



UNIVERSITY OF  
**KELANIYA**

Faculty of  
Science



# **STUDENT HANDBOOK**

## Academic Year 2022/2023



**UNIVERSITY OF KELANIYA  
SRI LANKA**  
***Faculty of Science***  
**Student Handbook**

BACHELOR OF SCIENCE  
AND BACHELOR OF SCIENCE HONOURS  
DEGREE PROGRAMMES

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

BACHELOR OF SCIENCE IN  
INFORMATION TECHNOLOGY  
DEGREE PROGRAMME

BACHELOR OF SCIENCE IN  
MANAGEMENT AND INFORMATION TECHNOLOGY  
DEGREE PROGRAMME

BACHELOR OF SCIENCE IN  
PHYSICS AND ELECTRONICS  
DEGREE PROGRAMME

BACHELOR OF SCIENCE HONOURS IN  
APPLIED CHEMISTRY  
DEGREE PROGRAMME

BACHELOR OF SCIENCE HONOURS IN  
ELECTRONICS AND COMPUTER SCIENCE  
DEGREE PROGRAMME

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

BACHELOR OF SCIENCE HONOURS IN  
SPORTS SCIENCE  
DEGREE PROGRAMME

**2022/2023**



## **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 Department of Chemistry, Industrial Management, Mathematics, Microbiology, Physics and Electronics, Plant and Molecular Biology, Statistics & Computer Science, & Zoology and 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 5 Bachelor of Science Degree Programmes of 3-year duration and 20 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)
- (iii) Bachelor of Science in Information Technology (IT)
- (iv) Bachelor of Science in Management and Information Technology (MIT)
- (v) Bachelor of Science in Physics and Electronics (PE)

The Bachelor of Science Honours Degree Programmes are

- (i) Bachelor of Science Honours in Applied Chemistry,
- (ii) Bachelor of Science Honours in Biochemistry,
- (iii) Bachelor of Science Honours in Chemistry,
- (iv) Bachelor of Science Honours in Computer Science,
- (v) Bachelor of Science Honours in Computer Studies,
- (vi) Bachelor of Science Honours in Electronics,
- (vii) Bachelor of Science Honours in Electronics and Computer Science,
- (viii) Bachelor of Science Honours in Environmental Conservation and Management,
- (ix) Bachelor of Science Honours in Information Technology,
- (x) Bachelor of Science Honours in Management and Information Technology,
- (xi) Bachelor of Science Honours in Mathematical Physics,
- (xii) Bachelor of Science Honours in Mathematics,
- (xiii) Bachelor of Science Honours in Microbiology,
- (xiv) Bachelor of Science Honours in Molecular Biology and Plant Biotechnology,
- (xv) Bachelor of Science Honours in Physics,
- (xvi) Bachelor of Science Honours in Plant Biology,
- (xvii) Bachelor of Science Honours in Software Engineering,
- (xviii) Bachelor of Science Honours in Sports Science,
- (xix) Bachelor of Science Honours in Statistics, and
- (xx) 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 a 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, comprising 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 prerequisites, 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
Applied Chemistry	APCH
Applied Mathematics	AMAT
Biochemistry*	BIOC
Biological Science Compulsory Course Units*	BIOL
Chemistry*	CHEM
Complementary Skill Development	CMSK
Computer Science*	COSC
Computer Studies*	COST
Electronics*	ELEC
Electronics and Computer Science	BECS
Environmental Conservation and Management*	ENCM
Generic Competencies	GNCT
Industrial Management	IMGT

Information Technology*	INTE
Management & Computer Studies	MACS
Management for Physical Science Students*	MAPS
Management and Technology*	MGTE
Microbiology*	MIBI
Molecular Biology and Plant Biotechnology*	MBBT
Multi-Disciplinary Group Project*	MDGP
Physics*	PHYS
Plant Biology*	PLBL
Professional Placement	PRPL
Pure Mathematics	PMAT
Software Engineering*	SENG
Sports Science*	BSSS
Statistics*	STAT
Zoology*	ZOOL

**\* - with a practical component**

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)**

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.**

#### **1.4.1 Biological Science**

The UGC selects **221** students with the additional intake from the GCE A/L Biological Science stream. Selection of students for preferred subjects in Biological Science streams will be carried out at the beginning of the second semester of the First Year of Study based on the performance at examinations in the first semester of the first year of study when demand exceeds capacity. The limited enrolment of the Biological Sciences streams is allocated as 60 students for Biochemistry (BIOC), 25 students for Computer Studies (COST) and 60 students for Microbiology (MIBI). All the students must follow all the stream compulsory course units (page 37) 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.

#### **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. The course structure for this programme is given on page 45.

#### **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. The limited enrolment of the Physical Sciences streams is allocated as 150 students for Computer Science (COSC), 25 students for Computer Studies (COST), 40 students for Electronics (ELEC), and 125 students for Statistics (STAT). The course structure for this programme is given on page 40.

#### **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 43.

### **1.5 Bachelor of Science Honours Degree Programmes (SLQF 6)**

The Faculty of Science offers 19 BSc Hons Degree programmes. Students are enrolled on some Honours programmes through a direct intake, whereas for BSc Degree, BSc (ENCM) Degree, and BSc (PE) Degree 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.

### **1.5.1 Honours Degrees with direct intake**

Students who have been selected to follow the Bachelor of Science Honours in Management and Information Technology/Information Technology (IT) Degree programme, Bachelor of Science Honours in Software Engineering Degree programme, and the Bachelor of Science Honours in Electronics and Computer Science (BECS) 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.

Students who have been selected to follow the Bachelor of Science Honours in Applied Chemistry (APCH) and Bachelor of Science Honours in Sports Science (BSSS) Degree programmes will follow a fix a relevant path in all academic years.

#### **(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 with 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)**

This four-year degree programme, designed according to the internationally accepted ACM guidelines, helps students to gain essential skills, knowledge, engineering practice, and attitudes required to function as software engineers in the local and international industries. An internship opportunity of six months will provide necessary industry exposure to the students to enhance their technical knowledge, skills, and professional practices. In addition, the one-year software engineering research component is a unique feature of this programme. The students following this degree programme have provided the flexibility to specialize in their own field of interest by incorporating six (06) specialized application domains; Net Centric, Mobile Computing, Digital Gaming and Animations, Health Informatics, Business Engineering Applications, and Data Science and Engineering Applications, to the curriculum.

a. **Net Centric**

Net centric specialization aims to develop the advanced skills and knowledge required to become successful software engineers in the advanced web application, distributed and cloud computing and semantic web and ontological engineering.

b. **Mobile Computing**

Mobile computing is a rapidly emerging area of computing that has enormous market potential and growth. Mobile computing specialization provides thorough knowledge about mobile computing technologies, mobile networks, and builds advanced skills in mobile application development.

**c. Digital Gaming and Animation**

This specialization provides knowledge about cutting-edge digital gaming and animation technologies and builds advanced skills essential to cater to the requirements of the digital gaming and animation industry.

**d. Health Informatics**

This specialization aims to provide advanced knowledge about health information management, health information system design and development and medical imaging and biomedical signal processing. The software engineering skills blended with medical informatics will fill the gap in the industry for health informaticians with advanced software engineering skills.

**e. Business Engineering Applications**

Software engineering is an integral part of modern business applications. Business engineering applications specialization provides the essential knowledge and skills required for a software engineer to design and implement solutions to improve business processes and services. The curriculum includes business systems modelling and optimization, computer-based operations management, and business process engineering.

**f. Data Science and Engineering Applications**

Data Science and engineering applications aim to equip the students with the advanced knowledge and skills required for building business intelligence and management support systems, designing and developing big data infrastructures, and analysing big data to deliver insights and discover new relations.

**(iii) Applied Chemistry (APCH)**

The Applied Chemistry programme has been designed to provide the necessary knowledge and understanding of the fundamental principles of chemistry and its applications, skills in analytical techniques used in laboratories, advanced knowledge in industrial related areas of chemistry, thus diversifying the undergraduate degree programme in relation to the national and global needs, so that the employability of the graduates increase.

**(iv) Electronics and Computer Science (BECS)**

Students those selected for the BSc Hons in Electronics and Computer Science programme have the opportunity to specialize either in (i) Electronics subject discipline or (ii) Computer Science subject discipline at the end of the second Year of Study. Selection of students to specialize in one subject discipline is based on the academic performance of the students during the first two academic years in the course modules relevant to the particular subject discipline. Since the no of opportunities to be specialize in one subject discipline is limited depending on the facilities available at each department, the following requirement must be fulfilled in order for a student to apply to be specialized in the subject discipline of the interest.

A student should have obtained a GPA of 3.00 or greater for compulsory course modules in the relevant subject offered in the Years of Study 1 and 2, aggregating to 24 credits (for Electronics) counted for GPA or 23 credits (for Computer Science) counted for GPA. In addition, a student should obtain grades of C or better for all the course modules mentioned above and should not have obtained either D/D+/C- grades in course modules offered in the Year of Study 1 and Year of Study 2 aggregating to more than 8 credits, or E grades in course units offered in the Years of Study 1 and Year of Study 2.

**(v) Sports Science (BSSS)**

The BSSS degree program is designed to equip students with knowledge, skills, attitudes and mind-set that will benefit their personal lives as well as career opportunity in the field of sports. Four (4) weeks foundation Programme will be conducted to provide a foundation in science and general key skills to prepare students for the BSSS programme. The foundation programme offers a direct pathway to the BSSS degree within a fully integrated programme. This is an excellent route for the students who have studied GCE A/L subjects that are different from those usually required for Sports Science courses. For the satisfactory completion of the foundation programme, student will be awarded a Certificate of Completion.

**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, Chemistry, Computer Science, Computer Studies, Electronics, Environmental Conservation and Management, Mathematics, Mathematical Physics, Microbiology, Molecular Biology and Plant Biotechnology, Physics, Plant Biology, 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 O2 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) **Electronics**  
a student should have obtained a GPA of 3.00 or greater for Year of Study 1 and Year of Study 2 compulsory course units in Electronics aggregating to at least 18 credits counted for GPA. In addition, a student should obtain grades C or better for all Electronics course units mentioned above and should not have obtained either D/D+/C- grades in Year of Study 1 and Year of Study 2 course units aggregating to more than 8 credits or E grades in Year of Study 1 and Year of Study 2 course units.
- (vi) **Environmental Conservation and Management (ENCM)**  
A student should have obtained grades of B or better aggregating to at least 40 credits from ENCM, CHEM, MIBI, PLBL, ZOOL compulsory course units offered in the Years of Study 1 and 2 prescribed for the degree programme. In addition, a student should not have obtained either D/ D+ /C- aggregating to more than 8 credits, or E grades in year of Study 1 and 2 course units.
- (vii) **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 for 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 21 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.

(viii) **Mathematics (Pure Mathematics and Applied Mathematics)**

A student should have obtained a GPA of 3.00 or greater for compulsory course units offered in the 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.

(ix) **Mathematics (Pure Mathematics and Statistics)**

A student should have obtained a GPA of 3.00 or greater for compulsory course units in Pure Mathematics, aggregating to 20 credits, and Statistics aggregating to 20 credits counted for GPA offered in the 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.

(x) **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.

(xi) **Molecular Biology and 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 21532 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.

(xii) **Physics**

A student should have obtained a GPA of 3.00 or greater for all course units in Physics offered in the Years of Study 1 and 2, 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.

(xiii) **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.

(xiv) **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 22 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.

(xv) **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 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 Years 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 prerequisites.

### **1.7      Changes of Courses**

A student wishing to drop or add an optional or Auxiliary course units 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**

For all theoretical/ lecture cum practical course modules, a minimum of 90% of the marks are assigned based on assessments (including continuous assessments), and a maximum of 10% of the marks are allocated based on lecture attendance. However, the lecturer has the flexibility to decide on the percentage, and students will be informed at the beginning of the respective course module.

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".

If a student is not participating in the lecture/s and laboratory session/s due to medical reasons, a medical certificate should be submitted within 14 days from the day of absence as evidence. If the medical certificate is issued from the private practice of Western, Ayurvedic, or Homeopathy doctors, the medical certificate should be certified by the Chief Medical Officer of the University. Please refer to the University Handbook for further details.

**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. Students can also access course details by logging in to the relevant department web site. 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.

<b>Range of Marks</b>	<b>Grade</b>	<b>Grade Point Value</b>
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) grade-point value will be assigned to it.

## **2.3 Repeating a Course Unit in 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 of the course unit submitting a repeat application 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.

$$\frac{(2 \times 4 \cdot 0) + (3 \times 2 \cdot 0) + (3 \times 3 \cdot 0) + (3 \times 1 \cdot 0) + (1 \times 2 \cdot 3) + (1 \times 4 \cdot 0)}{2+3+3+3+1+1} = \frac{32 \cdot 3}{13} = 2 \cdot 4846 \\ \text{Grade Point Average} = \mathbf{2 \cdot 48}$$

**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,
- (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 Level 4 course units in the subject/subjects of specialization, totalling to at least 126 credits, provided that he/she accumulates credits in the compulsory course units as stipulated by the relevant Department/Departments of study,
  - (ii) obtain grades of C or better in course units aggregating to at least 100 credits, of which at least 40 credits should be in the Level 4 course units, and grades of D or better in course units aggregating to at least further 26 credits, with the proviso that he/she should not obtain grades of E in any of the course units in the subject/subjects of specialization, considered under (i) above,
  - (iii) obtain a GPA of 2.00 or greater,
  - (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 Level 4 course units in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,
- (iv) obtains grades of A or better in the Level 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 2.8.2.1 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 Level 4 course units in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,
- (iv) obtains grades of B or better in the Level 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 Level 4 course units in the subject/subjects of specialization, aggregating to at least half the number of credits accumulated in such course units,
- (iv) obtains grades of B or better in the Level 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 year of study 3 and the year of study 4 academic years, including all the compulsory course units, and at least 48 credits in the Level 4 course units, to totalling at least 126 credits,
- (ii) obtain grades of C or better in course units aggregating to at least 100 credits, of which at least 40 credits should be in the Level 4 course units including the final year research project, and grades of D or better in course units aggregating to at least further 26 credits, with the proviso that he/she should not obtain grades of D/D+/C- in course units aggregating to more than 6 credits in each of the three subject areas (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 Level 4 course units, aggregating to at least half the number of credits accumulated in such course units,
- (iv) obtains grades of A or better in the Level 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 Level 4 course units, aggregating to at least half the number of credits accumulated in such course units,
- (iv) obtains grades of B or better in the Level 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 Level 4 course units, aggregating to at least half the number of credits accumulated in such course units,
- (iv) obtains grades of B or better in the Level 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, aggregating to at least 72 credits from year of study 1 and year of study 2, and aggregating to at least 132 credits from all four years, of which at least 30 credits must be from each of year of study 3 and year of study 4 academic year separately and
- (ii) obtains grades of C or better in course units totalling to at least 105 credits with at least D grades for the remaining course units, and
- (iii) obtain grades of C or better for either MGTE 43216 or INT 43216 course unit and for INT 31356 and GNCT 32216 course units, and
- (iv) Pass GNCT 11212, and GNCT 24212 course units, and
- (v) obtain a minimum GPA of 2.00, and
- (vi) 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, aggregating to at least 72 credits from year of study 1 and year of study 2, and aggregating to at least 132 credits from all four years, of which at least 30 credits must be from each of year of study 3 and year of study 4 academic year separately and
- (ii) obtains grades of C or better in course units totalling to at least 105 credits with at least D grades for the remaining course units, and
- (iii) obtain grades of C or better for INT 43216 course unit and for INT 31356 and GNCT 32216 course units, and
- (iv) Pass GNCT 11212, and GNCT 24212 course units, and
- (v) obtain a minimum GPA of 2.00, and
- (vi) 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 accumulated and considered for the calculation of the GPA, and
- (iii) obtains a minimum GPA of 3.70

- (iv) 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)**

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

- (i) obtains grades of C or better in course units, including the compulsory course units, aggregating to at least 117 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 accumulated and considered for the calculation of the GPA, and
- (iii) obtains a minimum GPA of 3.30
- (iv) 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)**

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

- (i) obtains grades of C or better in course units, including all compulsory course units, aggregating to at least 117 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 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, aggregating to at least 72 credits from year of study 1 and year of study 2, and aggregating to at least 102 credits from all three years, of which at least 30 credits must be from year of study 3 and
- (ii) obtains grades of C or better in course units totalling to at least 85 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 INT 31356 and GNCT 32216 course units, and
- (v) Pass GNCT 11212, and GNCT 24212 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, aggregating to at least 72 credits from year of study 1 and year of study 2, and aggregating to at least 102 credits from all three years, of which at least 30 credits must be from year of study 3 and
- (ii) obtains grades of C or better in course units totalling to at least 85 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 INT 31356 and GNCT 32216 course units, and
- (v) Pass GNCT 11212, and GNCT 24212 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 accumulated and considered for the calculation of the GPA, and
- (iii) obtains a minimum GPA of 3.70
- (iv) 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 99 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 accumulated and considered for the calculation of the GPA, and
- (iii) obtains a minimum GPA of 3.30
- (iv) 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 99 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 accumulated and considered for the calculation of the GPA, and

- (iii) obtains minimum GPA of 3.00
- (iv) completes the relevant requirements within three consecutive academic years.

### **2.11.3 Fall back option for the BSc (MIT) Degree/ BSc (IT) Degree**

Eligibility for the award of the Higher Diploma in Management and Information Technology / Higher Diploma in Information Technology

To be eligible for the Higher Diploma in MIT/ Higher Diploma in IT, a student must

- (i) accumulate grades of D or better in course units including all compulsory course units, aggregating to at least 72 credits from year of study 1 and year of study 2, and
- (ii) obtains grades of C or better in course units totalling to at least 60 credits with at least D grades for the remaining course units, and
- (iii) Pass GNCT 11212 and GNCT 24212 course units, and
- (iv) obtain a minimum GPA of 2.00, and
- (v) complete the relevant requirements within a period of six 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 Bachelor of Science Honours in Electronics and Computer Science (BECS)**

**2.13.1 Eligibility for the Award of the Bachelor of Science Honours in Electronics and Computer Science (BECS)**

For the award of a Bachelor of Science Honours in Electronics and Computer Science Degree, a student must

- (i) accumulate grades of C or better in course units aggregating to at least 104 credits, and grades of D or better in course units aggregating to at least further 16 credits of SLQLs 3, 4, 5 and 6, of which at least 30 credits must be from each SLQF separately,
- (ii) obtain a GPA of 2.00 or greater, and
- (iii) complete the relevant requirements within a period of six consecutive academic years.

**2.13.2 Award of Classes**

**2.13.2.1 First Class**

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

- (i) accumulate grades of C or better in course units aggregating to at least 120 credits of SLQLs 3, 4, 5 and 6, of which at least 30 credits must be from each SLQL separately,
- (ii) obtain a GPA of 3.70 or greater,
- (iii) obtain grades of A or better in course units aggregating to at least 50% of total credits for the course units considered under (i) above, and
- (iv) complete the relevant requirements within a period of four consecutive academic years at SLQLs 3, 4, 5 and 6.

**2.13.2.2 Second Class (Upper Division)**

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

- (i) accumulate grades of C or better in course units aggregating to at least 112 credits, and grades of D or better in course units aggregating to at least a further 8 credits of SLQLs 3, 4, 5 and 6, of which at least 30 credits must be from each SLQL separately,
- (ii) obtain a GPA of 3.30 or greater,
- (iii) obtain grades of B or better in course units aggregating to at least 50% of total credits for the course units considered under (i) above, and
- (iv) complete the relevant requirements within a period of four consecutive academic years of SLQLs 3, 4, 5 and 6.

**2.13.2.3 Second Class (Lower Division)**

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

- (i) accumulate grades of C or better in course units aggregating to at least 112 credits, and grades of D or better in course units aggregating to at least a further 8 credits of SLQLs 3, 4, 5 and 6, of which at least 30 credits must be from each SLQL separately,

- (ii) obtain a GPA of 3.00 or greater,
- (iii) obtain grades of B or better in course units aggregating to at least 50% of total credits for the course units considered under (i) above, and
- (iv) complete the relevant requirements within a period of four consecutive academic years of SLQLs 3, 4, 5 and 6

### **2.13.3 Option of reverting to the Bachelor of Science in Electronics and Computer Science (BECS)**

A student reading for a Bachelor of Science Honours in Electronics and Computer Science may request the award of the Bachelor of Science in Electronics and Computer Science, upon satisfying the requirements for the award of the Bachelor of Science in Electronics and Computer Science 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 final release of the results of the level 4 course units by the faculty. The results of the Bachelor of Science in Electronics and Computer Science Degree shall be determined solely on the basis of course units followed in the first three academic years.

## **2.14 Bachelor of Science Honours in Applied Chemistry Degree (APCH)**

### **2.14.1 Eligibility for the Award of the Bachelor of Science Honours in Applied Chemistry Degree (APCH)**

To be eligible for the Bachelor of Science Honours in Applied Chemistry, a student must

- (i) accumulate grades of D or better in course units, aggregating to at least 60 credits during the year of study 1 and 2, and aggregating to at least 120 credits during the entire four academic year period, including the stream compulsory units where applicable, of which at least 30 credits must be from each year of study
- (ii) obtain grades of C or better in course units totalling to at least 96 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 84 credits with at least D grades for the remaining compulsory course units,
- (iv) obtain a minimum GPA of 2.00, and
- (v) complete the relevant requirements within a period of six consecutive academic years

### **2.14.2 Award of Classes**

#### **2.14.2.1 First Class**

A student who is eligible for the BSc Hons (APCH) Degree may be awarded a First Class provided he/ she,

- (i) obtains grades of C or better in course units aggregating to at least 120 credits, considered under 2.14.1(i),
- (ii) obtains grades of A or better in level 4 course units aggregating to at least half the number of credits accumulated in such course units.
- (iii) obtains a GPA of 3.70 or greater, and

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

**Note:** A student who obtains grades of D/D+/C- aggregating to not more than 6 credits in level 3 and level 4 course units but fulfils all the other requirements stipulated under 2.14.2.1 may be considered by the Board of Examiners for the award of Second Class (Upper Division) Honours.

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

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

- (i) obtains grades of C or better in course units aggregating to at least 110 credits and grades of D or better in the remaining course units, considered under 2.14.1(i),
- (ii) obtains grades of B or better in level 4 course units aggregating to at least half the number of credits accumulated in such course units.
- (iii) obtains a GPA of 3.30 or greater, and
- (iv) completes the relevant requirements within four consecutive academic years.

**Note:** A student who obtains grades of D/D+/C- aggregating to not more than 6 credits in level 3 and level 4 course units but fulfils all the other requirements stipulated under 2.14.2.2 may be considered by the Board of Examiners for the award of Second Class (Lower Division) Honours.

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

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

- (i) obtains grades of C or better in course units aggregating to at least 110 credits and grades of at least D in the remaining course units, considered under 2.14.1(i),
- (ii) obtains grades of B or better in level 4 course units aggregating to at least half the number of credits accumulated in such course units.
- (iii) obtains a GPA of 3.00 or greater, and
- (iv) completes the relevant requirements within four consecutive academic years.

### **2.15 Bachelor of Science Honours in Sports Science Degree (BSSS)**

#### **2.15.1 Eligibility for the Award of the Bachelor of Science Honours in Sports Science Degree (BSSS)**

For the award of a BSc Hons (BSSS) Degree, a student must

- (i) accumulate grades of C or better in course units aggregating to at least 104 credits, and grades of D or better in course units aggregating to at least further 16 credits of SLQF 3, 4, 5 and 6, of which at least 30 credits must be from each SLQF separately,
- (ii) obtain a GPA of 2.00 or greater, and
- (iii) complete the relevant requirements within a period of six consecutive academic years.

## **12.15.2 Award of Classes**

### **12.15.2.1 First Class**

For the award of a BSc Hons (BSSS) Degree with First Class, a student must

- (i) accumulate grades of C or better in course units aggregating to at least 120 credits of SLQF 3, 4, 5 and 6, of which at least 30 credits must be from each SLQF separately,
- (ii) obtain a GPA of 3.70 or greater,
- (iii) obtain grades of A or better in course units aggregating to at least 50% from each SLQF level separately for the course units considered under (i) above, and
- (iv) complete the relevant requirements within a period of four consecutive academic years at SLQF 3, 4, 5 and 6.

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

For the award of a BSc Hons (BSSS) Degree with Second Class (Upper Division), a student must

- (i) accumulate grades of C or better in course units aggregating to at least 112 credits, and grades of D or better in course units aggregating to at least a further 8 credits of SLQF 3, 4, 5 and 6, of which at least 30 credits must be from each SLQF separately,
- (ii) obtain a GPA of 3.30 or greater,
- (iii) obtain grades of B or better in course units aggregating to at least 50% from each SLQF level separately for the course units considered under (i) above, and
- (iv) complete the relevant requirements within a period of four consecutive academic years of SLQF 3, 4, 5 and 6.

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

For the award of a BSc Hons (BSSS) Degree with Second Class (Lower Division), a student must

- (i) accumulate grades of C or better in course units aggregating to at least 112 credits, and grades of D or better in course units aggregating to at least further 8 credits of SLQF 3, 4, 5 and 6, of which at least 30 credits must be from each SLQF separately.
- (ii) obtain a GPA of 3.00 or greater,
- (iii) obtain grades of B or better in course units aggregating to at least 50% from each SLQF level separately for the course units considered under (i) above, and
- (iv) complete the relevant requirements within a period of four consecutive academic years at SLQF 3, 4, 5 and 6.

## **2.16 Award of the Degree**

The student has to request for the degree awarding by using the prescribe form to awarding 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 Information Technology, BSc in Management and Information Technology, BSc in Physics and Electronics Degree, BSc Hons in Applied Chemistry, BSc Hons in Biochemistry, BSc Hons in Chemistry, BSc Hons in Computer Science, BSc Hons in Computer Studies, BSc Hons in Electronics, BSc Hons in Electronics and Computer Science, 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 and Plant Biotechnology, BSc Hons in Physics, BSc Hons in Plant Biology, BSc Hons in Software Engineering, BSc Hons in Sports Science, 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 11013 <sup>1,2</sup>	C	C	C	C	C	C	C	C
ACLT 12022 <sup>1</sup>	O	O	O	O	O	O	O	O
ACLT 21032 <sup>1</sup>	O	O	O	O	O	O	O	O
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>1,3</sup>	A	A	A	A	A	A	A	A
CMSK 14022 <sup>1,3</sup>	A	A	A	A	A	A	A	A
CMSK 14032 <sup>1,3</sup>	A	A	A	A	A	A	A	A
CMSK 14042 <sup>1,3</sup>	A	A	A	A	A	A	A	A
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					
IMGT 14512	A	A	A	A	A	A	A	A
IMGT 21511	A	A	A	A	A	A	A	A
MGMT 11022 <sup>1,4</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 12523	C	C		C			C	
PMAT 11203	A	A	A	A	A	A	A	A
PMAT 12203	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
No of Credits from Compulsory Units	30	34	34	30	30	30	30	30

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

<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study

<sup>3</sup>At least one of the CMSK course units should be completed within the first two years of the study

<sup>4</sup>Should be completed within the three-year period of the Degree Programme

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 12022 <sup>1</sup>	O	O	O	O	O	O	O	O
ACLT 21032 <sup>1</sup>	O	O	O	O	O	O	O	O
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</sup>	A	A	A	A	A	A	A	A
CMSK 14022 <sup>1,2</sup>	A	A	A	A	A	A	A	A
CMSK 14032 <sup>1,2</sup>	A	A	A	A	A	A	A	A
CMSK 14042 <sup>1,2</sup>	A	A	A	A	A	A	A	A
COST 21053	C	C						
COST 21063	C	C						
COST 22073	C	C						
COST 22082	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>1,3</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 22553	O	O	O	O	O	O	O	O
PLBL 21513	C	C		C		C		
PLBL 21521	C	C		C		C		
PLBL 21532	C	C		C		C		
PLBL 22541	C	C		C		C		
PLBL 22554	C	C		C		C		
PLBL 22561	C	C		C		C		
PMAT 11203	A	A	A	A	A	A	A	A
PMAT 12203	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>33</b>	<b>33</b>	<b>32</b>	<b>34</b>	<b>33</b>	<b>32</b>	<b>32</b>	<b>31</b>

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

<sup>2</sup>At least one of the CMSK course units should be completed within the first two years of the study

<sup>3</sup>Should be completed within the three-year period of the Degree Programme

**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	
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	
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 11203	A	A	A	A	A	A	A	A
PMAT 12203	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	
No of Credits from Compulsory Units	6	12	7	12	7	13	12	7

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

<sup>2</sup> Should be completed within 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 11013 <sup>1,2</sup>	C	C	C	C	C	C	C	C	C	C
ACLT 12022 <sup>1</sup>	O	O	O	O	O	O	O	O	O	O
ACLT 21032 <sup>1</sup>	O	O	O	O	O	O	O	O	O	O
AMAT 11223	C			C			C		C	
AMAT 11232	C			C			C		C	
AMAT 12242	C			C			C		C	
AMAT 12253	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>1,3</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14022 <sup>1,3</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14032 <sup>1,3</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14042 <sup>1,3</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14052 <sup>1,3</sup>	A	A	A	A	A	A	A	A	A	A
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	
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			
PMAT 11223	C	C	C	C	C	C	C		C	C
PMAT 11232	C	C	C	C	C	C	C		C	C
PMAT 12242	C	C	C	C	C	C	C		C	C
PMAT 12253	C	C	C	C	C	C	C		C	C
STAT 11613					C			C		
STAT 11621					C			C		
STAT 11632					C			C		
STAT 12643					C			C		
STAT 12652					C			C		
No of Credits from Compulsory Units	30	31	29	31	32	31	30	29	31	30

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

<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study

<sup>3</sup>At least one of the CMSK course units should be completed within the first two years of the study

### 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 12022 <sup>1</sup>	O	O	O	O	O	O	O	O	O	O
ACLT 21032 <sup>1</sup>	O	O	O	O	O	O	O	O	O	O
AMAT 21262	C		C		C		C		C	
AMAT 21272	C		C		C		C		C	
AMAT 22282	C		C		C		C		C	
AMAT 22292	C		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</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14022 <sup>1,2</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14032 <sup>1,2</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14042 <sup>1,2</sup>	A	A	A	A	A	A	A	A	A	A
CMSK 14052 <sup>1,2</sup>	A	A	A	A	A	A	A	A	A	A
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	C	C					C		
PMAT 21263	C	C	C	C	C	C	C		C	C
PMAT 21272	C	C	C	C	C	C	C		C	C
PMAT 22282	C	C	C	C	C	C	C		C	C
PMAT 22293	C	C	C	C	C	C	C		C	C
STAT 21613					C				C	
STAT 21623					C				C	
STAT 22632					C				C	
STAT 22642					C				C	
STAT 22651					C				C	
No of Credits from Compulsory Units	29	32	30	29	32	31	28	31	29	31

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

<sup>2</sup>At least one of the CMSK course units should be completed within the first two years of the study

### 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 31303	O		O			O		O		
AMAT 31313	C		C			C		C		
AMAT 32323	C		C			C		C		
AMAT 32333	O		O			O		O		
AMAT 32343	O		O			O		O		
AMAT 32353	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	O		O	O	O					
COSC 31103	C		C	C	C					
COSC 31112	O		O	O	O					
COSC 31122	O		O	O	O					
COSC 32133	O		O	O	O					
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>1</sup>	O	O	O				O			
PHYS 31544 <sup>1</sup>	O	O	O				O			
PHYS 32551 <sup>1</sup>	C	C								
PHYS 32562 <sup>2</sup>	C	C								
PHYS 32572 <sup>1,3</sup>	O	O	O				O			
PHYS 32582 <sup>1,3</sup>	O	O	O				O			
PMAT 31303	C	C	C	C	C	C	C	C	C	C
PMAT 31312	O	O	O	O	O	O	O	O	O	O
PMAT 32322	O	O	O	O	O	O	O	O	O	O
PMAT 32332	O	O	O	O	O	O	O	O	O	O
PMAT 32342	O	O	O	O	O	O	O	O	O	O
PRPL 31992	O	O	O	O	O	O	O	O	O	O
STAT 31613				C			C			
STAT 31622				C			C			
STAT 31631				C			C			
STAT 31642 <sup>4</sup>				O			O			
STAT 31653				O			O			
STAT 32652				O			O			
STAT 32663 <sup>4</sup>				O			O			
STAT 32672				C			C			
STAT 32682 <sup>4</sup>				O			O			
No of Credits from Compulsory Units	15	12	12	12	14	7	10	15	17	10

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

### 3.3 BSc Degree – Course Structure Physics and Electronics (PE)

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 11013 <sup>1,2</sup>	C	C				
ACLT 12022 <sup>1</sup>	O	O	O	O		
ACLT 21032 <sup>1</sup>	O	O	O	O		
AMAT 11223	C					
AMAT 12253	O					
AMAT 21262			O			
AMAT 32323					O	
CMSK 14012 <sup>1</sup>	A	A	A	A		
CMSK 14022 <sup>1</sup>	A	A	A	A		
CMSK 14032 <sup>1</sup>	A	A	A	A		
CMSK 14042 <sup>1</sup>	A	A	A	A		
CMSK 14052 <sup>1</sup>	A	A	A	A		
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
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
PMAT 11223	C	C			
PMAT 11232	C	C			
PMAT 12253	C				
PMAT 21263			C	C	
PMAT 22282			C		
PMAT 22293			C		
PMAT 31303				C	
PMAT 31312				C	C
PMAT 32322				O	
PMAT 32332				O	
PRPL 31992				O	O
<b>No of Credits from Compulsory Units</b>	<b>30</b>	<b>34</b>	<b>28</b>	<b>34</b>	<b>24</b>
					<b>24</b>

<sup>1</sup>The credits that are not counted for GPA<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study

### 3.4 BSc Degree – Course Structure

#### Environmental Conservation and Management (ENCM)

Course code	Course unit combination (ENCM)		
	Year 1	Year 2	Year 3
ACLT 11013 <sup>1,2</sup>	C		
ACLT 12022 <sup>1</sup>	O	O	
ACLT 21032 <sup>1</sup>	O	O	
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>1</sup>	A	A	
CMSK 14022 <sup>1</sup>	A	A	
CMSK 14032 <sup>1</sup>	A	A	
CMSK 14042 <sup>1</sup>	A	A	
CMSK 14052 <sup>1</sup>	A	A	
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>3</sup>			O
ENCM 32792 <sup>3</sup>			O
ENCM 32805			C
ENCM 33774			C
MIBI 22554		C	
MIBI 22562		C	
PLBL 11543	C		
PLBL 12543	C		
ZOOL 12733	C		
ZOOL 32752			C
No of Credits from Compulsory Units	30	32	28

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

<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study

<sup>3</sup>Student should accumulate credits for at least one optional course unit offered in the third year

**4. COURSE STRUCTURE  
BSc Hons DEGREE**

#### 4.1 Honours Degree Biological Sciences– Course Structure

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

Course code	Course combination							
	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	O		
CHEM 32771	O	C	O	O	O	O		
CHEM 32782	O		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		
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 44378							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 41774							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 43868							C	
ENCM 44763							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							
	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 41772	C							
PLBL 41783	C							
PLBL 42793	C							
PLBL 42802	C							
PLBL 42812	C							
PLBL 42822	C							
PLBL 41833	C							
PLBL 41843	C							
PLBL 41854	C							
PLBL 41863	C							
PLBL 43872	C							
PLBL 43882	C							
PLBL 42893	C							
PLBL 42903	C							
PLBL 43918	C							

Course code	Course combination							
	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 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>2</sup>					O			
ZOOL 42872 <sup>2</sup>					O			
ZOOL 42882 <sup>2</sup>					O			
ZOOL 42892 <sup>2</sup>					O			
ZOOL 42902 <sup>2</sup>					O			
ZOOL 42912 <sup>2</sup>					O			
ZOOL 42922 <sup>2</sup>					O			
ZOOL 42932 <sup>2</sup>					O			
ZOOL 43742					C			
ZOOL 43948					C			
ZOOL 44762 <sup>1</sup>					O			
ZOOL 44952 <sup>1</sup>					O			

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

<sup>2,3</sup>In the second semester of the year of study 4, the student should accumulate at least 6 credits by selecting three course units either from <sup>2</sup> or <sup>3</sup>

<sup>4</sup>BSc Hons (Zoology) students must follow at least one of the two level 4 optional course units in the year of study

**4.2 Honours Degree Physical Sciences – Course Structure**  
**Chemistry, Computer Science, Computer Studies, Electronics, Mathematics,**  
**Mathematical Physics, Physics, Statistics**

Course code	Course combination										Course code	Course combination									
	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10
AMAT 21272			O	O							COSC 44283								O		
AMAT 31313			C								COSC 44293								O		
AMAT 41363	C	O									COSC 44303								O		
AMAT 41373	C	O									COSC 44313								O		
AMAT 41403	O	O									COSC 44323								O		
AMAT 41413	C	O									COSC 44333								O		
AMAT 41423	C										COSC 44343								O		
AMAT 41433	C										COSC 44353								O		
AMAT 42383	C	O									COSC 44364								C		
AMAT 42393	C	C									COSC 43378								C		
AMAT 42443	O	C									COST 31093								C		
AMAT 42453	C										COST 31102								C		
AMAT 42463	O										COST 31112								C		
AMAT 43976	C	C									COST 31122								C		
CHEM 44704										C	COST 31133 <sup>3</sup>								C		
CHEM 44714										C	COST 32143								C		
CHEM 44723										C	COST 32152								C		O
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>1</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>2</sup>			C							COST 44364								C			
COSC 31093			C							COST 43378								C			
COSC 31103			C	C						ELEC 31513								C			
COSC 31112			O							ELEC 31521								C			
COSC 31122			O							ELEC 31553								C			
COSC 32133			C							ELEC 31563								C			
COSC 32142			C							ELEC 32573								C			
COSC 32152			O							ELEC 32581								C			
COSC 32162			O							ELEC 32592								C			
COSC 44172			C							ELEC 44033								C			
COSC 44183			C							ELEC 43042								C			
COSC 44193			O	C						ELEC 43053								C			
COSC 44202			C							ELEC 44064								C			
COSC 44213			C							ELEC 44074								C			
COSC 44223			C							ELEC 44084								C			
COSC 44232			C							ELEC 44094								C			
COSC 44243			C							ELEC 44123								C			
COSC 44252			C							ELEC 43133								C			
COSC 44263			C							ELEC 44143								C			
COSC 44273			O							ELEC 43158								C			

Course code	Course combination									
	1	2	3	4	5	6	7	8	9	10
ELEC 44163									C	
ELEC 44172									C	
FLFC 44182									C	
ELEC 44192									C	
ELEC 44202									C	
PHYS 31512		C	C	C					C	
PHYS 31521		C	C	C					C	
PHYS 31532	O	C	C							
PHYS 31544	C	C	C							
PHYS 32551		C	C							
PHYS 32562		C	C							
PHYS 32572	O	C	C							
PHYS 32582	C	C	C							
PHYS 43793			C	C						
PHYS 43875			C	C						
PHYS 43888		C	C	C						
PHYS 44764		C	C	C						
PHYS 44774		C	C	C				O		
PHYS 44784			C							
PHYS 44804		C	C							
PHYS 44814				C						
PHYS 44824		C	C	C				O		
PHYS 44834		C	C	C						
PHYS 44854		C	C	C						
PHYS 44864		C	C	C						
PMAT 31303			C	C						
PMAT 32322		C			C	C				
PMAT 32332		O								
PMAT 41343	C	C	C							
PMAT 41353	O	O	O							
PMAT 41393	C	C	C		O					
PMAT41403 <sup>4</sup>	C	C	O							
PMAT 41413		O								
PMAT 42363	C	C	C	C						
PMAT 42373	O	O	O							
PMAT 42383	O	O								
PMAT44962 <sup>5</sup>	C	C	O							
PMAT 42423	C	C								
PMAT 42433	C	C								
PMAT 42443	O	O								
PMAT 43976	C	C								
PRPL 31992			O	O	O	O	O	O	O	

Course code	Course combination									
	1	2	3	4	5	6	7	8	9	10
STAT 11613 <sup>5</sup>									C	
STAT 11621 <sup>6</sup>									C	
STAT 31613			C						C	
STAT 31622			C						C	
STAT 31631			O						C	
STAT 31642									C	
STAT 31653									O	
STAT 32652									O	
STAT 32663			C						C	
STAT 32672									C	
STAT 32682			C						C	
STAT 41613									C	
STAT 44623			C						C	
STAT 44633			C						C	
STAT 42643									C	
STAT 42653			C						C	
STAT 42663			O						C	
STAT 44673			C						C	
STAT 44683									C	
STAT 44694									C	
STAT 44713									O	
STAT 44723									O	
STAT 44733									O	
STAT 44743									O	
STAT 44758								C		

**<sup>1</sup>The credits that are not counted for GPA**<sup>2</sup>Compulsory for all students who have not followed the course unit COSC 22083 in the Year of Study 2<sup>3</sup>Compulsory only for students entered to the Honours Degree Programme from the Biological Science stream<sup>4</sup>Students in the Mathematical Physics programme are strongly advised to attend this course<sup>5</sup>Students in the Mathematical Physics programme are recommended to attend this course<sup>6</sup>Compulsory for all students who have not followed the course units STAT 11613 and STAT 11621 in the Year of Study 1

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 unit.

#### 4.3 Honours Degree - Course Structure

##### Management and Information Technology (MIT) Information Technology (IT)

Course code	Course Combination			
	IT	MIT		
		IS	BSE	OS CM
ACLT 11013 <sup>1,2</sup>	C	C	C	C
ACLT 12022 <sup>1</sup>	O	O	O	O
ACLT 21032 <sup>1</sup>	O	O	O	O
CMSK 14012 <sup>1</sup>	A	A	A	A
CMSK 14022 <sup>1</sup>	A	A	A	A
CMSK 14032 <sup>1</sup>	A	A	A	A
CMSK 14042 <sup>1</sup>	A	A	A	A
CMSK 14052 <sup>1</sup>	A	A	A	A
DELT 11232	C	C	C	C
GNCT 11212 <sup>1</sup>	C	C	C	C
GNCT 24212 <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 12243	C	C	C	C
INTE 21213	C	C	C	C
INTE 21313	C	C	C	C
INTE 21323	C	C	C	C
INTE 21333	C	C	C	C
INTE 21243	C	A	A	A
INTE 21343	A	C	C	C
INTE 22293	C	A	A	A
INTE 22343	C	C	C	C
INTE 22253	C	A	A	A
INTE 22263	C	A	A	A
INTE 22303	C	C	C	C
INTE 22313	C	A	A	A
INTE 22283	C	C	C	C

Course code	Course Combination			
	IT	MIT		
		IS	BSE	OS CM
INTE 31356	C	C	C	C
INTE 31423	A	C	O	O
INTE 31413	A	C	O	O
INTE 31393	C	C	O	O
INTE 31233	C	A	A	A
INTE 31243	O	A	A	A
INTE 31283	O	A	A	A
INTE 31373	O	A	A	A
INTE 31403	O	A	A	A
INTE 41283	A	C	O	O
INTE 44303	A	O	O	O
INTE 41393	C	A	A	A
INTE 41373	O	A	A	A
INTE 41323	O	A	A	A
INTE 41383	O	A	A	A
INTE 41413	O	A	A	A
INTE 41403	O	A	A	A
INTE 42343	O	A	A	A
INTE 42353	O	A	A	A
INTE 42333	O	A	A	A
INTE 43216 <sup>3</sup>	C	C	A	A

Course code	Course Combination			
	IT	MIT		
		IS	BSE	OS CM
MGTE 11233	C	C	C	C
MGTE 11243	C	C	C	C
MGTE 12253	C	C	C	C
MGTE 12263	C	C	C	C
MGTE 12273	C	C	C	C
MGTE 21243	A	C	C	C
MGTE 21233	A	C	C	C
MGTE 22273	A	C	C	C
MGTE 22263	A	C	C	C
MGTE 31393	A	C	C	C
MGTE 31293	A	O	C	O
MGTE 31403	A	O	C	O
MGTE 31413	A	O	O	C
MGTE 31373	C	C	C	C
MGTE 31423	A	O	C	C
MGTE 31433	A	O	O	O
MGTE 31303	A	O	O	C
MGTE 31383	O	O	O	O
MGTE 31443	A	O	O	O
MGTE 41323	C	C	C	C
MGTE 41333	A	O	C	O

Course code	Course Combination			
	IT	MIT		
		IS	BSE	OS CM
MGTE 41233	A	O	O	O
MGTE 41303	A	C	O	O
MGTE 41313	C	C	C	C
MGTE 41343	A	O	O	C
MGTE 41353	A	O	O	O
MGTE 41363	A	O	O	O
MGTE 41373	A	O	O	O
MGTE 41383	A	O	O	O
MGTE 43216 <sup>3</sup>	A	A	C	C
MGTE 44273	A	O	O	O
MGTE 42223	A	O	O	O
MGTE 42213	A	O	C	O
MGTE 42323	A	O	O	C
MGTE 42313	A	O	O	O
MGTE 42243	A	O	O	O
MGTE 42333	C	O	O	O
PMAT 11212	C	C	C	C
PMAT 12212	C	C	C	C
PMAT 31212	O	A	A	A

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

<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study

<sup>3</sup>Students should take either MGTE 43216 or INTE 43216

#### Course Combinations of HDMIT:

Information Systems (IS),

Business Systems Engineering (BSE),

Operations and Supply Chain Management (OSCM)

**Note:** 1. 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.

2. A student who follows BSc Hons in MIT/IT Degree programmes may take any course units offered by the Department of Industrial Management and Axillary course units offered by any other Faculties/department, subject to meeting the prerequisite requirements, subject availability, capacity and scheduling.

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

Course code	Course Combination (SENG)
ACLT 11013 <sup>1,2</sup>	C
ACLT 12022 <sup>1</sup>	O
ACLT 21032 <sup>1</sup>	O
CMSK 14012 <sup>1</sup>	A
CMSK 14022 <sup>1</sup>	A
CMSK 14032 <sup>1</sup>	A
CMSK 14042 <sup>1</sup>	A
CMSK 14052 <sup>1</sup>	A
DELT 11232	C
DELT 12282	C
GNCT 13212 <sup>3</sup>	C
GNCT 23212 <sup>3</sup>	C
PMAT 11212	C
PMAT 12212	C
PMAT 22213	O
SENG 11213	C
SENG 11223	C
SENG 11232	C
SENG 11243	C
SENG 12213	C
SENG 12223	C
SENG 12233	C
SENG 12242	C
SENG 21213	C
SENG 21222	C
SENG 21233	C
SENG 21243	C
SENG 21253	C
SENG 21263	O
SENG 21272	C
SENG 22212	C
SENG 22223	C
SENG 22233	C
SENG 22243	C
SENG 22253	O
SENG 24213	C
SENG 31212	C
SENG 31222	C
SENG 31232	C
SENG 31242	C
SENG 31252	C
SENG 34262	C
SENG 31272	O
SENG 31282	O
SENG 31292	O

Application Domains	AD1	AD2	AD3	AD4	AD5	AD6
SENG 31313 <sup>4</sup>	O					
SENG 31323 <sup>4</sup>		O				
SENG 31333 <sup>4</sup>			O			
SENG 31343 <sup>4</sup>				O		
SENG 31353 <sup>4</sup>					O	
SENG 31363 <sup>4</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>5</sup>	O					
SENG 41293 <sup>5</sup>		O				
SENG 41303 <sup>5</sup>			O			
SENG 41313 <sup>5</sup>				O		
SENG 41323 <sup>5</sup>					O	
SENG 41333 <sup>5</sup>						O
SENG 42273 <sup>5</sup>	O					
SENG 42283 <sup>5</sup>		O				
SENG 42293 <sup>5</sup>			O			
SENG 42303 <sup>5</sup>				O		
SENG 42313 <sup>5</sup>					O	
SENG 42323 <sup>5</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>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study<sup>3</sup>Offered during alternate academic years for non-biology students<sup>4</sup>One course unit from this group should be selected based on the preferred application domain<sup>5</sup>Two course units from this group should be selected based on the preferred application domain

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

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

**4.5 Honours Degree - Course Structure**  
**Applied Chemistry (APCH)**

Course code	Course Combination (APCH)
ACLT 11013 <sup>1,2</sup>	C
ACLT 12022 <sup>1</sup>	O
ACLT 21032 <sup>1</sup>	O
APCH 11612	C
APCH 12622	C
APCH 12632	C
APCH 21642	C
APCH 21652	C
APCH 21663	C
APCH 21672	C
APCH 21682	C
APCH 22692	C
APCH 22702	C
APCH 22712	C
APCH 22721	C
APCH 22732	C
APCH 31742	C
APCH 31752	C
APCH 31761	C
APCH 31772	C
APCH 31782	C
APCH 32793	C
APCH 32802	C
APCH 32812	C
APCH 32821	C
APCH 32832	C
APCH 32842	C
APCH 41862	C
APCH 41872	C
APCH 42882	C
APCH 42893	C
APCH 42903	C
APCH 42912	O
APCH 42922	O
APCH 42932	C
APCH 42942	O
APCH 43853	C
APCH 44956	C
CHEM 11601 <sup>1</sup>	C
CHEM 11612	C
CHEM 11622	C
CHEM 11631	C
CHEM 12642	C
CHEM 12652	C
CHEM 12661	C
CHEM 21682	C
CHEM 21691	C
CHEM 22702	C
CHEM 22712	C
CHEM 22721	C
CHEM 31731	C
CMSK 14012 <sup>1</sup>	A
CMSK 14022 <sup>1</sup>	A

CMSK 14032 <sup>1</sup>	A
CMSK 14042 <sup>1</sup>	A
CMSK 14052 <sup>1</sup>	A
DELT 11232	C
ELEC 11534	C
ELEC 11541	C
ENCM 31812	C
ENCM 31823	C
MACS 22563	C
MACS 11512	C
MACS 11521	C
MACS 12532	C
MACS 32603	C
MACS 42612	O
MACS 42622	O
MIBI 12532	C
MIBI 42512	O

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

**<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study**

**4.6 Honours Degree – Course Structure  
Electronics and Computer Science (BECS)**

Course code	Course combination (BECS)	
	Year 1	Year 2
ACLT 11013 <sup>1,2</sup>	C	
ACLT 12022 <sup>1</sup>	O	O
ACLT 21032 <sup>1</sup>	O	O
BECS 11212	C	
BECS 11223	C	
BECS 11413	C	
BECS 11422	C	
BECS 11431	C	
BECS 11613	C	
BECS 11722	C	
BECS 12233	C	
BECS 12243	C	
BECS 12443	C	
BECS 12451	C	
BECS 12462	C	
BECS 12623	C	
BECS 12712	C	
BECS 12742	C	
BECS 21213		C
BECS 21223		C
BECS 21413		C
BECS 21422		C
BECS 21431		C
BECS 21613		C
BECS 21722		C
BECS 21732		C
BECS 22233		C
BECS 22243		C
BECS 22443		C
BECS 22451		C
BECS 22462		C
BECS 22623		C
BECS 22712		C
BECS 22732		C
BECS 22811		C
CMSK 14012 <sup>1</sup>	A	A
CMSK 14022 <sup>1</sup>	A	A
CMSK 14032 <sup>1</sup>	A	A
CMSK 14052 <sup>1</sup>	A	A

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

<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study

Course code	Course combination (BECS) Year 3		
	1	2	3
BECS 31213	O	-	C
BECS 31223	O	-	O
BECs 31233	C	-	C
BECs 31242	O	-	O
BECs 31412	C	C	-
BECs 31421	C	C	-
BECs 31433	C	C	-
BECs 31443	C	C	-
BECs 31712	C	C	-
BECs 31722	O	-	-
BECs 31732	O	-	-
BECs 31811	C	C	-
BECs 32253	C	O	C
BECs 32263	O	-	C
BECs 32272	O	O	O
BECs 32453	C	C	-
BECs 32461	C	C	-
BECs 32472	O	C	-
BECs 32502	O	O	-
BECs 32742	O	-	-

Course code	Course combination (BECS) Year 4		
	1	2	3
BECs 44213	O	O	O
BECs 44223	O	-	O
BECs 44233	C	-	C
BECs 44243	O	-	O
BECs 44253	O	-	O
BECs 44263	O	O	C
BECs 44273	O	-	O
BECs 44283	O	-	C
BECs 44292	O	-	C
BECs 44303	O	-	C
BECs 44414	C	C	-
BECs 44424	O	C	-
BECs 43432	C	C	-
BECs 44443	O	C	-
BECs 44453	O	C	-
BECs 44462	O	C	-
BECs 44472	O	C	-
BECs 44482	O	C	-
BECs 44492	O	C	-
BECs 43816	C	-	-
BECs 44826	C	-	O
BECs 44014	-	C	-
BECs 44024	-	C	-
BECs 43033	-	C	-
BECs 43043	-	C	-
BECs 44053	-	C	-
BECs 44062	-	O	-
BECs 44072	-	O	-
BECs 44082	-	O	-
BECs 44093	-	C	-
BECs 44613	-	-	O
BECs 44622	-	-	O
BECs 44633	-	-	C
BECs 44643	-	-	O
BECs 44653	-	-	O
BECs 44663	-	-	C
BECs 44673	-	-	O
BECs 44682	-	-	O
BECs 44693	-	-	O
BECs 44703	-	-	O
BECs 44712	-	-	O
BECs 44723	-	-	O
BECs 44733	-	-	O
BECs 44743	-	-	O
BECs 43838	-	C	C

- Note:
1. Some courses are not offered in the respective course pathway.
  2. Some of the Year of Study 4 courses are offered in Year of Study 3.
  3. Students must check with the relevant department before registering for the course modules.

- 1 - Electronics and Computer Science
- 2 - Specialization in Electronics Subject discipline
- 3 - Specialization in Computer Science Subject discipline

**4.7 Honours Degree - Course Structure  
Sports Science (BSSS)**

Course code	Course Combination (BSSS)
ACLT 11013 <sup>1,2</sup>	C
ACLT 12022 <sup>1</sup>	O
ACLT 21032 <sup>1</sup>	O
BSSS 01512	C
BSSS 01522	C
BSSS 01532	C
BSSS 01542	C
BSSS 01552	C
BSSS 01562	C
BSSS 11011	C
BSSS 11023	C
BSSS 11032	C
BSSS 11042	C
BSSS 11052	C
BSSS 11062	C
BSSS 11072	C
BSSS 11082	C
BSSS 12092	C
BSSS 12102	C
BSSS 12111	C
BSSS 12122	C
BSSS 12134	C
BSSS 12142	C
BSSS 12152	C
BSSS 21013	C
BSSS 21022	C
BSSS 21032	C
BSSS 21042	C
BSSS 21052	C
BSSS 21061	C
BSSS 21072	C
BSSS 21081	C
BSSS 22092	C
BSSS 22102	C
BSSS 22112	C
BSSS 22121	C
BSSS 22132	C
BSSS 22142	C
BSSS 22152	C
BSSS 22162	C
BSSS 22171	C
BSSS 31012	C
BSSS 31022	C
BSSS 31032	C
BSSS 31041	C
BSSS 31052	C
BSSS 31062	C
BSSS 31072	C
BSSS 31083	C
BSSS 31091	C

BSSS 32102	C
BSSS 32112	C
BSSS 32122	C
BSSS 32132	C
BSSS 32142	C
BSSS 32151	C
BSSS 41012	C
BSSS 41022	C
BSSS 41036	C
BSSS 41041	C
BSSS 41053	C
BSSS 42063	C
BSSS 42072	C
BSSS 42082	C
BSSS 42093	C
BSSS 42106	C
CMSK 14022 <sup>1</sup>	A
CMSK 14032 <sup>1</sup>	A
CMSK 14042 <sup>1</sup>	A
CMSK 14052 <sup>1</sup>	A

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

**<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study**

**5. COURSE UNITS**

**Course Units offered for BSc, BSc (ENCM), BSc (PE), BSc Hons (IT), BSc Hons (MIT), BSc Hons (SENG), BSc Hons (APCH), BSc Hons (BECS), and BSc Hons (BSSS) Degree Programmes**

**Academic Literacy**

Course modules of the Academic Literacy programme are provided in Section 5. Module 1 of the programme should be completed within the first two years of the study. It is recommended that all students to complete the Academic literacy programme during the undergraduate period. Attending the final examination with the requirement of minimum 80% attendance throughout the course will be compulsory for the completion of each module. Credits earned in these modules shall not be considered for the calculation of the GPA. Certificate will be issued after the successful completion of the Academic Literacy programme.

<b>Academic Literacy Course Units offered for BSc, BSc (ENCM), BSc (PE), BSc Hons (IT), BSc Hons (MIT), and BSc Hons (SENG), BSc Hons (APCH), BSc Hons (BECS), BSc Hons (BSSS) Degree Programmes</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre- requisite</b>
Year of Study 1	ACLT 11013 Academic Literacy I <sup>1,2</sup>	C	None
	ACLT 12022 Academic Literacy II <sup>1</sup>	O	ACLT 11013
Year of Study 2 or 3 Sem 3 or 5	ACLT 21032 Academic Literacy III <sup>1</sup>	O	ACLT 12022

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

<sup>2</sup>ACLT 11013 should be successfully completed (minimum C pass) within the first two years of the study

**Complementary Skill Development**

These course units are offered by the Faculty of Science in collaboration with other faculties of the university adhering to the following conditions. Courses will be offered to students as Year of Study 1 course units of Complementary Skill Development (CMSK). Every student who enrols in Bachelor of Science Degree Programmes under the Biological Science and Physical Science streams of the Faculty of Science is required to complete at least one CMSK course unit within the years of Study 1 and 2. Names of the course units are provided below. The minimum number of students required to open a course is 25 students. Students should have a minimum attendance of 80% with successful completion of continuous course assessments to complete any of the CMSK courses. Credits earned in these course units shall not be considered for the calculation of the GPA. Successfully completed courses will be mentioned in the transcript.

<b>Complementary Skill Development Course Units offered for BSc, BSc (ENCM), BSc (PE), BSc Hons (IT), BSc Hons (MIT), and BSc Hons (SENG), BSc Hons (APCH), BSc Hons (BECS), BSc Hons (BSSS) 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>1,4</sup>	A
	CMSK 14022 Photography for Social and Emotional Learning <sup>1,2,3</sup>	A
	CMSK 14032 Emotional Intelligence and Mindfulness <sup>1,2</sup>	A
	CMSK 14042 Introduction to Computer Hardware and Consumer Electronics <sup>1,2,3,6</sup>	A
	CMSK 14052 People and Plants <sup>1,2,3,5</sup>	A

<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

<sup>4</sup>Not offered for students following BSc Hons in Sports Science Degree

<sup>5</sup>Offered for non-Biology students

<sup>6</sup>Not offered for students following BSc Hons in Electronics and Computer Science Degree

## Management and Computer Studies

Management and Computer Studies (MACS) course modules bring together expertise from two subject domains to combine computing and management. MACS integrates computing skill with the thinking of management principles, Innovation and Entrepreneurship, Industrial Law and Accounting & Costing. These courses will improve students' career prospects and have the skills and knowledge to perform more effectively in their jobs. These course units are offered by the Department of Industrial Management.

Course Units offered for BSc Hons (APCH) Degree Programme		
	Course Units	Status
Year of Study 1 and 2 Sem 1 to 4	MACS 11512 Management Theory and Practices	C
	MACS 11521 Introduction to Intellectual Property Rights	C
	MACS 12532 Principles of Accounting and Costing	C
	MACS 22563 Introduction to Marketing and International Trade	C
Year of Study 3 and 4 Sem 5 to 8	MACS 32603 Principles of Human Resource Management and Leadership	C
	MACS 42612 Innovation and Entrepreneurship	O
	MACS 42622 Industrial Law	O

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
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 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 Hons (APCH) Degree Programme		
	Course Units	Status
Year of Study 1 Sem 1	DELT 11232 English for Professionals	C

Compulsory Course Units for BSc Hons (BSSS) Degree Programme		
	Course Units	Status
Year of Study 1 Sem 1	BSSS 01512 Basic English for Science	C
	BSSS 11052 English Language 1	C
Year of Study 1 Sem 2	BSSS 12152 English Language 2	C
Year of Study 2 Sem 3	BSSS 21081 English Language 3	C
Year of Study 2 Sem 4	BSSS 22171 English Language 4	C
Year of Study 3 Sem 5	BSSS 31091 English Language 5	C
Year of Study 3 Sem 6	BSSS 32151 English Language 6	C
Year of Study 4 Sem 7	BSSS 41041 English Language 7	C

<b>Subject: Applied Mathematics (AMAT)</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	AMAT 11223 Vector Analysis	C	GCE A/L Combined Mathematics	-
	AMAT 11232 Mechanics I	C	GCE A/L Combined Mathematics	-
Year of Study 1 Sem 2	AMAT 12242 Vector Methods in Geometry	C	AMAT 11223	-
	AMAT 12253 Numerical Methods I <sup>1</sup>	C/O	AMAT 11223	-
Year of Study 2 Sem 3	AMAT 21262 Scientific Computing using Appropriate Software I <sup>1</sup>	C/O	AMAT 12253	-
	AMAT 21272 Mechanics II	C	AMAT 11232	-
Year of Study 2 Sem 4	AMAT 22282 Numerical Methods II	C	AMAT 12253	-
	AMAT 22292 Scientific Computing using Appropriate Software II	C	AMAT 21262	AMAT 22282
Year of Study 3 Sem 5	AMAT 31303 Mathematics for Finance I	O	PMAT 21272	-
	AMAT 31313 Computational Mathematics	C	AMAT 22292	-
	PRPL 31992 Professional Placement	O	All Year 1 and 2 Compulsory AMAT course modules	-
Year of Study 3 Sem 6	AMAT 32323 Mathematical Modelling <sup>1</sup>	C/O	PMAT 22282	-
	AMAT 32333 Introduction to Fluid Dynamics	O	PMAT 22293	-
	AMAT 32343 Mathematics for Finance II	O	AMAT 31303	-
	AMAT 32353 Mechanics III	O	AMAT 21272	-

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

<b>Subject: Applied Mathematics (AMAT)</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	AMAT 41363 Qualitative & Quantitative Behaviour of the solutions of Ordinary Differential	C	AMAT 22292	-
	AMAT 41373 Advanced Computational Mathematics	C	AMAT 22292	-
Year of Study 3 Sem 6	AMAT 42383 Advanced Mathematical Modelling	C	AMAT 41363	-
	AMAT 42393 Fluid Dynamics	C	PMAT 41343	-
	AMAT 42463 Advanced Mechanics	O	AMAT 21272	-
Year of Study 4 Sem 7	AMAT 41403 Financial Mathematics	O	PMAT 21272	-
	AMAT 41413 Quantum Mechanics and Quantum Field Theory	C	AMAT 11223 PMAT 21263	-
	AMAT 41423 Linear & Non-Linear Programming	C	PMAT 21263	-
	AMAT 41433 Boundary Value Problems	C	PMAT 42373/ PMAT 32322	-
Year of Study 4 Sem 7 & 8	AMAT 43976 Research Project <sup>1</sup>	C	PMAT 44962	-
Year of Study 4 Sem 8	AMAT 42443 Tensors and General Relativity	C	PMAT 21263	-
	AMAT 42453 Computational Fluid Dynamics Using Appropriate Software	C	AMAT 42393	-

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

<b>Subject: Applied Chemistry (APCH)</b>		
<b>BSc Hons (APCH)</b>		
	<b>Course Units</b>	<b>Status</b>
Year of Study 1 Sem 1	APCH 11612 Computer Skills for Chemists	C
Year of Study 1 Sem 2	APCH 12622 Basic Statistical Methods	C
	APCH 12632 Biomolecules <sup>1</sup>	C
Year of Study 2 Sem 1	APCH 21642 Principles of Analytical Chemistry	C
	APCH 21652 Soil Chemistry, Terrestrial Pollution & Management of Solid and Hazardous Waste	C
	APCH 21663 Atmospheric Chemistry, Aquatic Chemistry and Pollution & Treatment	C
	APCH 21672 Polymer Chemistry	C
	APCH 21682 Scientific Communication Skills	C
Year of Study 2 Sem 2	APCH 22692 Sample Preparation and Chemo metrics	C
	APCH 22702 Case study I (Environmental)	C
	APCH 22712 Polymer technology	C
	APCH 22721 Environmental Chemistry Laboratory	C
	APCH 22732 Environmental Toxicology, Green Chemistry and Cleaner Production	C
Year of Study 3 Sem 1	APCH 31742 Food Chemistry	C
	APCH 31752 Food Technology	C
	APCH 31761 Food Chemistry Laboratory	C
	APCH 31772 Solid State Chemistry	C
	APCH 31782 Laboratory Safety, Occupational Health, Safety Management and Laboratory Quality Systems	C
Year of Study 3 Sem 2	APCH 32793 Advanced Analytical Chemistry	C
	APCH 32802 Case Study II (Industry)	C
	APCH 32812 Chemical Industries in Sri Lanka I (minerals, petroleum, metals, packaging, leather)	C
	APCH 32821 Industrial Chemistry Laboratory	C
	APCH 32832 Chemical Technology I	C
	APCH 32842 Chemical Industries II (plantation crops)	C
Year of Study 4 Sem 1	APCH 43853 Industrial Training	C
	APCH 41862 Molecular biology	C
	APCH 41872 Productivity and Quality Management	C
Year of Study 4 Sem 2	APCH 42882 Chemical Technology II	C
	APCH 42893 Ethan pharmacology and Health Products#	C
	APCH 42903 Metabolism and Clinical Chemistry#	C
	APCH 42912 Agrochemicals and Chemical Ecology	O
	APCH 42922 Nanoscience and Nanotechnology	O
	APCH 42932 Statistical Methods in Industry and Research	C
	APCH 42942 Biotechnology	O
	APCH 44956 Research	C

<sup>1</sup>Lecture cum Practical

<b>Subject: Biochemistry<sup>1</sup> (BIOC)</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	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	BIOC 11532	BIOC 12632
	BIOC 12622 Metabolism of Biomolecules	C	BIOC 11532	BIOC 12632
	BIOC 12632 Academic Research and Analytical Skills	C	BIOC 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	BIOC 22642, 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

<b>Subject: Biochemistry<sup>1</sup> (BIOC)</b>		
<b>BSc Hons</b>	<b>Course Units</b>	<b>Status</b>
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

<b>Subject: Electronics and Computer Science (BECS)</b>				
<b>BSc Hons (BECS)</b>				
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>
Year of Study 1 Sem 1	BECS 11212 Foundations in Computer Science	C	G.C.E(A/L)	BECS 11223
	BECS 11223 Fundamentals of Programming	C	G.C.E(A/L)	BECS 11212
	BECS 11413 Analogue Electronics I	C	A/L Physics	BECS 11431
	BECS 11422 Electric Circuit Fundamentals	C	A/L Physics	BECS 11431
	BECS 11431 Analogue Electronics Laboratory I	C	A/L Physics	BECS 11413, BECS 11422
	BECS 11613 Applied Algebra & Statistics	C	A/L Combined Mathematics	None
	BECS 11722 Fundamentals of Management Accounting	C	None	None
Year of Study 1 Sem 2	BECS 12233 Data Communications and Networks	C	BECS 11212	None
	BECS 12243 Object Oriented Programming	C	BECS 11223	None
	BECS 12443 Digital Electronics	C	BECS 11413	BECS 12451
	BECS 12451 Digital Electronics Laboratory	C	BECS 11431	BECS 12443
	BECS 12462 Mechanics & Properties of Materials	C	A/L Physics	None
	BECS 12623 Calculus	C	BECS 11613	None
	BECS 12712 Foundation Course in English	O	None	None
Year of Study 2 Sem 3	BECS 12742 Project Management and Financing	O	None	None
	BECS 21213 Software Engineering	C	BECS 12243	None
	BECS 21223 Data Structures and Algorithms	C	BECS 12243	None
	BECS 21413 Analogue Electronics II (Operational Amplifiers)	C	BECS 11413	BECS 21431
	BECS 21422 Electromagnetism	C	BECS 11613	BECS 21431
	BECS 21431 Analogue Electronics Laboratory II	C	BECS 11431	BECS 21413, BECS 21422
	BECS 21613 Differential Equations, Integral Transforms & Numerical Method	C	A/L Combined Mathematics	None
Year of Study 2 Sem 4	BECS 21722 Organizational Behavior	O	None	None
	BECS 21732 Professional English	O	BECS 12712	None
	BECS 22233 Computer Architecture and Operating Systems	C	BECS 11212, BECS 12443	None
	BECS 22243 Database Management Systems	C	BECS 21223	None
	BECS 22443 Measurement & Instrumentation	C	All previous Electronics Compulsory Courses	BECS 22451
	BECS 22451 Measurement & Instrumentation Laboratory	C	All Previous Laboratory Classes	BECS 22443
	BECS 22462 Signals and Systems	C	BECS 21613	None
Year of Study 3 Sem 5	BECS 22623 Numerical Methods in Scientific Computing	C	BECS 21613	None
	BECS 22712 English in Today's World	O	BECS 21732	None
	BECS 22811 Creative Design Project I	C	All Previous Compulsory Courses	None
	BECS 22732 Marketing Fundamentals	O	None	None
	BECS 31213 Enterprise Software Design and Architecture	C	BECS 21223, BECS 22243	None
	BECS 31223 Cyber Security and Forensics	C	BECS 12233	None
	BECS 31233 Web and Internet Technologies	C	BECS 12233, BECS 12243, BECS 22243	None
Year of Study 3 Sem 5	BECS 31242 Visual Programming	O	BECS 21213, BECS 22243	None
	BECS 31412 Microcontrollers and Embedded Electronics	C	All previous Compulsory Courses	BECS 31421
	BECS 31421 Microcontrollers and Embedded Electronics Laboratory	C	All Previous Electronics Laboratory Classes of year of study I & II	BECS 31412

	BECS 31433 Communication Systems	C/O	BECS 21413, BECS 21422, BECS 22462	None
	BECS 31443 Control Systems Design	C	BECS 22462	None
	BECS 31712 Technical Communication	C	BECS 12712 BECS 21732, BECS 22712	None
	BECS 31722 Introduction to Entrepreneurship	O	None	None
	BECS 31732 Legal Environment of Business	O	None	None
	BECS 31811 Creative Design Project II	C	All Previous course modules	None
Year of Study 3 Sem 6	BECS 32253 Intelligent Systems	C/O	BECS 11212, BECS 21223	None
	BECS 32263 Full-stack Software Development	O	BECS 31213	None
	BECS 32272 Mobile Application Development	O	BECS 12243, BECS 22243	None
	BECS 32453 Digital Signal Processing (DSP)	C	BECS 22462, BECS 31433, BECS 21613	BECS 32461
	BECS 32461 Digital Signal Processing Laboratory	C	All Previous Electronics Laboratory Classes	BECS 32453
	BECS 32472 Programmable Logic Devices and HDL	C/O	BECS 12443	None
	BECS 32502 Micro- Electro Mechanical Systems (MEMS)	O	BECS 11413, BECS 22443	None
	BECS 32742 Operations Management	O	None	None
	BECS 44213 Wireless Communication and Networks	O	BECS 12233	None
Year of Study 4 Sem 7 & 8	BECS 44223 Block chain and Cryptocurrency	O	BECS 12233	None
	BECS 44233 Computer Graphics and Visualization	C	BECS 11223, BECS 11613	None
	BECS 44243 High Performance Computing	O	ECS 12233, BECS 22233	None
	BECS 44253 Emerging Technologies in Computer Science	O	All previous compulsory course units	None
	BECS 44263 Machine Learning	C/O	BECS 44223	None
	BECS 44273 Game Development	O	None	None
	BECS 44283 Advanced Databases	C/O	BECS 22243	None
	BECS 44292 Human Computer Interaction	O/C	BECS 21213	None
	BECS 44303 Information Assurance and Security	O/C	BECS 12233	None
	BECS 44414 Power Electronics	C	BECS 11413, BECS 21413	None
	BECS 44424 CMOS VLSI system design	C/O	BECS 11413, BECS 22462, BECS 12443	None
	BECS 43432 Emerging Topics in Electronics	C	All previous Compulsory course modules in Electronics	None
	BECS 44443 RF & Microwave Circuits Design	O	BECS 11413	None
	BECS 44453 Industrial Electronics	O	All previous Compulsory course modules in Electronics	None
	BECS 44462 Industrial Automation	O	BECS 31443 BECS 22443	None
	BECS 44716 Industrial Training	C/O	All Previous Compulsory courses of Year of study 1, 2 & 3	None
	BECS 44472 Electronics Product Design & Manufacturing	O	All Compulsory courses in Electronics	None

BECS 44482 Robotics and Automation	O/C	All Previous Electronics Course modules	None
BECS 44492 Electrical Machines and Drives	O/C	BECS 11422, BECS 21422	None
BECS 43816 Research Project (Group)	C	All Previous Electronics Course modules	None
BECS 44826 Industrial Training	O/C	All Compulsory courses	None
BECS 44014 Advanced Analogue Electronics	C	BECS 11413, BECS 24114 & BECS 11422	None
BECS 44024 Advanced Electromagnetism	C	BECS 11422, BECS 21422, & All Mathematics Courses	None
BECS 43033 Advanced Experimental Laboratory I	C	All previous Compulsory course modules in Electronics	None
BECS 43043 Advanced Experimental Laboratory II	C	All previous Compulsory courses in Electronics	None
BECS 44053 Optoelectronics	C/O	BECS 11413	None
BECS 44062 Modern Radar Systems	O	BECS 21422	None
BECS 44072 Physics of Semiconductor Devices	O	BECS 11413, BECS 12462	None
BECS 44082 Semiconductor Device Processing & Fabrication	O	BECS 11413, BECS 12462, BECS 44072	None
BECS 44093 Research and Development Internship in Electronics	C	All previous Compulsory courses in Electronics	None
BECS 44613 Data Science	O	BECS 44263	None
BECS 44622 Big Data Technologies	O	BECS 12243, BECS 44283	None
BECS 44633 Object-Oriented Analysis and Design	C	BECS 12243	None
BECS 44643 Logic Programming	C	BECS 21223	None
BECS 44653 Digital Image Processing and Computer Vision	O	BECS 21223	None
BECS 44663 Theory of Computing	C	BECS 21223	None
BECS 44673 Theory of Compilers	O	BECS 21223	None
BECS 44682 Research Methodologies	O	BECS 11212	None
BECS 44793 Multimedia Systems Development	O	None	None
BECS 44703 Natural Language Processing	O	BECS 44223	None
BECS 44712 Systems Administration	O	None	None
BECS 44723 Semantic Web and Ontological Modelling	O	BECS 31233	None
BECS 44733 Cloud Computing	O	BECS 12233	None
BECS 44743 System Level Programming	O	BECS 22233	None
BECS 43838 Research Project (Individual)	C	All Compulsory courses	None

<b>Subject: Sports Science (BSSS)</b>			
<b>BSc Hons (BSSS)</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-Requisite</b>
Year of Study 1 Sem 1	BSSS 01512 Basic English for Science	C	GCE (A/L)
	BSSS 01522 Introduction to Biology	C	GCE (A/L)
	BSSS 01532 Introduction to Physics	C	GCE (A/L)
	BSSS 01542 Basic Mathematics	C	GCE (A/L)
	BSSS 01552 Introduction to Chemistry	C	GCE (A/L)
	BSSS 01562 Introduction to Computer Science	C	GCE (A/L)
Year of Study 1 Sem 1	BSSS 11011 Sports history and Organization	C	GCE (A/L)
	BSSS 11023 Human Biology and Anatomy	C	BSSS 01522
	BSSS 11032 Basic Physics	C	BSSS 01532
	BSSS 11042 Mathematics	C	BSSS 01542
	BSSS 11052 English Language 1	C	BSSS 01512
	BSSS 11062 Introduction to Psychology	C	BSSS 01522
Year of Study 1 Sem 2	BSSS 11072 Lifestyle, Health and Hygiene Habit	C	BSSS 01522
	BSSS 11082 Strength and Conditioning Training	C	GCE (A/L)
	BSSS 12092 Applied Biomechanics	C	BSSS 11032
	BSSS 12102 Training Principles and Training Methods	C	GCE (A/L)
	BSSS 12111 Sports Policy, Act and Regulations	C	GCE (A/L)
	BSSS 12122 Track and Field Athletics 1, and Swimming 1	C	BSSS 11082
Year of Study 2 Sem 3	BSSS 12134 Track and Field Athletics 2	C	BSSS 12122
	BSSS 12142 Swimming 2	C	BSSS 12122
	BSSS 12152 English Language 2	C	BSSS 11052
	BSSS 21013 Exercise Physiology and Sports Performance	C	BSSS 11023
	BSSS 21022 Child and Adult Psychology	C	BSSS 11062
	BSSS 21032 Statistics for Sports Science	C	BSSS 11042
Year of Study 2 Sem 4	BSSS 21042 Training Components and Physical Qualities	C	BSSS 12102
	BSSS 21052 Role of the Coach and Leadership Development	C	GCE (A/L)
	BSSS 21061 Gymnastics 1	C	GCE (A/L)
	BSSS 21072 Gymnastic 2	C	BSSS 21061
	BSSS 21081 English Language 3	C	BSSS 12152
	BSSS 22092 Human Kinesiology	C	BSSS 21013
Year of Study 2 Sem 5	BSSS 22102 Exercise Science and Postural Correction	C	BSSS 22092
	BSSS 22112 Sports Psychology	C	BSSS 21022
	BSSS 22121 Computer and Analytical Application for Sports Science	C	BSSS 11042 & BSSS 01562
	BSSS 22132 Periodization and Training Methodology	C	BSSS 21042
	BSSS 22142 Nutrition, Recovery Technique and First aid	C	GCE (A/L)
	BSSS 22152 Management Skills and Sports Event Management	C	GCE (A/L)
Year of Study 3 Sem 5	BSSS 22162 Time and Record Sports	C	GCE (A/L)
	BSSS 22171 English Language 4	C	BSSS 21081
	BSSS 31012 Biochemistry, Performance Enhancement Products and Doping	C	BSSS 22142
	BSSS 31022 Sport Skills and Human Performance Analysis	C	BSSS 12092
	BSSS 31032 Test and Measurement, and Human Energy system	C	BSSS 21013
Year of Study 3 Sem 5	BSSS 31041 Physiotherapy and Sports Massage	C	BSSS 21013
	BSSS 31052 Sports Facility Development, Maintenance and Marketing	C	BSSS 22152
	BSSS 31062 Combat and Body Contact Sports	C	All Sports Science courses
	BSSS 31072 Team Sports	C	All Sports Science courses

	BSSS 31083 Local and International Student Exchange programme or Planning and Field Work	C	All Sports Science courses
	BSSS 31091 English Language 5	C	BSSS 22171
Year of Study 3 Sem 6	BSSS 32102 Mental Training Skills into Practice	C	All Sports Science courses
	BSSS 32112 Overtraining, Rest and Recovery Methods	C	All Sports Science courses
	BSSS 32122 Aquatic Sports	C	BSSS 12122 and BSSS 12142
	BSSS 32132 Racket Sports	C	GCE (A/L)
	BSSS 32142 Research Methodology	C	All Sports Science courses
	BSSS 32151 English Language 6	C	BSSS 31091
	BSSS 32162 Planning and Field Work	C	All Sports Science courses
Year of Study 4 Sem 7	BSSS 41012 Calorie Expenditure and Nutrition Plan for Athletes	C	BSSS 31012
	BSSS 41022 Combined Events	C	BSSS 21042
	BSSS 41036 Internship	C	All Sports Science courses
	BSSS 41041 English Language 7	C	BSSS 32151
	BSSS 41053 Recreational Sports	C	GCE (A/L)
Year of Study 4 Sem 8	BSSS 42063 Special Education	C	BSSS 11023 and BSSS 21013
	BSSS 42072 Sports Tourism and Economics Development	C	GCE (A/L)
	BSSS 42082 Digital Living in Sports, Sports media and social media	C	N/A
	BSSS 42093 Type of Aerobic Exercise	C	GCE (A/L)
	BSSS 42106 Dissertation	C	All Sports Science courses

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 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

<b>Subject: Chemistry (CHEM)</b>		
<b>BSc Hons</b>	<b>Course Units</b>	<b>Status</b>
Year of Study 3	CHEM 44704 Advanced Analytical Chemistry <sup>1</sup>	C
	CHEM 44714 Advanced Biochemistry I	C
	CHEM 44723 Advanced Inorganic Chemistry I	C
	CHEM 44733 Advanced Organic Chemistry I <sup>1</sup>	C
	CHEM 44743 Advanced Physical Chemistry I	C
	CHEM 44753 Analytical and Environmental Chemistry Laboratory <sup>1</sup>	C
	CHEM 44762 Biochemistry Laboratory	C
	CHEM 44772 Inorganic Chemistry Laboratory	C
	CHEM 44782 Organic Chemistry Laboratory <sup>1</sup>	C
	CHEM 44792 Physical Chemistry Laboratory	C
	CHEM 44802 Applications in Computational Chemistry	C
	CHEM 44811 Industrial/ Professional Placement <sup>2</sup>	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 II <sup>1</sup>	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	O	COSC 12043, COSC 21063, COSC 22083
	COSC 31103 Web & Internet Technologies	C	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	O	COSC 31103
	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

<b>Subject: Computer Science<sup>1</sup> (COSC)</b>			
<b>BSc Hons</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
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	C	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 31103
	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

<b>Subject: Computer Studies<sup>1</sup> (COST)</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	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

<b>Subject: Computer Studies<sup>1</sup> (COST)</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	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 Block chain 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

<b>Subject: Electronics<sup>1</sup> (ELEC)</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	ELEC 11534 Basic Electronics	C	A/L Physics	ELEC 11521
	ELEC 11541 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 31553 Communication Systems	C	ELEC 22534	-
	ELEC 31563 Control Systems Design	C	ELEC 22534	-
Year of Study 3 Sem 6	ELEC 32534 Special Topics in Electronics	O	ELEC 31513	-
	ELEC 33542 Research Project	C	All ELEC Compulsory Course Units	-
	ELEC 32573 Digital Signal Processing	C	ELEC 22534	ELEC 32581
	ELEC 32581 Digital Signal Processing Laboratory	C	ELEC 22534	ELEC 32573
	ELEC 32592 Digital System Design with PLD	C	ELEC 21513	-

<sup>1</sup>Limited enrolment

<b>Subject: Electronics<sup>1</sup> (ELEC)</b>				
<b>BSc Honors</b>				
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>
Year of Study 4	ELEC 44033 Microcontrollers and Embedded Systems	C	ELEC 22513	ELEC 43053
	ELEC 43042 Emerging Topics in Electronics	C	All the compulsory modules in Electronics	-
	ELEC 43053 Advanced Electronics Laboratory I	C	Level 4 Compulsory Courses	-
	ELEC 44064 Power Electronics	C	ELEC 11513, ELEC 12534	ELEC 43053
	ELEC 44074 Advanced Analogue Electronics	C	ELEC 11513, ELEC 12534	ELEC 43053
	ELEC 44084 Applied Electromagnetics	C	ELEC 31512	-
	ELEC 44094 CMOS VLSI Systems Design	C	ELEC 11513, ELEC 21513	ELEC 43053
	ELEC 44123 RF and Microwave Circuits Design	C	ELEC 11513, PHYS 32512	-
	ELEC 43133 Advanced Electronics Laboratory II	C	All Level 4 compulsory Electronics modules	-
	ELEC 44143 Research and Development Internship in Electronics	C	All the compulsory Electronics Modules	-
	ELEC 43158 Research Project	C	All the previous compulsory Electronics Modules	-
	ELEC 44163 Industrial Electronics	C	All the compulsory Electronics Modules	ELEC 43133
	ELEC 44172 Industrial Automation	C	All the compulsory Electronics Modules	ELEC 43133
	ELEC 44182 Robotics and Automation	C	All the compulsory Electronics Modules	ELEC 43133
	ELEC 44192 Electrical Machines and Drives	C	ELEC 44064, ELEC 44084	ELEC 43133
	ELEC 44202 Electronics Product Design and Manufacturing	C	All the compulsory Electronics Modules	ELEC 43133

<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 12752	-
	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 31812 Environmental Policies and Legislation <sup>1</sup>	C	-	-
	ENCM 31823 Environmental Impact Assessment and Environmental Monitoring <sup>1</sup>	C	-	ENCM 31812
	ENCM 33774 Environmental Project	C	All Years of Study 1 and 2 ENCM course units	-
	ENCM 32782 Hazards and Disaster Risk Management <sup>2</sup>	O	ENCM 12752	-
Year of Study 3 Sem 6	ENCM 32792 Urban Environmental Management <sup>2</sup>	O	ENCM 12752	-
	ENCM 32805 In-Plant Training	C	All Years of Study 1 and 2 ENCM course units	-

<sup>1</sup>Offered only for the students who follow the BSc Hons (Applied Chemistry) Degree Programme<sup>2</sup>Students should select at least one optional course unit

<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 Geo informatics 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 41774 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
Year of Study 4 Sem 8	ENCM 43868 Research Project	C	ENCM 41702 and ENCM 42732
	ENCM 44763 Forest Resources Management	C	ENCM 12732
	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 obtain at least 06 credits from optional course units<sup>2</sup>Students should obtain at least 02 credits from optional course units<sup>3</sup>Students should obtain at least 10 credits from optional course units

<b>Subject: Generic Competencies (GNCT)</b>		
<b>BSc Hons (MIT)/ BSc Hons (IT)</b>		
	<b>Course Units</b>	<b>Status</b>
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

<b>Subject: Industrial Management (IMGT)</b>		
	<b>Course Units</b>	<b>Status</b>
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

<b>Subject: Information Technology (INTE)</b>			
<b>BSc Hons (MIT) &amp; BSc Hons (IT)</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 1	INTE 11213 Fundamentals of Computing	C	None
	INTE 11223 Programming Concepts	C	None
	INTE 12243 Computer Networks	C	INTE 11213
	INTE 12213 Object Oriented Programming	C	INTE 11223
	INTE 12223 Database Design and Development	C	INTE 11223
Year of Study 2	INTE 21213 Information Systems Modelling	C	INTE 11223, INTE 12213 & INTE 12223
	INTE 21313 Business Information Systems	C	INTE 11213
	INTE 21323 Web Application Development	C	None
	INTE 21333 Event Driven Programming	C	INTE 12213 & INTE 12223
	INTE 21343 Software Engineering Concepts	C	INTE 21213
	INTE 21243 Computer Architecture and Operating Systems	C	INTE 11223 & INTE 11213
	INTE 22293 Software Architecture and Process Models	C	INTE 21213
	INTE 22343 Data Structures and Algorithms	C	INTE 11223 & INTE 12213
	INTE 22253 Distributed Systems and Cloud Computing	C	INTE 12213 & INTE 21323
	INTE 22263 Embedded Systems Development	C	INTE 11223 & INTE 21243
	INTE 22303 Artificial Intelligence	C	INTE 11223
	INTE 22283 Mobile Applications Development	C	INTE 12213 & INTE 21323
	INTE 22313 Software Design Patterns and Frameworks	C	INTE 21213
	INTE 31233 Human Computer Interaction	C	INTE 11213
	INTE 31283 Big Data and Data Warehousing	O	INTE 12223

Year of Study 3	INTE 31356 Software Development Project	C	All Core Modules from L1 to L3
	INTE 31413 Information Technology Infrastructure	C/O	INTE 11213 & INTE 12243
	INTE 31243 Software Quality Engineering	O	INTE 21343
	INTE 31373 Machine Learning	O	INTE 22303
	INTE 31393 Information Security	C/O	INTE 12243 & INTE 21313
	INTE 31403 System Administration and Maintenance	O	INTE 11213 & INTE 12243
	INTE 31423 Data Analytics and Visualization	C/O	INTE 21313
Year of Study 4	INTE 41403 Advanced Databases	O	INTE 12223
	INTE 41413 Internet of Things	O	INTE 12243 & INTE 22263
	INTE 41393 System Integration Technologies	C	INTE 12213, INTE 21323 & INTE 22313
	INTE 44303 Information Audit and Assurance	O	INTE 21313, INTE 31393 & INTE 12243
	INTE 41283 Information Systems Management and Strategy	C/O	INTE 21313
	INTE 41373 Image Processing	O	INTE 11213, INTE 22343 & PMAT 31212
	INTE 41323 Neural Networks and Deep Learning	O	INTE 22303
	INTE 41383 Industrial Automation	O	None
	INTE 42353 Semantic Web and Ontological Engineering	O	INTE 12213 & INTE 21323
	INTE 42333 Complex Systems and Agent-Based Modelling	O	INTE 11223 & INTE 22303
	INTE 42343 Natural Language Processing	O	None
	INTE 43216 Research Project <sup>1</sup>	C	MGTE 31383

<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 Sem6	MAPS 32612 Innovation and Entrepreneurship	A	-

<b>Subject: Management and Technology (MGTE)</b>			
<b>BSc Hons (MIT)/ BSc Hons (IT)</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-Requisite</b>
Year of Study 1	MGTE 11233 Business Statistics and Economics	C	None
	MGTE 11243 Principles of Management & Organizational Behaviour	C	None
	MGTE 12253 Accounting Concepts and Costing	C	None
	MGTE 12263 Optimization Methods in Management Science	C	None
	MGTE 12273 Industry and Technology	C	None
Year of Study 2	MGTE 21243 Marketing Management	C	None
	MGTE 21233 Operations Management	C	None
	MGTE 22273 Human Resource Management & Leadership Communication	C	None
	MGTE 22263 Logistics and Supply Chain Management	C	None
Year of Study 3	MGTE 31373 Project Management	C	None
	MGTE 31383 Research Methods	O	None
	MGTE 31403 Management of Technology	C/O	None
	MGTE 31413 Warehouse Management and Industrial Shipping	C/O	None
	MGTE 31433 Computer Based Tools for Management Applications	O	MGTE 12222
	MGTE 31443 Strategic Marketing and International Trade	O	MGTE 21243
	MGTE 31423 Advanced Optimization Methods in Management Science	C/O	MGTE 12263
	MGTE 31293 Computer Integrated Manufacturing	C/O	MGTE 12273 & MGTE 21233
	MGTE 31303 Procurement and Supply Management	C/O	MGTE 21233 & MGTE 22263
	MGTE 31393 Managerial Finance	C	MGTE 12253
Year of Study 4	MGTE 41373 Strategic Management	O	MGTE 11233, MGTE 21243, MGTE 21233 & MGTE 31393
	MGTE 41323 Professional Practices	C	MGTE 11243
	MGTE 41333 Business Process Engineering	C/O	MGTE 21233
	MGTE 41313 Statistical Data Modelling	C	MGTE 11233
	MGTE 41233 Corporate Finance	O	MGTE 31393
	MGTE 41343 Logistics System Analysis and Geomatics	C/O	All compulsory modules for OSCM
	MGTE 41303 Enterprise Systems	C/O	INTE 21313
	MGTE 41383 Advanced Operations Management	O	MGTE 21233
	MGTE 41353 Sustainability and Economics in Logistics and Supply Chain	O	None
	MGTE 41363 Digital Innovations Management	O	INTE 21313
	MGTE 42213 Industrial and Systems Engineering	C/O	MGTE 21233
	MGTE 42223 Investment Management	O	MGTE 41233
	MGTE 42243 Advanced Planning and Scheduling	O	MGTE 12263
	MGTE 42313 Advanced Supply Chain and Logistics Applications	O	All compulsory modules for OSCM
	MGTE 42323 Strategic Quality Management and Lean Six Sigma	C/O	None
	MGTE 42333 Business and Information Technology Law	C/O	None
	MGTE 43216 Research Project <sup>1</sup>	C	MGTE 31383
	MGTE 44273 Innovation and Entrepreneurship	O	None

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

<b>Subject: Microbiology<sup>1</sup> (MIBI)</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 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
	MIBI 12532 Introductory Microbiology <sup>2</sup>	C	A/L Science stream	-
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>3</sup>	C	ENCM 12553	MIBI 22562
	MIBI 22562 Laboratory Microbiology for Environmental Management <sup>3</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>4</sup>	C/O	MIBI 31514 MIBI 31522	-
	MIBI 33534 Medical and Veterinary Microbiology, Microbial Technology <sup>4</sup>	C/O	MIBI 21514 MIBI 21522	MIBI 33541
	MIBI 33541 Laboratory aspects of Medical and Veterinary Microbiology <sup>4</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>Offered only for the students who follow the BSc Hons (Applied Chemistry) Degree Programme<sup>3</sup>Offered only for the students who follow the BSc (ENCM) Degree Programme<sup>4</sup>Compulsory only for the BSc Hons (Microbiology) students

<b>Subject: Microbiology<sup>1</sup> (MIBI)</b>			
<b>BSc Hons</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
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	C	All MIBI compulsory course units
	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		
	MIBI 42512 Industrial Microbiology <sup>2</sup>	O	MIBI 12532

<sup>1</sup>Limited enrolment<sup>2</sup>Offered only for the students who follow the BSc Hons (Applied Chemistry) Degree Programme

<b>Subject: Molecular Biology and Plant Biotechnology (MBBT)*</b>			
<b>BSc Hons</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 3 Sem 5	MBBT 31514 Principles and Techniques in Plant Biotechnology	C	All PLBL compulsory course units in Year of Study I and Year of Study 2
	MBBT 31522 Principles and Techniques in Plant Biotechnology Laboratory		
	PRPL 31992 Professional Placement	O	
	MBBT 41763 Cell Biology and Biochemistry		
Year of Study 3 Sem 6	MBBT 41773 Molecular Plant Breeding		
	MBBT 32533 Plant Pathology		
	MBBT 32541 Tissue Culture		
	MBBT 32552 Principles and Practices of Horticulture		
	MBBT 42784 Microbial Genetics		
Year of Study 4 Sem 7	MBBT 42793 Bioethics and Intellectual Property Rights	C	All MBBT compulsory course units
	MBBT 41804 Bioinformatics		
	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 Year of Study 1 and Year of Study 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.

<b>Subject: Physics<sup>1</sup> (PHYS)</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	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>	O/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 and Optional for only Biological science students<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

<b>Subject: Physics (PHYS)</b>			
<b>BSc Hons</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 4	PHYS 43793 Advanced Physics Laboratory - I	C	All PHYS Compulsory Course Units
	PHYS 43875 Advanced Physics Laboratory - II		
	PHYS 43888 Research Project		
	PHYS 44764 Classical Mechanics		
	PHYS 44774 Quantum Mechanics		
	PHYS 44784 Advanced Electronics <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

<b>Subject: Plant Biology (PLBL)</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 11522 Genetics	C	G.C.E. A/L (Biology)	-
	PLBL 11543 Plant Evolution and Identification <sup>1</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 12523 Microbial Biology	C	BIOL 11512	-
	PLBL 12543 Floristic Resources in Sri Lanka and Management <sup>1</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 12513	PLBL 21513
	PLBL 21532 Fundamentals of Molecular Biology	C	BIOL 11522	-
Year of Study 2 Sem 4	PLBL 22541 Biostatistics	C	-	-
	PLBL 22554 Plant Evolution, Diversity and Taxonomy	C	PLBL 12513	PLBL 22561
	PLBL 22561 Plant Evolution, Diversity and Taxonomy Laboratory	C	PLBL 12513	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>2</sup>	C/O	PLBL 21513	-
	PLBL 32542 Recombinant DNA Technology and Tissue Culture <sup>2</sup>	C/O	PLBL 21532	-
	PLBL 32552 Horticulture <sup>2</sup>	C/O	PLBL 21513	-

<sup>1</sup>Offered for BSc in Environmental Conservation and Management<sup>2</sup>Compulsory for BSc Hons in Plant Biology

<b>Subject: Plant Biology (PLBL)</b>			
<b>BSc Hons</b>			
	<b>Course Units</b>	<b>Status</b>	<b>Pre-requisite</b>
Year of Study 3 Sem 5	PLBL 41763 Plant Physiology and Metabolism	C	All PLBL compulsory course units
	PLBL 41772 Geographic Information System and Remote Sensing in Plant Science		
	PLBL 41783 Applied Microbiology		
Year of Study 3 Sem 6	PLBL 42793 Molecular and Microbial Genetics	C	All PLBL compulsory course units
	PLBL 42802 Conservation Genetics		
	PLBL 42812 Forestry and Ecosystem Management		
	PLBL 42822 Bioethics		
Year of Study 4 Sem7	PLBL 41833 Plant Breeding	C	All PLBL compulsory course units
	PLBL 41843 Fungi in Ecosystem Processes and Soil Nutrient Dynamics		
	PLBL 41854 Plant Systematics and Bioinformatics		
	PLBL 41863 Biotechnology		
	PLBL 43872 Term Paper and Presentation		
Year of Study 4 Sem 8	PLBL 43882 Field Botany	C	All PLBL compulsory course units
	PLBL 42893 Crop Evolution and Bioprospecting		
	PLBL 42903 Analysis of Ecological Systems		
	PLBL 43918 Research Project - Dissertation		

<b>Subject: Pure Mathematics (PMAT)</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	PMAT 11203 Topics in Basic Mathematics <sup>1</sup>	A	-	-
	PMAT 11212 Mathematics for Computing I <sup>a,b</sup>	C	-	-
	PMAT 11223 Discrete Mathematics I	C	G.C.E. A/L Combined Mathematics	-
	PMAT 11232 Matrix Algebra	C	G.C.E. A/L Combined Mathematics	-
Year of Study 1 Sem 2	PMAT 12203 Introduction to Calculus <sup>1</sup>	A	PMAT 11203	-
	PMAT 12212 Mathematics for Computing II <sup>a,b</sup>	C	PMAT 11212	-
	PMAT 12242 Discrete Mathematics II	C	PMAT 11223	-
	PMAT 12253 Theory of Calculus	C	PMAT 11223	-
Year of Study 2 Sem 3	PMAT 21263 Linear Algebra	C	PMAT 11232	-
	PMAT 21272 Infinite Series	C	PMAT 12253	-
Year of Study 2 Sem 4	PMAT 22213 Mathematical Methods for Computing <sup>b</sup>	O	PMAT 12212	-
	PMAT 22282 Ordinary Differential Equations	C	PMAT 12253	-
	PMAT 22293 Functions of Several Variables	C	PMAT 21263	-
Year of Study 3 Sem 5	PMAT 31212 Mathematics for Computing III <sup>a</sup>	C	PMAT 12212	-
	PMAT 31303 Complex Variables	C	PMAT 22293	-
	PMAT 31312 Abstract Algebra	C/O	PMAT 21263	-
	PRPL 31992 Professional Placement	O	All Year 1 and 2 Compulsory PMAT course modules	-
Year of Study 3 Sem 6	PMAT 32322 Mathematical Methods	C/O	PMAT 22293	-
	PMAT 32332 Geometry	O	PMAT 22293	-
	PMAT 32342 Number theory	O	PMAT 12242	-

<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/IT) degree programme

<sup>b</sup>For BSc Hons (SENG) degree programme

<b>Subject: Pure Mathematics</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	PMAT 41343 Complex Analysis	C	PMAT 22293	-
	PMAT 41353 Differential Geometry	O	PMAT 22293	-
Year of Study 3 Sem 6	PMAT 42363 Theory of Riemann Integration	C	PMAT 12253	-
	PMAT 42373 Advanced Mathematical Methods	O	PMAT 22293, PMAT 22282	-
	PMAT 42383 Graph theory	O	PMAT 21263	-
	PMAT 42443 Advanced Geometry	O	PMAT 22293	-
Year of Study 3 Sem 5 or 6	PMAT 44962 Research Methodology <sup>1</sup>	C/O	-	-
Year of Study 4 Sem 7	PMAT 41393 Functional Analysis <sup>2</sup>	C/O	PMAT 21263	-
	PMAT 41403 Topology <sup>1</sup>	C/O	PMAT 21263	-
	PMAT 41413 Special Topics in Mathematics	O	-	-
Year of Study 4 Sem 7 & 8	PMAT 43976 Research Project <sup>3</sup>	C	PMAT 44962	-
Year of Study 4 Sem 8	PMAT 42423 Measure Theory	C	PMAT 42363	-
	PMAT 42433 Group Theory	C	PMAT 21263	-

<sup>1</sup>Optional for Mathematical Physics students only<sup>2</sup>Optional for BSc Hons (Statistics) students only<sup>3</sup>Compulsory for students who do not register for 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 21233, 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 21233, 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
Year of Study 4	SENG 34222 Software Process	C	SENG 21233
	SENG 41212 Software Evolution	C	SENG 22212
	SENG 41222 Software Metrics and Measurements	C	SENG 21233, 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 11613 Fundamentals of Statistics	C	A/L Combined Mathematics/ Mathematics
	STAT 11621 Statistical Laboratory	C	
	STAT 11632 Optimization I	C	
Year of Study 1 Sem 2	STAT 12643 Probability Distributions and Applications I	C	STAT 11613
	STAT 12652 Optimization II	C	STAT 11632
	STAT14552 Statistics for Natural Sciences	A	-
Year of Study 2 Sem 3	STAT 21613 Probability Distributions and Applications II	C	STAT12643
	STAT 21623 Statistical Inference I	C	STAT12643
	STAT 22632 Survey Methods and Sampling Techniques	C	STAT21613
Year of Study 2 Sem 4	STAT 22642 Statistical Inference II	C	STAT 21623
	STAT 22651 Statistical programming	C	STAT 21623
	STAT 31613 Regression Analysis	C	STAT 22642
Year of Study 3 Sem 5	STAT 31622 Design and Analysis of Experiments	C	STAT 22642
	STAT 31631 Statistical Modeling	C	STAT 22642
	STAT 31642 Applied Time Series Analysis <sup>1</sup>	C/O	STAT 22642
	STAT 31653 Introduction to Economics	O	-
	PRPL 31992 Professional Placement	O	Core courses covered in first two years
	STAT 32652 Statistical Process Control	O	STAT22632
Year of Study 3 Sem 6	STAT 32663 Corporate Capstone Project <sup>1</sup>	C/O	-
	STAT 32672 Nonparametric Statistics	C	STAT22632
	STAT 32682 Statistical Simulation <sup>1</sup>	C/ O	STAT22642

<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 41613 Stochastic Processes I	C	All STAT compulsory course units in the first two years
	STAT 44623 Advanced Optimization	C	STAT 12652
	STAT 44633 Bayesian Inference Decision Theory	C	All STAT compulsory course units in the first two years
	STAT 42643 Advanced Topics in Time Series Analysis	C	STAT 31642
	STAT 42653 Stochastic Processes II	C	STAT 41613
	STAT 42663 Generalized linear models	C	All STAT compulsory course units in the first two years
Year of Study 4	STAT 44673 Multivariate Data Analysis	C	All STAT compulsory course units in the first three years
	STAT 44683 Advanced Design and Analysis of Experiments	C	STAT 31613, STAT 31622
	STAT 44694 Industrial Training	C	All STAT compulsory course units in the first three years
	STAT 44713 Actuarial Mathematics	O	STAT 21613
	STAT 44723 Econometrics	O	STAT 31613
	STAT 44733 Special Topics in Statistics	O	All STAT compulsory course units in the first three years
	STAT44743 Statistical Data Mining	O	STAT 31613, STAT 44633
	STAT 44758 Research Project/Independent Study	C	All STAT compulsory course units in the first three years

Subject: Zoology (ZOOL)				
BSc	Course Units	Status	Pre-requisite	Co-requisite
Year of Study 1 Sem1	BIOL 11552 Evolutionary Biology and Biogeography	C	GCE A/L Biology	-
Year of Study 1 Sem2	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 <sup>1</sup>	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	C1/O	ZOOL 12703	-
	ZOOL 31713 Entomology and Pest Management	O**	ZOOL 12703	-
	ZOOL 31722 Environmental Impact Assessment	C1/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	C1/O	ZOOL 12703	-
	ZOOL 32742 Parasitology	C1/O	ZOOL 12703	-
	ZOOL 32752 Conservation Biology	C1/O	ZOOL 12703 or ZOOL12733	-
	ZOOL 32762 Wildlife Management	C1/O	ZOOL 12703	-

<sup>1</sup>Offered only for BSc in Environmental Conservation and Management Degree Programme

**Note:** 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.

Subject: Zoology (ZOOL)				
BSc Hons				
	Course Units	Status	Pre-requisite	Co-requisite
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	-
Year of Study 3 Sem 6	ZOOL 42773 Statistics for Zoological Studies	C	ZOOL 41732	-
	ZOOL 42784 Molecular Genetics	C	ZOOL 41752	-
	ZOOL 44762 Geo-informatics for Zoological Studies <sup>1</sup>	O	ZOOL 22732 & ZOOL 22752	-
	ZOOL 44952 Animal Biotechnology <sup>1</sup>	O	ZOOL 21702 & ZOOL 21722	-
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 <sup>2</sup>	O	ZOOL 12703	-
	ZOOL 42872 Ornithology <sup>2</sup>	O	ZOOL 12703	-
	ZOOL 42882 Mammalogy <sup>2</sup>	O	ZOOL 12703	-
	ZOOL 42892 Apiculture <sup>2</sup>	O	ZOOL 41703 & ZOOL 41711	-
	ZOOL 42902 Immunology <sup>3</sup>	O	ZOOL 21702 & ZOOL 21711	-
	ZOOL 42912 Environmental Physiology <sup>3</sup>	O	ZOOL 22732	-
	ZOOL 42922 Ecotoxicology <sup>3</sup>	O	ZOOL 22732	-
	ZOOL 42932 Bioinformatics <sup>3</sup>	O	ZOOL 42784	-

<sup>1</sup>BSc Hons (Zoology) students must follow one of the two level 4 optional course units in the year of study 3<sup>2,3</sup>In the second semester of the year of study 4, the student should accumulate at least 6 credits by selecting three course units either from <sup>2</sup> or <sup>3</sup>

## **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 Study1**

- BUCU 11332 Ancient Buddhist Monasteries of Sri Lanka  
BUCU 12372 Buddhist Art and Architecture in Sri Lanka

##### **Year of Study2**

- BUCU 21332 An Introduction to Buddhist Counselling  
BUCU 21342 An Introduction to Buddhist Art and Antiquities in South Asia  
BUCU 22382 An Introduction to Buddhist Rites and Ceremonies

##### **Year of Study3**

- BUCU 31342 An Introduction to Development of Buddhist Culture in Sri Lanka  
BUCU 32372 An Introduction to Buddhism and other Religions

#### **BUDDHIST PHILOSOPHY**

##### **Year of Study1**

- BUPH 12362 Buddhism and Social Issues

##### **Year of Study2**

- BUPH 21332 The Buddhist Attitude Towards Law, Crime and Punishment

##### **Year of Study3**

- BUPH 32362 Buddhist Attitude to the Economy, Politics and Health

#### **BUDDHIST PSYCHOLOGY**

- BUPS 12362 Introduction to Buddhist Psychiatry  
BUPS 32352 Buddhist Educational Psychology

#### **CHINESE**

##### **Year of Study1**

- CHIN 13372 Chinese Language and Culture I

##### **Year of Study2**

- CHIN 23382 Chinese Language and Culture II

##### **Year of Study3**

- CHIN 33372 Chinese Language and Culture III

#### **CHRISTIAN CULTURE**

##### **Year of Study2**

- CHCU 21332 Introduction to Biblical Greek  
CHCU 22362 Wisdom Literature  
CHCU 22372 Introduction to Biblical Hebrew
- Year of Study3**
- CHCU 31332 Philosophy of Religion  
CHCU 31342 Symbolism of Meals in Scripture and Tradition

#### **FRENCH**

##### **Year of Study1**

- FREN 13352 French Grammar & Vocabulary

##### **Year of Study2**

- FREN 23342 Grammar, Comprehension and Expression

##### **Year of Study3**

- FREN 33342 French Grammar, Expression and Culture

**GERMAN****Year of Study1**

GERM 13352 German Language and Culture I

**Year of Study2**

GERM 23352 German Language and Culture II

**Year of Study3**

GERM 33352 German Language and Culture III

**JAPANESE****Year of Study1**

JPNS 13354 Japanese language for business purposes I

**Year of Study2**

JPNS 23354 Japanese language for business purposes II

**KOREAN****Year of Study1**

KORE 13362 Korean Language and Culture I

**Year of Study2**

KORE 23352 Korean Language and Culture II

**Year of Study3**

KORE 33352 Korean Language and Culture III

**RUSS****Year of Study1**

RUSS 13363 Russian Language &amp; Culture I

**Year of Study2**

RUSS 23383 Russian Language &amp; Culture II

**Year of Study3**

RUSS 33413 Russian Language &amp; Culture III

**SINHALA****Year of Study2**

SINH 22232 Practical Sinhala II

SINH 22242 Modern Sinhala Writing Skills

**WESTERN CLASSICAL CULTURE****Year of Study1**

WCCU 11232 Appreciating Greek and Roman Art

**Year of Study2**

WCCU 22252 Greek and Roman Drama

**Year of Study3**

WCCU 32252 Greek and Roman Literary Theory/Criticism

**General Education (GE)Course Units Offered by the Faculty of Social Sciences****Year of Study1**

GESR 11222 Japanese Management Tools

GESR 11232 Fitness and Wellness

**Year of Study2**

GEHI 22282 History of Sri Lanka

**Year of Study3**

GESR 31022 Event Management

GESR 32072 Olympic Movement and Olympism

**Auxiliary Course Units Offered by the Faculty of Commerce & Management**

**Year of Study1**

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 Study2**

MGMT 21012	Human Resource Management
MGMT 22022	Marketing Management
MGMT 21042	Entrepreneurship

**Year of Study3**

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



**FACULTY OF SCIENCE**

UNIVERSITY OF KELANIYA

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