial Chemistry	C
	CHEM 44902 Food Chemistry	C
	CHEM 44912 Polymer Chemistry	C
	CHEM 43928 Research Project/ Dissertation	C

<sup>1</sup>Course units offered for the BSc Hons (Biochemistry) and (Chemistry)

<sup>2</sup>The credits that are not counted for GPA

<b>Subject: Computer Science<sup>1</sup> (COSC)</b>			
<b>BSc</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 1 Sem 1	COSC 11012 Introduction to Computing	C	G.C.E. A/L
	COSC 11023 Fundamentals of Programming	C	G.C.E. A/L
Year of Study 1 Sem 2	COSC 12033 Data Communication and Networks	C	COSC 11012
	COSC 12043 Object Oriented Programming	C	COSC 11023
Year of Study 2 Sem 3	COSC 21052 Software Engineering	C	COSC 11012, COSC 12043
	COSC 21063 Data Structures and Algorithms	C	COSC 11023, COSC 12043
Year of Study 2 Sem 4	COSC 22073 Computer Architecture and Operating Systems	C	COSC 11012, COSC 11023
	COSC 22083 Database Management Systems	C	COSC 11023
Year of Study 3 Sem 5	PRPL 31992 Professional Placement	O	All Years of Study 1 and 2 course modules
	COSC 31093 Enterprise Software Design and Architecture	C	COSC 12043, COSC 21063, COSC 22083
	COSC 31103 Web & Internet Technologies	O	COSC 12033, COSC 12043, COSC 22083
	COSC 31112 Visual Programming	O	COSC 22083, COSC 21052
	COSC 31122 Cyber Security	O	COSC 12033
Year of Study 3 Sem 6	COSC 32133 Full-Stack Software Development	C	COSC 31093
	COSC 32142 Artificial Intelligence	O	COSC 11012, COSC 11023
	COSC 32152 Mobile Application Development	O	COSC 12043, COSC 22083
	COSC 32162 Big Data Technologies	O	COSC 12033, COSC 12043, COSC 22083

<sup>1</sup>Limited Enrolment



Subject: Computer Science <sup>1</sup> (COSC)			
BSc Hons			
	Course Units	Status	Pre-requisite
Year of Study 3 Sem 5	PRPL 31992 Professional Placement	O	All Years of Study 1 and 2 course modules
	COSC 31093 Enterprise Software Design and Architecture	C	COSC 12043, COSC 21063, COSC 22083
	COSC 31103 Web & Internet Technologies	O	COSC 12033, COSC 12043, COSC 22083
	COSC 31112 Visual Programming	O	COSC 22083, COSC 21052
	COSC 31122 Cyber Security	O	COSC 12033
Year of Study 3 Sem 6	COSC 32133 Full-Stack Software Development	C	COSC 31093
	COSC 32142 Artificial Intelligence	C	COSC 11012, COSC 11023
	COSC 32152 Mobile Application Development	O	COSC 12043, COSC 22083
	COSC 32162 Big Data Technologies	O	COSC 12033, COSC 12043, COSC 22083
Year of Study 3 and 4	COSC 44172 Human Computer Interaction	C	COSC 21052, COSC 31103
	COSC 44183 Computer Graphics and Visualization	C	COSC 11023
	COSC 44193 Advanced Databases	C	COSC 22083
	COSC 44202 Object Oriented Analysis and Design	C	COSC 32133
	COSC 44213 Information Assurance and Security	C	COSC 12033
	COSC 44223 Machine Learning	C	COSC 32142
	COSC 44232 Advanced Computer Architecture and Operating Systems	C	COSC 22073
	COSC 44243 Parallel and Distributed Computing	C	COSC 22073
	COSC 44252 Research Methodologies	C	COSC 11012
	COSC 44263 Theory of Computing	C	COSC 11012
	COSC 44273 Logic Programming	O	COSC 32142
	COSC 44283 Theory of Compilers	O	COSC 22073
	COSC 44293 Wireless Communication and Networks	O	COSC 12033
	COSC 44303 Natural Language Processing	O	COSC 32142
	COSC 44313 Image Processing and Computer Vision	O	COSC 32142
	COSC 44323 Emerging Technologies in Computer Science	O	All compulsory COSC course units of Year of Study 3
	COSC 44333 Game Development	O	COSC 44183
	COSC 44343 Data Science	O	COSC 44223
	COSC 44353 Cloud Computing	O	COSC 12033
	COSC 44364 Industrial Training	C	All compulsory COSC course units of Years of Study 1, 2 and 3
	COSC 43378 Research Project	C	All the compulsory COSC courses

<sup>1</sup>Limited Enrolment

Subject: Computer Studies <sup>1</sup> (COST)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 1 Sem 1	COST 11012 Introduction to Computing	C	G.C.E. A/L	COST 11023
	COST 11023 Fundamentals of Programming	C	G.C.E. A/L	COST 11012
Year of Study 1 Sem 2	COST 12032 Introduction to Computer Networks	C	COST 11012	-
	COST 12043 Database Management Systems	C	COST 11012, COST 11023	-
Year of Study 2 Sem 3	COST 21053 Object Oriented Programming	C	COST 11023, COST 12043	-
	COST 21063 Systems Analysis & Design	C	COST 11012	COST 21053
Year of Study 2 Sem 4	COST 22073 Web Development	C	COST 21053	-
	COST 22082 Information Systems	C	COST 21063	-
Year of Study 3 Sem 5	COST 31093 Event Driven Programming	C	COST 22073	-
	COST 31102 Social and Professional Issues in Computing	O	COST 21063	-
	COST 31112 Human Computer Interaction	O	COST 22073, COST 22082	COST 31093
	COST 31122 Software Project Management	O	COST 22082	-
	PRPL 31992 Professional Placement	O	All Years of Study and 2 course modules	-
Year of Study 3 Sem 6	COST 32143 Multimedia Technologies <sup>2</sup>	C/O	-	-
	COST 32152 Mobile Application Development	O	COST 21053	-
	COST 32162 Software Quality Assurance	O	COST 22082	-
	COST 32182 Industry-based Project	O	All the Years of Study 01 and Years of Study 02 courses, COST 31093	-

<sup>1</sup>Limited Enrolment<sup>2</sup>Optional for BSc in (PE) students only

Subject: Computer Studies <sup>1</sup> (COST)				
BSc Hons				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 3 Sem 5	COST 31093 Event Driven Programming	C	COST 22073	-
	COST 31102 Social and Professional Issues in Computing	C	COST 21063	-
	COST 31112 Human Computer Interaction	C	COST 22073, COST 22082	COST 31093
	COST 31122 Software Project Management	C	COST 22082	-
	COST 31133 Mathematics for Information Technology <sup>2</sup>	C	GCE (A/L)	
	PRPL 31992 Professional Placement	O	All Years of Study 1 and 2 course modules	-
Year of Study 3 Sem 6	COST 32143 Multimedia Technologies	C	-	-
	COST 32152 Mobile Application Development	C	COST 21053	-
	COST 32162 Software Quality Assurance	C	COST 22082	-
	COST 32173 Statistics for Information Technology	C	GCE (A/L)	-
	COST 32182 Industry-based Project	O	All Years of Study 1 and 2 courses, COST 31093	-
Years of Study 3 and 4 Sem 5-8	COST 44193 Advanced Computer Networks	C	COST 12032	-
	COST 44203 Advanced Databases	C	COST 12043	-
	COST 44213 Cloud Computing	C	COST 12032	-
	COST 44223 Computer Architecture and Operating Systems	C	COST 11012, COST 11023	-
	COST 44233 Data Structures and Algorithms	C	COST 21053	-
	COST 44243 Information Security	C	COST 22082	-
	COST 44252 Object Oriented Analysis and Design	C	COST 21053	-
	COST 44262 Research Methodologies	C	COST 22082, COST 32173	-
	COST 44272 System Administration	C	COST 12032	-
	COST 44283 Applied Robotics	O	COST 11023	-
	COST 44293 Blockchain and Cryptocurrency	O	COST 12032, COST 44243	-
	COST 44303 Business Intelligence	O	COST 11023, COST 32173	-
	COST 44313 Internet of Things	O	COST 11023, COST 12032	-
	COST 44322 Big Data Technologies	O	COST 21053, COST 12032	-
	COST 44332 Business Process Analysis and Design	O	COST 22082	-
	COST 44342 Emerging Technologies in Information Technology	O	All compulsory COST course units of Year of Study 3	-
	COST 44352 Games Design	O	COST 31112	-
	COST 44364 Industrial Training	C	All compulsory COST course units of Years of Study 1, 2 and 3	-
	COST 43378 Research Project	C	All the compulsory COST courses	-

**Note:**

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

<sup>1</sup>Limited enrolment.

<sup>2</sup>Compulsory only for students entered to the BSc Hons Degree Programme from the Biological Science stream.

Subject: Electronics <sup>1</sup> (ELEC)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 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 of Study 1 Sem 2	ELEC 12534 Analogue Electronics	C	A/L Physics	ELEC 12541
	ELEC 12541 Analogue Electronics Laboratory	C	ELEC 11521	ELEC 12534
Year of Study 2 Sem 3	ELEC 21513 Digital Electronics	C	ELEC 12534	ELEC 21521
	ELEC 21521 Digital Electronics Laboratory	C	ELEC 12541	ELEC 21513
Year of Study 2 Sem 4	ELEC 22534 Signal Processing and Data Acquisition	C	ELEC 21513	ELEC 22541
	ELEC 22541 Signal Processing and Data Acquisition Laboratory	C	ELEC 21521	ELEC 22534
Year of Study 3 Sem 5	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 of Study 3 Sem 6	ELEC 33542 Research Project	C	All ELEC Compulsory Course Units	-

<sup>1</sup>Limited enrolment

<b>Subject: Environmental Conservation and Management (ENCM)</b>				
<b>BSc (ENCM)</b>				
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>
Year of Study 1 Sem 1	ENCM 11702 Evolution of Earth and Biogeography	C	G.C.E. (A/L) Biology	-
	ENCM 11713 Basic Geology and Soil Science	C	G.C.E. (A/L) Biology	-
	ENCM 11722 Hydrology	C	G.C.E. (A/L) Biology	-
Year of Study 1 Sem 2	ENCM 12732 Forest Resources	C	G.C.E. (A/L) Biology	-
	ENCM 12742 Environmental Pollution	C	G.C.E. (A/L) Biology	-
	ENCM 12752 Sustainability, Social Responsibility, and Environmental Management	C	-	-
Year of Study 2 Sem 3	ENCM 21703 Terrestrial and Aquatic Ecology	C	-	ENCM 21711
	ENCM 21711 Terrestrial and Aquatic Ecology Laboratory	C	-	ENCM 21703
	ENCM 21722 Environment and Human Health	C	ENCM 12742	-
	ENCM 21732 Sustainable Utilization of Energy Resources	C	ENCM 12752	-
	ENCM 21743 GIS and Remote Sensing	C	ENCM 12742	-
	ENCM 21752 Environmental Policies and Legislation	C	ENCM 12752	-
Year of Study 2 Sem 4	ENCM 22762 Air Quality Management	C	ENCM 12742	-
	ENCM 22773 Solid and Hazardous Waste Management	C	ENCM 12742	-
	ENCM 22782 Wastewater Management	C	ENCM 12742	-
	ENCM 22791 Scientific Communication	C	-	-
	ENCM 22802 Basic Statistics for Environmental Studies	C	-	-
Year of Study 3 Sem 5	ENCM 31702 Environmental Impact Assessment	C	ENCM 21752	-
	ENCM 31712 Environmental Economics	C	ENCM 12742	-
	ENCM 31722 Environmental Monitoring	C	ENCM 12742	-
	ENCM 31732 Occupational Health and Safety	C	ENCM 21722	-
	ENCM 31742 Environmental Management Systems and Standards	C	ENCM 12752	-
	ENCM 31752 Green Technology and Eco-design	C	ENCM 12752	-
	ENCM 31762 Water Resources Management	C	ENCM 11722	-
	ENCM 33774 Environmental Project <sup>1</sup>	C	All Years of Study 1 and 2 ENCM course units	-
Year of Study 3 Sem 6	ENCM 32782 Hazards and Disaster Risk Management <sup>2</sup>	O	ENCM 12752	-
	ENCM 32792 Urban Environmental Management <sup>2</sup>	O	ENCM 12752	-
	ENCM 32805 In-Plant Training <sup>1</sup>	C	All Years of Study 1 and 2 ENCM course units	-

<sup>1</sup>Not offered for the BSc Hons (ENCM) Degree programme<sup>2</sup>Students should accumulate credits for at least one optional course unit offered in the Year of Study 3.

<b>Subject: Environmental Conservation and Management (ENCM)</b>			
<b>BSc Hons (ENCM)</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 3 Sem 5	ENCM 31702 Environmental Impact Assessment	C	ENCM 21752
	ENCM 31712 Environmental Economics	C	ENCM 12742
	ENCM 31722 Environmental Monitoring	C	ENCM 12742
	ENCM 31732 Occupational Health and Safety <sup>1</sup>	O	ENCM 21722
	ENCM 31742 Environmental Management Systems and Standards <sup>1</sup>	O	ENCM 12752
	ENCM 31752 Green Technology and Eco-design <sup>1</sup>	O	ENCM 12752
	ENCM 31762 Water Resources Management <sup>1</sup>	O	ENCM 11722
	ENCM 41702 Research Methodology	C	ENCM 22802
	ENCM 41713 Geoinformatics for Environmental Management	C	ENCM 21743
	ENCM 43722 Literature Review and Seminar on Special Topics in Environmental Management	C	ENCM 22791
Year of Study 3 Sem 6	ENCM 32782 Hazards and Disaster Risk Management <sup>2</sup>	O	ENCM 12752
	ENCM 32792 Urban Environmental Management <sup>2</sup>	O	ENCM 12752
	ENCM 42732 Statistics for Environmental Studies	C	ENCM 22802
	ENCM 42745 Professional Placement	C	All Year of Study 3 compulsory ENCM course units
Year of Study 4 Sem 7	ENCM 41753 Applications in Environmental Economics	C	ENCM 31712
	ENCM 41763 Forest Resources Management	C	ENCM 12732
	ENCM 43774 Environmental Toxicology and Risk Assessment	C	ENCM 21722
	ENCM 41783 Ecological Interactions and Dynamics <sup>3</sup>	O	ENCM 21703
	ENCM 41793 Wetland Management <sup>3</sup>	O	ENCM 21573
	ENCM 41802 Environmental Management in Fisheries and Aquaculture <sup>3</sup>	O	ENCM 12592
	ENCM 41813 Wildlife and Protected Area Management <sup>3</sup>	O	ZOOL 32752
	ENCM 41822 Ecotourism <sup>3</sup>	O	ZOOL 32752
	ENCM 41832 Insects and Environment Management <sup>3</sup>	O	ZOOL 12733
	ENCM 41842 Environmental Engineering <sup>3</sup>	O	ENCM 22762 ENCM 22773 and ENCM 22782
	ENCM 41852 Environmental Biotechnology <sup>3</sup>	O	MIBI 22554, MIBI 22562, ENCM 22773, and ENCM 22782
	ENCM 43868 Research Project <sup>4</sup>	C	ENCM 41702 and ENCM 42732
Year of Study 4 Sem 8	ENCM 42873 Marine and Coastal Resources Management	C	ENCM 21703
	ENCM 42883 Climate Change, Mitigation, and Adaptation	C	ENCM 12752

<sup>1</sup>Students should accumulate at least 06 credits from optional course units in the Year of study 3 Semester 1.

<sup>2</sup>Students should accumulate 02 credits from optional course units in the Year of Study 3 Semester 8.

<sup>3</sup>Students should accumulate 10 credits from optional course units in the Year of Study 4 Semester 7.

<sup>4</sup>Offered throughout the year

Subject: Generic Competencies (GNCT)		
BSc Hons (MIT)/ BSc Hons (IT)		
	Course Units	Status
Year of Study 1 Sem 1	GNCT 11212 <sup>a</sup> Personal Progress Development I	C
Year of Study 1 Sem 2	GNCT 12212 <sup>a</sup> Problem Solving and Critical Thinking	C
Year of Study 2 Sem 3	GNCT 21212 <sup>a</sup> Personal Progress Development II	C
Year of Study 2 Sem 4	GNCT 22212 <sup>a</sup> Technical Writing	C
Year of Study 3 Sem 6	GNCT 32216 Internship	C

<sup>1</sup>The credits that are not counted for GPA

Subject: Industrial Management (IMGT)		
	Course Units	Status
Year of Study 1	IMGT 14512 Management Theory and Practice <sup>1</sup>	A
Year of Study 2	IMGT 21511 Introduction to Intellectual Property	A

<sup>1</sup>Can take either IMGT 14512 or MGMT 11012

Subject: Information Technology (INTE)			
BSc Hons (MIT)/ BSc Hons (IT)			
	Course Units	Status	Pre-requisite
Year of Study 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 11223
	INTE 12232 Computer Network I	C	INTE 11213
Year of Study 2	INTE 21213 Information Systems Modelling	C	INTE 11223, INTE 12213 & INTE 12223
	INTE 21223 Interactive Applications Development	C	INTE 12223 & INTE 12213
	INTE 21233 Web Application Development I	C	None
	INTE 21243 Computer Architecture and Operating Systems	C/O	INTE 11213 & INTE 11223
	INTE 21253 Computer Networks – 2	O	INTE 12232
	INTE 21263 Data Structures and Algorithms	C/O	INTE 11223 & INTE 12213
	INTE 21273 Data Science	C/O	INTE 11223
	INTE 21282 Business Information Systems	C/O	INTE 11213
	INTE 21292 Information Security I	C	None
	INTE 21303 Physical Computing	O	INTE 11213 & INTE 11223
	INTE 22212 Software Design Patterns and Frameworks	C/O	INTE 21213
	INTE 22242 Web Applications Development II	C/O	INTE 21233 & INTE 12213
	INTE 22253 Distributed Systems and Cloud Computing	C/O	INTE 12213 & INTE 21233
	INTE 22263 Embedded Systems Development	O	INTE 21243 & INTE 21303

	INTE 22273 Information Security – 2	O	INTE 21292
	INTE 22283 Mobile Applications Development	O	INTE 12213 & INTE 21233
	INTE 22293 Software Architecture and Process Models	O	INTE 21213
	INTE 22303 Artificial Intelligence	C	INTE 11223
Year of Study 3	INTE 31213 Advanced Databases	O	INTE 12223
	INTE 31223 Internet of Things	O	INTE 12232 & INTE 22263
	INTE 31233 Human Computer Interaction	O	INTE 11213
	INTE 31243 Software Quality Engineering	O	INTE 22293
	INTE 31253 Software Engineering Concepts	O	INTE 21213
	INTE 31273 System Integration Technologies - 1	C	INTE 12213, INTE 22242 & INTE 22212
	INTE 31283 Big Data and Data Warehousing	O	INTE 12223
	INTE 31302 Requirement Engineering	C	INTE 21213
	INTE 31312 Information Technology Infrastructure	C	INTE 11213
	INTE 31332 Information Systems Auditing and Control	C	INTE 21282 & INTE 31362
	INTE 31356 Software Development Project	C	All compulsory modules from Years of Study 1 to 3
	INTE 31362 Information Security Management	C/O	INTE 12232 & INTE 21282
	INTE 31373 Machine Learning	O	INTE 21273
	INTE 31382 System Administration and Maintenance	O	INTE 11213 & INTE 12232
Year of Study 4	INTE 41212 Systems Modelling and Simulation	O	MGTE 12222
	INTE 41232 Information Systems Innovation & Technologies	O	INTE 21282 & INTE 31312
	INTE 41263 Information Systems Strategy and Management	C/O	INTE 21282
	INTE 41272 Enterprise Architecture	C	INTE 21282, INTE 21213 & INTE 31312
	INTE 41292 Mobile Computing	O	INTE 12232 & INTE 22283
	INTE 41302 Geographical Information Systems	O	INTE 21273
	INTE 41312 Image Processing and Computer Graphics	O	INTE 11213, INTE 21263 & PMAT 31212
	INTE 41323 Neural Networks and Deep Learning	O	INTE 22303
	INTE 41333 Data Mining and Applied Analytics	O	INTE 21273, MGTE 22242 & INTE 31283
	INTE 41342 Industrial Automation	O	INTE 31223
	INTE 41352 System Integration Technologies – 2	O	INTE 31273
	INTE 41363 Computer Crimes and Digital Forensics	O	INTE 22273 & INTE 31362
	INTE 42222 Reinforcement Learning	O	INTE 41323



	INTE 42232 Data Engineering	O	INTE 31283 & INTE 31213
	INTE 42252 Semantic Web and Ontological Engineering	O	INTE 12213 & INTE 22242
	INTE 42282 Knowledge Management		INTE 21282
	INTE 42292 Parallel and High Performance Computing	O	INTE 22253
	INTE 42302 Robotics	O	INTE 41342
	INTE 42312 Virtual and Augmented Reality	O	INTE 11223
	INTE 42322 Vision Based Systems	O	INTE 41312 & 41323
	INTE 42333 Complex Systems and Agent Based Modelling	O	INTE 22303
	INTE 42343 Natural Language Processing	O	INTE 11223
	INTE 43216 <sup>2</sup> Research Project	C	MGTE 31222

<sup>1</sup>Students should offer either MGTE 43216 or INTE 43216

Subject: Management for Physical Science Students (MAPS)			
BSc			
	Course Units	Status	Pre-Requisite
Year of Study 1 Sem 1	MAPS 11512 Management theory and Practices	A	-
Year of Study 2 Sem 4	MAPS 22603 Principles of Human Resource Management and Leadership	A	-
Year of Study 3 Sem 6	MAPS 32612 Innovation and Entrepreneurship	A	-

Subject: Management and Technology (MGTE)			
BSc Hons (MIT)/ BSc Hons (IT)			
	Course Units	Status	Pre-Requisite
Year of Study 1	MGTE 11202 Economics	C	None
	MGTE 11213 Statistics	C	None
	MGTE 11222 Principles of Management	C	None
	MGTE 12222 Optimization Methods in Management Science I	C	MGTE 11213
	MGTE 12232 Industry and Technology	C	None
	MGTE 12253 Accounting Concepts and Costing	C	None
Year of Study 2	MGTE 21222 Marketing Management	C	None
	MGTE 21233 Operations Management	C	None
	MGTE 22212 Human Resource Management	C	None
	MGTE 22232 Leadership and Management Communication	C	None
	MGTE 22242 Statistical Data Modelling	C/O	MGTE 11213
	MGTE 22252 Optimization Methods in Management Science II	C	MGTE 11213 & MGTE 12222
Year of Study 3	MGTE 31212 Project Management	C/O	MGTE 11222 & MGTE 11213 & MGTE 22252
	MGTE 31222 Research Methods	O	None

	MGTE 31233 Strategic Management	C	MGTE 11202 MGTE 21222 MGTE 21233 MGTE 34213
	MGTE 31272 Computer based tools for Management Applications	O	MGTE 12222
	MGTE 31283 Strategic Marketing and International Trade	O	MGTE 21222
	MGTE 31293 Computer Integrated Manufacturing	C	MGTE 12232 MGTE 21233
	MGTE 31303 Procurement and Supply Management	C	MGTE 21233
	MGTE 31312 Management of Technology	C/O	None
	MGTE 34213 Managerial Finance	C	MGTE 12253
Year of Study 4	MGTE 41212 Professional Practices	C	MGTE 11222
	MGTE 41222 Business Process Engineering	C/O	MGTE 21233
	MGTE 41233 Corporate Finance	C	MGTE 34213
	MGTE 41252 Logistics Systems and Transportation Management	C	MGTE 41262
	MGTE 41262 Advanced Operations Management	C	MGTE 21233
	MGTE 41273 Statistical Techniques for Data Analysis	C/O	MGTE 22242
	MGTE 41282 Supply Chain Financing	O	MGTE 34213
	MGTE 41292 Advanced Optimization Methods in Management Science	O	MGTE 12222 & MGTE 22252
	MGTE 41303 Enterprise Systems	C/O	INTE 21282
	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 22242
	MGTE 42243 Advanced Planning and Scheduling	O	MGTE 12222 & MGTE 22252
	MGTE 42252 Strategic Quality Management and Lean Six Sigma	C	None
	MGTE 42292 Business and Information Technology Law	O	None
	MGTE 43216 Research Project	C	MGTE 31222
	MGTE 44242 Warehouse and Distribution Management	C	MGTE 41262
	MGTE 44273 Innovation & Entrepreneurship	O	None

<sup>1</sup>Students should offer either MGTE 43216 or INTE 43216

Subject: Microbiology <sup>1</sup> (MIBI)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 1 Sem 1	BIOL 11512 Scope and Fundamentals of Microbiology (Lecture cum Laboratory)	C	A/L Biology	-
Year of Study 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 of Study 2 Sem 3	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 of Study 2 Sem 4	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 <sup>2</sup>	C	ENCM 12553	MIBI 22562
	MIBI 22562 Laboratory Microbiology for Environmental Management <sup>2</sup>	C	ENCM 12553	MIBI 22554
Year of Study 3 Sem 5	PRPL 31992 Professional placement	O	All MIBI compulsory units offered in the Years of Study 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 of Study 3 Sem 6	MIBI 32556 Industrial Training in Microbiology <sup>3</sup>	C/O	MIBI 31514 MIBI 31522	-
	MIBI 33534 Medical and Veterinary Microbiology, Microbial Technology <sup>3</sup>	C/O	MIBI 21514 MIBI 21522	MIBI 33541
	MIBI 33541 Laboratory aspects of Medical and Veterinary Microbiology <sup>3</sup>	C/O	MIBI 21514 MIBI 21522	MIBI 33534
	MIBI 33562 Special Topics in Microbiology	O	MIBI 31514 MIBI 31522	MIBI 33534

<sup>1</sup>Limited enrolment<sup>2</sup>Compulsory only for the students who follow the BSc (ENCM) Degree Programme<sup>3</sup>Compulsory only for the BSc Hons (Microbiology) students

Subject: Microbiology <sup>1</sup> (MIBI)			
BSc Hons			
	Course Units	Status	Pre-requisite
Year of Study 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 of Study 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		

<sup>1</sup>Limited enrolment

Subject: Molecular Biology and Plant Biotechnology (MBBT)*					
BSc Hons					
	Course Units	Status	Pre-requisite		
Year of Study 3 Sem 5	MBBT 31514 Principles and Techniques in Plant Biotechnology	C	All Years of Study I and 2 PLBL compulsory course units		
	MBBT 31522 Principles and Techniques in Plant Biotechnology Laboratory				
	PRPL 31992 Professional Placement	O			
	MBBT 41763 Cell Biology and Biochemistry	C			
	MBBT 41773 Molecular Plant Breeding				
Year of Study 3 Sem 6	MBBT 32533 Plant Pathology				
	MBBT 32541 Tissue Culture				
	MBBT 32552 Principles and Practices of Horticulture				
	MBBT 42784 Microbial Genetics				
	MBBT 42793 Bioethics and Intellectual Property Rights				
Year of Study 4 Sem 7	MBBT 41804 Bioinformatics	C	All MBBT compulsory course units		
	MBBT 41813 Agricultural, Environmental and Industrial Biotechnology				
	MBBT 41824 Developmental Gene Regulation				
	MBBT 41834 Genetic Manipulation of Microorganisms				
	MBBT 41844 Omics Technologies				
Year of Study 4 Sem 8	MBBT 42853 Molecular Ecology				
	MBBT 42863 Immunology and Cancer Biology				
	MBBT 43872 Term Paper and Presentation				
	MBBT 43888 Research Project - Dissertation				

\*PLBL course units offered in the Years of Study 1 and 2 are considered as course units in the subject of specialization to be eligible for the award of BSc Hons in Molecular Biology & Plant Biotechnology degree and for the award of classes.

Subject: Physics <sup>1</sup> (PHYS)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 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 of Study 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 of Study 2 Sem 3	PHYS 21513 Waves and Optics	C	PHYS 12542 PHYS 12552	PHYS 21521
	PHYS 21521 General Physics Laboratory I	C	PHYS 12561	PHYS 21513
Year of Study 2 Sem 4	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 <sup>2</sup>	C	A/L Physics or Chemistry	-
Year of Study 3 Sem 5	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 <sup>3</sup>	O/C	A/L Physics	-
	PHYS 31544 Mathematical Methods in Physics <sup>3</sup>	O/C	All Year of Study 1 and 2 PHYS Compulsory Units	-
Year of Study 3 Sem 6	PHYS 32551 Electronics Laboratory <sup>4</sup>	C	PHYS 31521	PHYS 32562
	PHYS 32562 Electronics <sup>4</sup>	C	PHYS 31512	PHYS 32551
	PHYS 32572 Nanoscience <sup>3</sup>	O/C	PHYS 12542 PHYS 12552	-
	PHYS 32582 Introduction to Cosmology and Astrophysics <sup>3,5,6</sup>	O/C	A/L Physics	-

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

Subject: Physics (PHYS)			
BSc Hons			
	Course Units	Status	Pre-requisite
Year of Study 4	PHYS 43793 Advanced Physics Laboratory - I	<b>C</b>	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 <sup>1</sup>		
	PHYS 44804 Statistical Physics		
	PHYS 44814 Special Topics in Physics <sup>2</sup>		
	PHYS 44824 Condensed Matter Physics		
	PHYS 44834 Theory of Relativity and Cosmology		
	PHYS 44854 Electrodynamics		
	PHYS 44864 Nuclear Physics and Fundamental Particles		

<sup>1</sup>Offered for students who have not followed Electronics as a subject

<sup>2</sup>Offered for students who have followed Electronics as a subject

Subject: Plant Biology (PLBL)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 1 Sem 1	BIOL 11522 Genetics	C	G.C.E. A/L (Biology)	-
	PLBL 11532 Organic Gardening <sup>1</sup>	A	-	-
	PLBL 11543 Plant Evolution and Identification <sup>2</sup>	C	G.C.E. A/L	-
Year of Study 1 Sem 2	PLBL 12513 Cellular and Plant Developmental Biology	C	All BIOL course units	PLBL 12521
	PLBL 12521 Cellular and Plant Developmental Biology Laboratory	C	All BIOL course units	PLBL 12513
	PLBL 12533 Microbial Biology	C	BIOL 11512	-
	PLBL 12543 Floristic Resources in Sri Lanka and Management <sup>2</sup>	C	PLBL 11543	-
Year of Study 2 Sem 3	PLBL 21513 Plant Physiology	C	PLBL 12513	PLBL 21521
	PLBL 21521 Plant Physiology Laboratory	C	PLBL 12521	PLBL 21513
	PLBL 21531 Biostatistics	C	-	-
	PLBL 21541 Fundamentals of Molecular Biology	C	BIOL 11522	-
Year of Study 2 Sem 4	PLBL 22554 Plant Evolution, Diversity and Taxonomy	C	PLBL 12513	PLBL 22561
	PLBL 22561 Plant Evolution, Diversity and Taxonomy Laboratory	C	PLBL 12521	PLBL 22554
Year of Study 3 Sem 5	PLBL 31514 Ecology and Environmental Resources Management	C	PLBL 22554	PLBL 31521
	PLBL 31521 Ecology and Environmental Resources Management Laboratory	C	PLBL 22561	PLBL 31514
	PRPL 31992 Professional Placement	O	-	-
Year of Study 3 Sem 6	PLBL 32533 Plant Pathology and Post-Harvest Technology <sup>3</sup>	C/O	PLBL 21513	-
	PLBL 32542 Recombinant DNA Technology and Tissue Culture <sup>3</sup>	C/O	PLBL 21541	-
	PLBL 32552 Horticulture <sup>3</sup>	C/O	PLBL 21513	-

<sup>1</sup>Offered during alternate academic years for non-Biology students.

<sup>2</sup>Offered for BSc in Environmental Conservation and Management.

<sup>3</sup>Compulsory for BSc Hons in Plant Biology.



Subject: Plant Biology (PLBL)			
BSc Hons			
	Course Units	Status	Pre-requisite
Year of Study 3 Sem 5	PLBL 41763 Plant Physiology and Biochemistry	C	All PLBL compulsory course units
	PLBL 41773 Plant Breeding		
Year of Study 3 Sem 6	PLBL 42783 Molecular and Microbial Genetics		
	PLBL 42793 Bioethics		
Year of Study 4 Sem 7	PLBL 41804 Plant Systematics and Bioinformatics		All PLBL compulsory course units
	PLBL 41814 Bioprospecting		
	PLBL 41823 Food and Industrial Microbiology		
	PLBL 41833 Forest Management and Soil Nutrient Dynamics		
	PLBL 41844 Fungi in Ecosystem Processes		
Year of Study 4 Sem 8	PLBL 42853 Ecology of Sustainability		
	PLBL 42863 Bioremediation		
	PLBL 43872 Field Botany		
	PLBL 43882 Term paper and Presentation		
	PLBL 43898 Research Project - Dissertation		

Subject: Pure Mathematics (PMAT)				
BSc				
	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 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 <sup>a</sup>	C	-	-
	PMAT 11703 Topics in Basic Mathematics <sup>1</sup>	A	-	-
Year of Study 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 <sup>b</sup>	C	PMAT 11212	-
	PMAT 12713 Introduction to Calculus <sup>1</sup>	A	-	-
Year of Study 2 Sem 3	PMAT 21553 Linear Algebra	C	PMAT 11522	-
	PMAT 21562 Infinite Series	C	PMAT 12543	-
Year of Study 2 Sem 4	PMAT 22572 Ordinary Differential Equations	C	PMAT 12543	-
	PMAT 22583 Functions of Several Variables	C	PMAT 21553	-
	PMAT 22213 Mathematical Methods for Computing <sup>c</sup>	O	-	-
Year of Study 3 Sem 5	PMAT 31593 Complex Variables	C	PMAT 22583	-
	PMAT 31602 Abstract Algebra	O	PMAT 21553	-
	PRPL 31992 Professional Placement	O	-	-
Year of Study 3 Sem 6	PMAT 32612 Theory of Riemann Integration	O	PMAT 12543	-
	PMAT 32622 Mathematical Methods	C/O	PMAT 22583	-
	PMAT 32632 Geometry	O	PMAT 22583	-

<sup>1</sup>Available only for students who have not offered combined Mathematics for GCE (A/L) Examination

<sup>a</sup>For BSc Hons (MIT) and (SENG) programmes

<sup>b</sup>For BSc Hons (MIT) and (SENG) programmes

<sup>c</sup>For BSc Hons (SENG) programme

Subject: Pure Mathematics (PMAT)			
BSc Hons			
	Course Units	Status	Pre-requisite
Year of Study 3 Sem 5	PMAT 41763 Complex Analysis	C	PMAT 22583
	PMAT 41783 Differential Geometry	O	PMAT 22583
Year of Study 3 Sem 6	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
	PMAT 44962 Research Methodology	C/O	-
Year of Study 4 Sem 7	PMAT 41813 Functional Analysis <sup>1</sup>	C/O	PMAT 21553
	PMAT 41823 Topology <sup>2</sup>	C	PMAT 21553
	PMAT 43976 Research Project <sup>3</sup>	C	-
Year of Study 4 Sem 8	PMAT 42833 Measure Theory	C	PMAT 42793
	PMAT 42843 Group Theory	C	PMAT 21553

<sup>1</sup>Optional for students in the BSc Hons (Statistics)

<sup>2</sup>Students in the Mathematical Physics program are strongly advised to attend these lectures

<sup>3</sup>Compulsory for the student who has not offered AMAT 43976

Subject: Software Engineering (SENG)			
BSc Hons (SENG)			
	Course Units	Status	Pre-requisite
Year of Study 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
Year of Study 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 12242
	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
Year of Study 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
Year of Study 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 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
	SENG 44212 Software Safety and Reliability	C	SENG 22212, SENG 22233
	SENG 44222 Usability Engineering	O	SENG 22223
	SENG 44232 Software Management	O	SENG 22212
	SENG 44242 Machine Learning	O	SENG 12213
	SENG 44252 Computer Graphics	O	SENG 11213, SENG 11223, SENG 12233, PMAT 11212, PMAT 12212, PMAT 22213

<b>Subject: Statistics<sup>1</sup> (STAT)</b>			
<b>BSc</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 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 of Study 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 of Study 2 Sem 3	STAT 21513 Probability Distributions and Applications II	C	STAT 12533
	STAT 21522 Optimization II	C	STAT 12542
Year of Study 2 Sem 4	STAT 22533 Inferential Statistics	C	STAT 21513
	STAT 22542 Survey Methods and Sampling Techniques	C	STAT 21513
Year of Study 3 Sem 5	STAT 31513 Statistical Models	C	STAT 22533
	STAT 31522 Time Series Analysis <sup>1</sup>	C/O	STAT 22533
	STAT 31532 Statistical Quality Control	O	STAT 12533, STAT 22542
	PRPL 31992 Professional Placement	O	Compulsory courses covered in the Years of Study 1 and 2
Year of Study 3 Sem 6	STAT 32543 Research Methodology, Data Analysis & Report Writing <sup>1</sup>	C/O	-
	STAT 32552 Non- parametric Statistics	O	STAT 22542
	STAT 32562 Statistical Simulation <sup>1</sup>	C/O	STAT 22533

<sup>1</sup>Compulsory only for BSc Hons (Statistics)

<b>Subject: Statistics (STAT)</b>			
<b>BSc Hons</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 3	STAT 41763 Stochastic Processes I	C	Compulsory courses covered in the Years of Study 1 and 2 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	Compulsory courses covered in the Years of Study 1 and 2 and STAT 22542
	STAT 44794 Actuarial Mathematics	C	STAT 22533
Year of Study 4	STAT 42843 Design and Analysis of Experiments	C	STAT 31513
	STAT 43878 Research Project/Independent Study	C	Compulsory courses covered in the first three years
	STAT 44833 Multivariate Data Analysis	C	Compulsory courses covered in the first three years
	STAT 44853 Econometrics	O	STAT 31513
	STAT 44863 Special Topics in Statistics	O	Compulsory courses covered in the first three years
	STAT 44884 Industrial Training	O	Compulsory courses covered in the first three years
	STAT 44893 Statistical Data Mining	O	STAT 31513 & STAT 42803

<b>Subject: Zoology (ZOOL)</b>				
<b>BSc</b>				
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>
Year of Study 1 Sem 1	BIOL 11552 Evolutionary Biology and Biogeography	C	GCE A/L Biology	-
Year of Study 1 Sem 2	ZOOL 12703 Animal Diversity	C	BIOL 11552	ZOOL 12711
	ZOOL 12711 Animal Diversity Laboratory	C	BIOL 11552	ZOOL 12703
	ZOOL 12722 Animal Behaviour	C	BIOL 11552	-
	ZOOL 12733 Faunal Diversity and Sri Lankan Fauna	C*	GCE A/L Biology	-
Year of Study 2 Sem 3	ZOOL 21702 Animal Histology and Physiology	C	ZOOL 12703	ZOOL 21711
	ZOOL 21711 Animal Histology and Physiology Laboratory	C	ZOOL 12703	ZOOL 21702
	ZOOL 21722 Developmental Biology and Human Genetics	C	ZOOL 12703	-
Year of Study 2 Sem 4	ZOOL 22732 Terrestrial Ecology	C	ZOOL 12703	ZOOL 22752
	ZOOL 22742 Aquatic Ecology	C	ZOOL 12703	ZOOL 22752
	ZOOL 22752 Terrestrial and Aquatic Ecology Laboratory	C	ZOOL 12711	ZOOL 22732 & ZOOL 22742
Year of Study 3 Sem 5	ZOOL 31703 Fish Biology, Population Dynamics and Fisheries	C <sup>1</sup> /O	ZOOL 12703	-
	ZOOL 31713 Entomology and Pest Management	O**	ZOOL 12703	-
	ZOOL 31722 Environmental Impact Assessment	C <sup>1</sup> /O	ZOOL 22732 & ZOOL 22742	-
	PRPL 31992 Professional Placement	O	All Year of Study 1 & 2 ZOOL course units	-
Year of Study 3 Sem 6	ZOOL 32733 Aquaculture	C <sup>1</sup> /O	ZOOL 12703	-
	ZOOL 32742 Parasitology	C <sup>1</sup> /O	ZOOL 12703	-
	ZOOL 32752 Conservation Biology	C <sup>1</sup> /O	ZOOL 12703 or ZOOL 12733	-
	ZOOL 32762 Wildlife Management	C <sup>1</sup> /O	ZOOL 12703	-

\*Offered only for BSc in Environmental Conservation and Management Degree Programme

\*\*Not offered for the BSc Hons in Zoology Degree programme.

<sup>1</sup>Compulsory for the BSc Hons in Zoology Degree programme.

In order to claim Zoology as a subject for the BSc Degree programme, the student should accumulate a minimum of 7 credits from Year of Study 3 ZOOL optional course units with at least 3 credits from each semester.



<b>Subject: Zoology (ZOOL)</b>				
<b>BSc Hons</b>				
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>
Year of Study 3 Sem 5	ZOOL 41703 Insect Biology and Systematics	C	ZOOL 12703	ZOOL 41711
	ZOOL 41711 Insect Biology and Systematics Laboratory	C	ZOOL 12711	ZOOL 41703
	ZOOL 41722 Histological and Museum Techniques	C	ZOOL 12711 & ZOOL 21711	-
	ZOOL 41732 Research Methodology and Scientific Writing	C	-	-
	ZOOL 43742 Literature Review and Seminar on Special Topics in Zoology	C	-	ZOOL 41732
	ZOOL 41752 Molecular Cell Biology	C	ZOOL 21722	-
	ZOOL 41762 Geo-informatics for Zoological Studies	C	ZOOL 22732 & ZOOL 22752	-
Year of Study 3 Sem 6	ZOOL 42773 Statistics for Zoological Studies	C	ZOOL 41732	-
	ZOOL 42784 Molecular Genetics	C	ZOOL 41752	-
Year of Study 4 Sem 7	ZOOL 43948 Research Project	C	ZOOL 41732 & ZOOL 42773	-
	ZOOL 41792 Zoology in Practice	C	All Year of Study 1, 2 & 3 ZOOL compulsory course units	-
	ZOOL 41802 Fisheries Management	C	ZOOL 31703	-
	ZOOL 41813 Aquaculture Management	C	ZOOL 32733	-
	ZOOL 41823 Ecological Interactions and Dynamics	C	ZOOL 22732	-
	ZOOL 41832 Agricultural Entomology	C	ZOOL 41703 & ZOOL 41711	-
	ZOOL 41842 Nematode Pest Management	C	ZOOL 32742	-
Year of Study 4 Sem 8	ZOOL 42853 Medical and Veterinary Entomology	C	ZOOL 41703 & ZOOL 41711	-
	ZOOL 42862 Herpetology	O <sup>1</sup>	ZOOL 12703	-
	ZOOL 42872 Ornithology	O <sup>1</sup>	ZOOL 12703	-
	ZOOL 42882 Mammalogy	O <sup>1</sup>	ZOOL 12703	-
	ZOOL 42892 Apiculture	O <sup>1</sup>	ZOOL 41703 & ZOOL 41711	-
	ZOOL 42902 Immunology	O <sup>2</sup>	ZOOL 21702 & ZOOL 21711	-
	ZOOL 42912 Environmental Physiology	O <sup>2</sup>	ZOOL 22732	-
	ZOOL 42922 Ecotoxicology	O <sup>2</sup>	ZOOL 22732	-
	ZOOL 42932 Bioinformatics	O <sup>2</sup>	ZOOL 42784	-

O<sup>1</sup>/O<sup>2</sup>In the second semester of the 4<sup>th</sup> year, the student should accumulate at least 6 credits by selecting three course units either from O<sup>1</sup> or O<sup>2</sup>.

Total credits earned by the Zoology Honours student are as follows;

3<sup>rd</sup> year = 35 (Year of Study 3 ZOOL credits 14 +Year of Study 4 ZOOL Credits 21)

4<sup>th</sup> year = 31 (Year of Study 4 compulsory Credits 25 + Year of Study 4 optional Credits 6)

## **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**

##### **Year of Study 1**

BUCU 11032 Ancient Buddhist Monasteries of Sri Lanka

BUCU 12062 Buddhist Art and Architecture in Sri Lanka

##### **Year of Study 2**

BUCU 21042 An Introduction to Buddhist Art and Antiquities in South Asia

BUCU 22092 An Introduction to Buddhist Rights and Ceremonies

##### **Year of Study 3**

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**

##### **Year of Study 1**

BUPH 12072 Buddhism and Social Issues

##### **Year of Study 2**

BUPH 21032 The Buddhist Concept of Communication

BUPH 22062 The Buddhist Attitude Towards Law, Crime and Punishment

##### **Year of Study 3**

BUPH 32062 Buddhist Attitude to the Economy, Politics and Health.

#### **CHINESE**

##### **Year of Study 1**

CHIN 13252 Chinese Language and Culture I

##### **Year of Study 2**

CHIN 23252 Chinese Language and Culture II

##### **Year of Study 3**

CHIN 33252 Chinese Language and Culture III

#### **CHRISTIAN CULTURE**

##### **Year of Study 1**

CHCU 12252 Introduction to the Bible

CHCU 12262 Introduction to Christianity

#### **FRENCH**

##### **Year of Study 1**

FREN 13252 French Grammar & Vocabulary

##### **Year of Study 2**

FREN 23252 Grammar, Composition and Expression

##### **Year of Study 3**

FREN 33252 French Grammar, Expression and Culture

#### **GERMAN**

##### **Year of Study 1**

GERM 13252 German Language and Culture I

##### **Year of Study 2**

GERM 23252 German Language and Culture II

##### **Year of Study 3**

GERM 33252 German Language and Culture III

**HINDI**

**Year of Study 1**

HIND 11232	Proficiency in Hindi Language I
HIND 12262	Proficiency in Hindi Language II

**Year of Study 2**

HIND 21232	Proficiency in Hindi Language III
HIND 22262	Proficiency in Hindi Language IV

**Year of Study 3**

HIND 31232	Introduction to North Indian Culture
HIND 32262	Introduction to Modern Hindi Prose & Verse (Prescribed)

**JAPANESE**

**Year of Study 1**

JPNS 13252	Japanese Grammar & Vocabulary I
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**Year of Study 2**

JPNS 23252	Japanese Grammar & Vocabulary II
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**Year of Study 3**

JPNS 33252	Japanese Grammar & Vocabulary III
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**KOREAN**

**Year of Study 1**

KORE 13262	Korean Language and Culture I
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**Year of Study 2**

KORE 23332	Korean Language and Culture II
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**Year of Study 3**

KORE 33402	Korean Language and Culture III
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**PALI**

**Year of Study 1**

PALI 11032	Source Criticism
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**Year of Study 2**

PALI 21032	Pali Grammar - II
PALI 22072	Sri Lankan Historical Sources in Pali

**Year of Study 3**

PALI 31032	Preaching Skills
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**RUSS**

**Year of Study 1**

RUSS 13252	Russian Language & Culture I
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**Year of Study 2**

RUSS 23252	Russian Language & Culture II
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**Year of Study 3**

RUSS 33252	Introduction to Russian Literature III
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**SANSKRIT**

**Year of Study 1**

SANS 11032	Introduction to Sanskrit Language and Literature I
SANS 12062	Introduction to Sanskrit Language and Literature II

**Year of Study 2**

SANS 21032	Sanskrit Composition and Literature I
SANS 22062	Sanskrit Composition and Literature II

**Year of Study 3**

SANS 31232	Sanskrit Literary Criticism and Dramaturgy
SANS 32262	Sanskrit Technical Terms
SANS 32272	Sanskrit Exposition of Conflict Resolution

## **SINHALA**

### **Year of Study 2**

SINH 22232	Practical Sinhala II
SINH 22242	Modern Sinhala Writing Skills

## **WESTERN CLASSICAL CULTURE**

### **Year of Study 1**

WCCU 11232	Appreciating Greek and Roman Art
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### **Year of Study 2**

WCCU 22252	Greek and Roman Drama
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### **Year of Study 3**

WCCU 32252	Greek and Roman Literary Theory/Criticism
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## **Auxiliary Course Units Offered by the Department of English Language Teaching (DELT)**

### **Year of Study 2**

DELT 21212	English in Today's World
DELT 22222	Introduction to Literature

### **Year of Study 3**

DELT 33212	English for Professional Purposes
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## **General Education (GE) Course Units Offered by the Faculty of Social Sciences**

### **Year of Study 1**

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

### **Year of Study 2**

GEGE 21212	Map Reading
GEEC 21222	Sri Lankan Economy
GESS 21232	Elements of Mathematics
GEAR 21242	Archaeological Tourism
GEAR 22252	Archaeological 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

### **Year of Study 3**

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**

**Year of Study 1**

MGMT 11012 <sup>1</sup>	Principles of Management
MGMT 11022	Communication Skills and Personality Development
MGMT 12012	Fundamentals of Organizational Behaviour
MGMT 12022	Business Accounting

**Year of Study 2**

MGMT 21012	Human Resource Management
MGMT 22022	Marketing Management

**Year of Study 3**

MGMT 32012	Japanese Management Approach
MGMT 32022	Financial Management

<sup>1</sup>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/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 the Hindi Language (two years) offered by the Department of Hindi Studies

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