HANDBOOK

Academic Year – 2017/2018

Faculty of Science
University of Colombo

DISCLAIMER

This handbook has been compiled with information received up to November 2016. .It is hereby notified that this handbook is only for general information and is not for official purposes. Any information contained herein should be confirmed by reference to the relevant authority.

Vision

The Faculty of Science
to be a centre of
scientific and technological excellence
nationally and internationally.

Mission

To develop honest, adaptable productive citizens:
with multidisciplinary knowledge,
creative thinking and analytical skills
with a high degree of civic consciousness.

To articulate and promote interaction with
public and private sector
and society at large,
with the view to contributing towards
the development of the nation.

To institute mechanisms
for partnership programmes
for improving
resources and infrastructure facilities.

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INTRODUCTION TO THE FACULTY OF SCIENCE

The Faculty of Science, which is clearly distinguished by its icon, the University tower, was formed with the advent of the University College in Colombo in 1913. It continued in the same location with the establishment of the University of Ceylon in 1942. Though a section of the University moved to Peradeniya in 1949, the Faculty of Science continued in Colombo. The Faculty, in 1967, became a part of the University of Colombo, Ceylon, later re-named University of Ceylon, Colombo.In 1972 the Faculty came under the University of Sri Lanka, Colombo Campus and finally in 1978, University of Colombo, Sri Lanka.

Presently the Faculty of Science has about 1683 undergraduate students and 216 postgraduate students, 230 academic staff and 87 non-academic staff. The annual intake to the Faculty increased to 480 in 2006 with the introduction of two new streams, Biochemistry & Molecular Biology and Industrial Statistics & Mathematical Finance.

The Faculty consists of seven Departments of study- Chemistry, Mathematics, Nuclear Science, Physics, Plant Sciences, Statistics and Zoology & Environment Sciences, and conducts courses leading to the B.Sc. general degree (03 years duration), B.Sc. general degree (04 years duration) and B.Sc. special degree (04 years duration). A comprehensive range of subject combinations/ streams are available for the general degree while special degree programmes are available in several subject areas. The Faculty together with the University of Colombo School of Computing also offers several joint special degree programmes.

The Faculty of Science conducts several postgraduate programmes leading to the Master of Science degree and postgraduate diplomas. The Faculty also plays a very active role in research and there are many research students reading for PhD. and MPhil. degrees. Through the research programmes the Faculty and the departments have established strong links with both Sri Lankan and foreign research organizations. The members of the Faculty also play a prominent role in national development. Several members act as resource persons, consultants and board members in many government and non-government organizations.

The proposed infrastructure development plan includes new buildings for Zoology & Environment Sciences and Statistics, an extension to Plant Sciences, a new Science Library Complex, and a Student Service Center with other student facilities and renovations of historical buildings.

Students of the Faculty of Science also have many other advantages – the lively metropolitan location, a wide variety of campus clubs and societies and good facilities for sports. Further, the Faculty provides a learning environment devoid of unrest and violence and for the past several years all study programmes were concluded within the stipulated time period of 3 or 4 years. The latest published data indicate that the Colombo science graduates are in very high demand among the employers. Hence, the Faculty of Science at Colombo occupies, without doubt, a pivotal position among the Science Faculties in Sri Lankan Universities.

The Graduate Profile of the Faculty of Science

The Faculty of Science of the University of Colombo aims to provide its students with a learning experience, that will produce graduates with an in-depth knowledge of their subject matter, yet knowledgeable across a wide spectrum of disciplines. They will have a strong sense of intellectual integrity and personal and professional ethics, and be able to be critical and creative thinkers, with an aptitude for continued self-directed learning. They will be leaders in organizations and communities, contributing towards national development and also be sensitive global citizens.

The desired attributes of a Science graduate of the University of Colombo are elaborated as follows.

Desired attributes of a science graduate at the University of Colombo

A Science graduate of the University of Colombo should be,

Academically excellent:

- Having a strong background in the basics of an array of relevant disciplines, and an in-depth knowledge of selected disciplines.
- Skilled in writing, research activities, problem-solving and communication.
- Able to critically examine, synthesize and evaluate knowledge across a broad range of disciplines.
- Adept at continued, self-directed, independent learning in a range of ways, including application of modern technologies (tech savvy).
- Having strong personal and professional ethics.

Highly employable and able to contribute to national development:

- Able to apply academically gained knowledge in a wider context.
- Able to work amicably and efficiently in teams, showing empathy, gaining their trust, and sharing and cross-fertilizing knowledge and skills.
- Self-confident and able to take risks
- Able to lead as well as follow, taking responsibility for one's actions and decisions.
- Aware of and able to discuss issues of national importance.
- Having a set of flexible and transferable skills for different types of employment, both in the public and private sectors, and in self-employment. (entrepreneurship)

Sensitive global citizens:

- Being socially responsible, with civic consciousness.
- Respecting the cultures and values of others.
- Committed to improving the sustainability of the environment.
- Having a high regard for human rights, equity and ethics.

UNIVERSITY ADMINISTRATION

Chancellor

Most Rev. Dr. Oswald Gomis

Archbishop Emeritus of Colombo.

Vice Chancellor

Senior Professor Lakshman Dissanayake

B.Dev.S. (Colombo), PG Diploma (Colombo), MA (Brussels), Ph.D. (Adelaide), FRSA (UK)

Dean Faculty of Science

Senior Professor K.R.R. Mahanama

B.Sc. (Colombo), M.A., M.Phil., Ph.D. (CUNY)

Librarian

Dr. (Mrs) K.G.P.G. Wijetunge

BA. (Hons.), (Philosophy) (Peradeniya)

Dip.Lib.Inf.Sc (Colombo)

M.Lib (Wales) PhD (Colombo)

MIS (Canberra)

ASLLA, FSLLA

Senior Assistant Librarian/Science

Ms. H.M.D.S.D. Somaratna

B.Sc. (Colombo), PGDip (Bus.Mgt.)

MLIS (Colombo)

Registrar

Mr. K.A.S. Edward

B.A. (Econ.) (Peradeniya),

M.A. (Econ.) (Colombo), MBA (Keelle,UK)

Deputy Registrar

Ms. Vajira Hapuhinna Jayaratne

BA (Hons) (Delhi)

PGDip (Bus.Mgt) (Colombo)

MBA (Colombo)

Bursar

Ms. K.S.T. Swarnalatha Jayasooriya

A.C.A.

Senior Assistant Bursar

Ms. P.L.C. Fernando

B.Sc. Business Administration

University of Sri Jayawardanapura

Address

Faculty of Science, University of Colombo

P.O. Box 1490, Colombo 3, Sri Lanka

E-mail deans.office@sci.cmb.ac.lk

Web http://science.cmb.ac.lk/

DIRECTORS OF STUDY

The Directors of Study are responsible for the Faculty of Science undergraduate and postgraduate programmes. The Undergraduate Director of Study is the chairperson of the Curriculum Development and Evaluation Committee (CDEC) of the Faculty of Science. Information and clarifications of the degree programmes could be obtained from the Directors of Study

Director of Study - Undergraduate Degree Programmes.
Professor T.D .Silva
Department of Plant Sciences

Director of Study - Postgraduate Degree Programmes.
Professor M. R. Wijesinghe
Zoology & Environment Sciences

ACADEMIC ADVISORS

Chemistry:	Professor D.P. Dissanayake
Mathematics:	Dr. D.R. Jayawardene
	Mr. M.H.K.M. Hameem
Nuclear Science:	Dr. M.R. Lamabadusuriya
Physics:	Dr. M.S. Gunewardene
Plant Sciences:	Dr. P.S. Saputhanthri
Statistics:	Dr. C.H. Magalla
Zoology& Env.Sci:	Dr. I.C. Perera

COORDINATORS

Enhancement Course Advisors
Professor M.R. Wijesinghe (Zoology & Env.Sci.) (Chairperson)
Dr. P. Saputhanthri (Plant Science)
Dr. C. Hettiarachchi (Chemistry)
Dr. Jayampathy Ratnayake (Mathematics)

Sinhala & Tamil Language Course Coordinators
Dr. H.I.U. Caldera (Plant Sciences)
Dr. B.G.K. Perera (Chemistry)

Internship Programme/ Service Learning
Personality & Career Development Course Units
Professor D.D. Wickramasinghe (Zoology & Env.Sci.)
Dr. C. Hettiarachchi (Chemistry)
Co- Directors, Career Guidance Unit

Molecular Biology & Biochemistry Programme
Professor R.S. Dassanayake (Chemistry)

Computer Science Courses
Dr. C.D. Tilakaratne, (Statistics)

EXAMINATIONS AND REGISTRATION

Senior Assistant Registrar/Examinations
Ms. T.J. Ekanayake

Assistant Registrar/Registrations
Ms. T. Elancheliyapallavan

SCIENCE LIBRARY

The Science Faculty Library which is located in the faculty premises is a part of the Central Library of the University of Colombo.

Resources:

The library contains around 30,000 books and journals, a thesis collection and a CD collection. Annually it subscribes to around six electronic databases with full-text access facilities.

Services:

Many services such as Inter Library Loans (ILLs), access to E-resources, photocopying service and user education programmes are conducted by the Library. The library offers an “Information Skills Development Programme” for the first year Undergraduates as an Enhancement course.

STUDENT COUNSELLING & WELFARE SERVICES

Every student has the opportunity of seeking advice and assistance from a student counsellor in academic and other matters related to their undergraduate work.

Senior Student Counsellor

Dr. M.T.M. Mahees

Permanent Student Counsellor- Faculty of Science

Mr. R.A.B. Abegunawardana (Statistics)

Student Counsellors

Dr. B. S. S. Senavirathne (Zoology & Env.Sci.)
Dr. (Ms.) G. Galhena (Zoology & Env.Sci.)
Dr. J. M. D. R. Jayasundara (Physics)
Dr. J. K Ratnayake (Mathematics)
Dr. A. C. Mahasinghe (Mathematics)
Dr. (Ms.) C. H. Magalla (Statistics)
Dr. S.D. Viswakula (Statistics)
Dr. (Ms.) A. M. Wickaramasuriya (Plant Science)
Dr. (Ms.) G.S. Abayaweera (Chemistry)
Dr. J. Jeyasugiththan (Nuclear Science)

Actg. Deputy Registrar/Student and Staff Affairs
Ms. P.K.S.K. Senewiratne

The Following assistance and services are available at the Student and Staff Affairs Branch.

I. Payment of Mahapola and Bursary.
II. Hostel Accommodation.
III. Other scholarships such as E.E.T.C.S. Commercial Bank, Mitsubishi etc.
IV. Services of Photocopying and Canteen at each faculty.
V. Students' Union and Students' Society matters.
VI. Amalgamated Club.
VII. Arts Council.
VIII. Season Tickets.

HOSTELS

Extremely limited hostel accommodation is available. The hostels maintained by the University and their respective wardens are listed below.

Sujatha Jayawardena (**Women**)
Dr. A.M.K.S.A. Boyagoda (Demography)

De Saram (**Women**) (Medical)
Prof. Anuja Abeydeera (Surgery)

Havelock Road (Women)
Dr. Dilrukshi Abeysinghe (Sociology)

Kittiyakara (**Men**)
Mr. Mahesh Senanayake (Pol.Sc)

Muttaiah (**Women**)
Mrs. G.P.V.D.R. Silva (Pol.Sci)

De Saram (**Women**) (**New**)
Ms. S.N.K. Mallikahewa (Economics)

Blomfontein (**Men**)
Dr. M.R.N. Cassim (Surgery)

Thelawala (Women)
Dr. (Mrs) P.G.R.S.K. Senarath (Edu.Psychology)

In addition to the above hostels, the following houses were rented out to accommodate students.

No. 71/3, Green Path, Colombo 7
(Bhikku students)
Dr. B.A.C.A. Balasooriya (Int.Relations)

No.290/3, Maharagama Rd, Boralasgamuwa. (Men)
No 286, Rajagiriya Road, Rajagiriya
Mr. E.R.A.D. Bandara (Statistics)

DEPARTMENT OF PHYSICAL EDUCATION

Sports and related activities including physical fitness programmes, motivation and leadership programmes are organized by the Department of Physical Education and all students are entitled to use sports facilities for 22 games available at the department.

Inter-Faculty, Fresher's Tournaments and Open Meets are annually conducted and those who are qualified will be given the opportunity to participate in Inter University Games/Championships, International Tournaments and Asian/World University Games/Championships.

Participants of the Inter University Games will be awarded the University Colours at the Colours Awarding Ceremony which is held once a year.

Acting Director/Physical Education:
Mr. Ajantha Dahanayake

Assistant Registrar/ Physical Education:
Mr. Kapila Gunasinghe

Instructors in Physical Education:
Ms. Srimalka Gunasekera
Ms. Wasantha Rathnayake
Mr. Sanjeewa Jayasinghe
Ms. Nayanthi Chandrasena

Contact No Office – 0112 502405
Intercom – 8646 / 8647
e-mail – physicaleducationcmb@gmail.com

Badminton	Men
Badminton	Women
Baseball	Men
Basketball	Men
Basketball	Women
Carrom	Men
Carrom	Women
Chess	Men
Chess	Women
Cricket	Men
Elle	Men
Elle	Women
Swimming	Women
Table Tennis	Men
Table Tennis	Women
Taekwondo	Men
Taekwondo	Women
Tennis	Men
Tennis	Women
Track and Field	Men
Track Field	Women
Volleyball	Men
Volleyball	Women
Weightlifting	Men
Wrestling	Men

UNIVERSITY HEALTH CENTRE

University Medical Officer

Dr. K.D.I. Wasudeva (M.B.B.S., D.F.M.)
Dr. (Mrs) M.A.P.W. Prematilake (M.B.B.S.)
Dr. (Mrs) A.R.P. Rathnayake (M.B.B.S.)

The University Health Service has been organized to enable students of the University to lead an active life, free of mental and physical ailments. University health service facilities have been provided for University employees as well as students.

There are two Medical centers in this University. The main and the bigger Centre is situated at Reid Avenue. The other is at the Medical Faculty.

Treatment is for outpatients only. Patient needing specialist treatment or residential treatment are directed to the Clinics at the Colombo group of hospitals.

Limited laboratory facilities are available at Reid Avenue health center for students and staff.

Dental treatment service is available on Monday, Wednesday and Friday mornings at the University of Colombo.

CAREER GUIDANCE UNIT

The Unit was established to help and guide students to an optimal career path through counseling and training.

INFORMATION AND COMMUNICATION TECHNOLOGY SERVICES

The use of computers in academic activities has now become an ineluctable factor for higher education. The Faculty handles and manages the ICT infrastructure and provides a range of ICT related facilities and services for the staff and the students. The faculty intranet connects all the buildings in the faculty. Wireless hotspots are available all around the faculty. The faculty intranet is connected to the internet through the Lanka Education and Research Network (LEARN). The main IT services provided includes the Student Information Systems (SIS, mscSis, pgSIS), Learning Management Systems (LMS, edpLMS, mscLMS), online public library access catalogue OPAC, Email (Google Apps) and FOSmedia (Faculty of Science Media). The Faculty of Science is equipped with two main Information Technology Units (ITUs).

- **Information Technology Unit 1 (ITU1)**

Coordinator – Dr. Hiran Jayaweera (Physics)

The ITU1 is situated behind the main Chemistry building. It is a walk-in computer laboratory consisting of 35 computers running Windows 7/ Ubuntu 14.04 with fast internet access allowing students to work comfortably on their academic work. Software Development Unit (SDU) and the Faculty of Science Media Unit (FOSmedia) are located within the ITU1.

- **Software Development Unit (SDU)**

Software Development Unit of the Faculty has developed a number of software applications to expedite various University processes such as examinations and course registrations. The SDU owns and maintains a state of the art server room to host Faculty websites, web apps and the other online services.

- Undergraduate SIS - handles student registration, course registration, examination results, hostel, bursary, and Mahapola for almost all the faculties of the University
- mscSIS and pgSIS - for handling MSc students' and MPhil/PhD students' information of the Faculty of Science
- Maintaining the LMS - Learning Management System (LMS) is used for managing academic materials such as lecture notes and other online activities such as online examinations
- Official email addresses (Google Apps) of the students and staff is also managed by the SDU
- Faculty wi-fi zones are coordinated through the SDU

- **Faculty of Science Media Unit (FOSmedia)**

Although FOSmedia is the official media unit of the Science Faculty, it serves as the official media unit of the entire university giving coverage to the major events such as convocations, annual research symposia and university games. FOSmedia is comprised of SDU staff and the students of the Faculty of Science. Following are the FOSmedia brands and services.

- FOS TV - Live web TV channel that handles webcasting of university events
- Students Blog - A space for students to showcase their talent in writing (tutorials, poetry, research etc.)
- UOC Rhythm - Online radio channel for university students which is the first ever of its kind in Sri Lanka
- FOSmediaR - Reporting University wide events and other major incidents
- FOSmedia Events - Twitter feed dedicated to live sport and event updates
- Faculty website is also maintained by the FOSmedia with the supervision of the Faculty IT committee
- FOSmedia video production - Videography, editing and production of movies and clips at the request of various faculties, departments and clubs

FOSmedia owns a fully equipped media studio and provides a wide range of services to the university through photography, videography, photo/video editing and desktop publishing work.

Visit us on http://fos.cmb.ac.lk/, like us on FB/ fosmedia and follow us on Twitter/fosmediaR or email to fosmedia@fos.cmb.ac.lk

- **Information Technology Unit 2 (ITU2)**

Coordinator – Dr. S.S.N. Perera (Mathematics)

IT Unit 2 is situated in the top floor (2nd floor) of the Industrial Statistics building which is adjacent to the KG hall and behind the Physics building. This laboratory is the largest teaching lab in the faculty with facilities to accommodate a group of 60 students in one sitting. Equipped with high speed internet connectivity and the Learning Management System, this lab provides a friendly environment for the students and the lecturers to conduct lectures using modern technologies. Apart from functioning as a teaching lab, ITU 2 is also responsible for handling and management of courses for IT stream students in the 4 year General Degree program. Currently it handles 53 credits of the aforesaid programme.

Computer Lounge & Library

Senior Treasurer: Professor D. Weerakoon

- Walk-in IT zone
- 20 computers : Windows XP/7
- Printing & scanning facilities
- Headsets will be provided on request

The Computer Lounge & Library is located next to the common room adjoining KG Hall. It is a fully air-conditioned computer room and has printing and scanning facilities for students. Batch representatives from each batch contribute in steering and maintenance and providing services for fellow students.

Equipped with high speed internet connectivity the computer lounge provides a friendly environment to the students in their day to day work and educational activities.

THE UNDERGRADUATE STUDY PROGRAMME

The undergraduate study program of the Faculty of Science introduces students to several curricula in the fields of Biological Sciences, Physical Sciences, Biochemistry & Molecular Biology and Industrial Statistics and Mathematical Finance, leading to a Bachelor of Science degree. These are conducted by the seven academic departments of the faculty together with experts from outside the university where necessary. The faculty offers three degree programmes, namely the general degree program of 3 years duration (90 credits), the general degree programme of 4 years duration (120 credits) and the special degree program of 4 years duration (120 credits). The academic programme operates on a course unit and a credit rating system consisting of both academic and enhancement courses.

The academic courses deal with subject knowledge and skills pertaining to the 15 subjects offered by the faculty while enhancement courses provide opportunities for students to participate in extra-curricular activities while improving their soft skills. Academic courses are further classified as compulsory courses that provide fundamental knowledge of a subject and elective courses that cover a wider scope of the subjects.

In the first two years, the courses offered provide the basic knowledge required in various subjects. At the end of the second year, students have the opportunity to enroll in one of 21 special degree programmes, based on good academic performance. Students may also choose to enroll in the four year general degree programme which is theme based, provided the eligibility and selection criteria are satisfied, or in the three year general degree programme.

The faculty also offers a structured Career and Personal Development programme that spans through the first three years of the undergraduate programme. This is designed by and conducted with the assistance of human resource professionals with a view to providing undergraduates with the soft skills, attitudes and behaviors required in their professional and personal life.

Students who follow the general degree programme have the opportunity to undertake an internship training or a service learning programme in the third year (of the 3 year general degree) or an industrial training in the fourth year (of the 4 year general degree), provided they satisfy the selection criteria. Students who register for the four year special degree programme are required to conduct a research project during their fourth year.

You are welcome to the undergraduate study programme of the Faculty of Science, University of Colombo. Please do read this handbook carefully and be aware of all the opportunities available to you in the Faculty. If you have any doubts about the academic or other facilities available, do contact the academic advisors, student counsellors, academic mentors, Heads of Department and the Director of Undergraduate Studies who will help you

REGISTRATION FOR COURSES

Registration for courses for the **entire academic year** commences **one** week prior to the start of the first semester, and continues during the first two weeks of this semester.

Selection of course units must be done very carefully as students will not be permitted to change their selections once the registration period is over.

All students are expected to obtain advice directly from faculty appointed academic advisors if they have any queries regarding their study programmes. Students are also advised to register for the **prerequisites, if any,** of their intended study programmes. Elective course units having less than five students are not conducted (applicable only to General Degree course units) and students who have registered for such course units are permitted to register for other available course units during the registration period. **No changes in course units are permitted after the registration period.**

Mode of Registration

Registration for courses is done online through the Student's Information System (SIS) of the Faculty of Science. (http://sis.cmb.ac.lk/sci/)

The 'Add – Drop' Period

During the first two weeks of every second semester, students are given a limited opportunity to revise their course unit registrations. During this period they can add or drop a limited number of course units to/from the list that they have submitted at the beginning of the academic year. **However, students are not allowed to change subject combinations or drop compulsory units**. Changes are only allowed on condition that the students maintain the prescribed number of main subjects and compulsory course units.

Very Important

Although students are permitted to register for more than 30 academic course units per year (up to 33), this option has to be taken very cautiously as the performance of all registered course units will be taken into consideration when determining the final result. Students will not be permitted to drop any of their selections once the registration period is over.

Registration for Course Units – Level I and Level II

- **Biological Science (Including the Direct Intake for Biochemistry & Molecular Biology)**

During the first two years of study, students should register for **a minimum of 30 academic course credits** including the compulsory course units (maximum of 33), as prescribed in Annex 4 and 5 and for the required number of enhancement course units per year (Annex 22).

- **Physical Science**

Out of the 30 academic course credits, a minimum of 6 credits should be selected from the core / compulsory course units of each of **three main subjects** in the combination (as specified in Annex 1 and 2), totaling 18 credits. Students, if they wish, may treat all four subjects in the combination as main subjects, in which case they should register for a total of 24 core / compulsory course units from the four subjects. All students are required to follow this selected number of course units and other designated **compulsory course** units during the first and the second years. Students can select the rest of the course units from subject areas within and outside their subject combination, **provided it is permitted by the time table, space availability, and other degree requirements**.

Minimum Achievement Level – Level I and II

A student should obtain **C grades or better aggregating to a minimum of 15 academic credits** per year at the levels I and II, to move on to the next level. If a student fails to obtain this minimum achievement level, he or she will not be permitted to register for the next level until this requirement has been fulfilled.

Registration for course units of the General Degree – Level III

During the Level III of study, students should register for a minimum of 30 academic credits (maximum of 33) and the required number of Enhancement credits.

Those who are following the three year general degree programme are required to register for at least 6 core credits from each of **two main subjects**. The remaining credits can be selected from any subject area, subject to time and space availability. In addition, students may have the opportunity to select an Internship programme worth 6 academic credits in the 6th semester of their study. More information regarding this programme is given under 'Career Guidance Unit' on page 75.

The three-year general degree programme will span a total of **six** semesters with 90-99 academic credits and at least four enhancement credits. All academic credits accumulated over the Levels I, II and III are considered for the determination of the B.Sc. three year general degree.

Those who have been selected for the four year general degree program will be required to follow the prescribed courses of the relevant themes (Annex 21).

Minimum Achievement Level General Degree–Level III

A student should have met the criteria listed under degree awarding criteria (on page 16), in order to be eligible for the award of the degree of Bachelor of Science (General - 3 Years)

An Important Note

Many public institutions will not recognise a particular discipline as part of a graduate's General Degree programme, unless the graduate has completed **a minimum of 24 credits in that discipline,** over Levels I, II, and III. Students interested in keeping open the option of employment in the public sector (secondary education, banks, government ministries and institutions, etc.), or in pursuing post-graduate education in a particular field, should take sufficient electives in at least two main disciplines in order to fulfill this requirement.

Registration for course units of the General Degree - Level IV

During the Level IV of study in the four-year general degree programme, students must register for 30 academic credits (maximum of 33). They are required to register for a minimum of 18 academic credits offered in the 7th semester, and for the full-time industrial training programme worth 12 academic credits in the 8th semester.

The four-year general degree programme will span a total of eight semesters with 120-132 academic credits and at least four enhancement credits. All academic credits accumulated over the entire four year period are considered for the determination of the BSc. four year general degree.

Minimum Achievement Level General Degree - Level IV

a) A student should **obtain C grades or better aggregating to a minimum of 15 academic credits** in Level III to move on to the Level IV

b) At the end of Level IV, a student should have met the criteria listed under Degree Awarding Criteria (on page 17) in order to be eligible for the award of the degree of Bachelor of Science (Special).

Registration for course units of the Special Degree programme

Selection for the four-year special degree programmes, is based on the marks obtained by the student for the relevant **course units** as specified by each programme during the first two years. In addition to the core / compulsory course units, departments may specify additional course units as pre-requisites for eligibility for particular four-year special degree programmes. For a special degree, selected students are expected to follow course units specified for Levels III and IV of the relevant special degree programme.

Students following the special degrees should register for a minimum of 30 (maximum of 33) academic credits, and the necessary enhancement course units, during each of the third and fourth years of study. The total minimum number of Level III and Level IV academic credits that should be offered by a student depends on the special degree a student wishes to follow. A department could allow students to take up to four enhancement course credits per year if they wish. Thus, a special degree will span a total of eight semesters with 120-132 academic credits and 4-12 enhancement course credits.

Minimum Achievement Level: Special Degree - Level III and IV

a) A student should **obtain C grades or better aggregating to a minimum of 15 academic credits** in Level III to move on to the Level IV

b) At the end of Level IV, a student should have met the criteria listed under Degree Awarding Criteria (on page 18) in order to be eligible for the award of the degree of Bachelor of Science (Special).

EVALUATION PROCEDURE

Course units may be evaluated by theory examinations (mid semester, end of semester or continuous), assignments, reports, presentations and oral examinations or a combination of any of the above. The method of evaluation of course units will be announced by the relevant departments at the beginning of each semester.

The Grading system

Range of Marks	Grade	Grade Point Value	Attainment
90 – 100	A+	4.30	
80 – 89	A	4.00	Superior
75 – 79	A–	3.70	
70 – 74	B+	3.30	
65 – 69	B	3.00	Meritorious
60 – 64	B–	2.70	
55 – 59	C+	2.30	
50 – 54	C	2.00	Adequate
45 – 49	C–	1.70	
40 – 44	D+	1.30	
30 – 39	D	1.00	Minimal
20 – 29	D–	0.70	
00 – 19	F	0.00	Failure

Unless otherwise approved by the Faculty Board for particular course units, marks obtained for the academic course units are graded according to the standard grading scheme given above. Each grade carries a **Grade Point Value** (**GPV**) as specified in the table above. The transcript includes the grades obtained for all course units together with their respective credit ratings but not the actual marks.

Grade Point Average (GPA)

When calculating the **Grade Point Average** (**GPA**), all course units are weighted according to their corresponding credit values. GPA is computed to the second decimal place. Grades of all registered course units in a study programme are taken into account when calculating the GPA.

Enhancement course units

All enhancement course units carry only a letter grade as specified below and do not carry a Grade Point Value (GPV). For non-sports course units, the ranges of marks corresponding to various grades are given in the table below; for units associated with various sports, the corresponding descriptors will be used.

Grade	Attainment	Marks / Descriptor
H	Honours	70 - 100 Exceptional performance, including participation at national level
M	Meritorious	55 - 69 Above average performance, including participation at inter-university level
S	Satisfactory	40 - 54 Minimum level of acceptable achievement or participation.
U	Unsatis-factory	0 - 39 Unacceptable level of achievement or participation
W	Withdrawal	

For the three-year and four-year degree programmes a student is required to obtain a grade of S or better for **a minimum of four credits from enhancement courses offered** in order to complete the requirements for the degree.

Details of enhancement courses are given in **Annex 22.**

EXAMINATIONS

All examinations are conducted and completed within a given semester except for course units having practical or research projects. No theory course units in the three-year degree programme are conducted over two semesters.

The results of all examinations are normally released within two months of completion of the examinations.

The duration of the end of semester theory examinations vary from one hour (for one credit courses) to a maximum of three hours (for three credits and above). The departments decide the duration of practical and oral examinations.

Examination Offenses

Examination offences may be classified as follows.

Possession of unauthorized documents or removal of examination stationery, disorderly conduct, copying, obtaining or attempting to obtain improper assistance, cheating or attempting to cheat, impersonation, aiding and abetting the commission of any of these offences.

In course units where submitting a report or dissertation is part of the evaluation, *e.g.*, research projects, laboratory or field work, etc., **plagiarism** is considered a serious offense, equivalent to an examination offense. Plagiarism may be defined as any of the following.

- Submitting another person's work as your own.
- Including another person's work (language, ideas, results, data, graphics/images, etc.) in your submissions **without proper acknowledgement or citation.**
- Copying another person's paragraphs or sentences into your work, with or without minor changes, even if you cite your sources.
- In cases where you consider it necessary to **quote** (copy word for word) a sentence or two of someone else's language, **failure to put it within quotation marks.**

Any candidate who is found guilty of an examination offence or plagiarism is liable to any one or more of the following punishments:

Removal of his/her name from the pass list, cancellation of his/her candidacy from whole or part of the examination, suspension from any University examination for such period as the Senate may decide or indefinitely, or suspension from the University for such period as the Senate may decide, or expulsion from the University

Attendance

Students are strongly advised to attend all lectures and practical classes of all course units that they have registered for. For practical course units and course units with a practical component, which are evaluated through a practical examination, a **minimum of 50% attendance at practical classes and sitting for the final practical examination are required to obtain a C grade or better.** Such course units are evaluated through continuous assessments. A **minimum of 80% attendance at practical classes** is required to obtain a C grade or better.

In addition, 80% attendance is required for all special degree lectures and practical classes. Students who do not have the required attendance for lectures and practical classes, shall not be allowed to sit for the corresponding final examination/assessment that year and will have to sit for the final examinations in the following year as repeat candidates.

Completion of a course unit

The student must participate in and complete all the assessment procedures (i.e. Assignments, continuous assessments, mid-semester and final examinations, practical assessments, etc., whichever are applicable) for each course unit for which he/she has registered, and obtain **a final grade for each course unit for it to be considered as 'complete'**. All course units for which the student has registered shall be considered for calculation of the final GPA and the awarding of the degree.

If a student is absent for any or all assessment procedures of a course unit and has not repeated them thereafter, the course unit shall be considered as 'incomplete', and a provisional grade of NC shall be assigned. This grade shall be changed to the appropriate grade once the student has completed the course.

Repeating examinations

A student obtaining a grade below a C may re-sit the course unit examination for the purpose of improving the grade. The grades obtained in the first and subsequent attempts shall all be listed in the academic transcript. The highest grade obtained is used for the calculation of the final GPA. However, the highest grade considered for the determination of award of a class, as well as for selection for Special Degrees, is C.

Two relevant rules:

(i) A student shall be deemed to have sat the first scheduled examination irrespective of whether he/she has actually sat or not, unless he/she has been prevented from sitting examination due to illness or any other reasonable cause, which must be accepted as valid by the Faculty Board.

(ii) A student who fails to complete any course unit(s) in the first attempt shall be eligible to repeat the course unit(s) so failed in two more attempts only. In counting the number of attempts a student has exhausted, the attempts deemed under (i) above shall also be taken into account.

Medical certificates

If a student has been prevented from sitting for an examination due to illness, the student should submit a Medical Certificate (MC) to the Chief Medical Officer/University Medical Officer, within the stipulated period of time. Students are strongly advised to read the University guidelines for submission of medical certificates, since a MC can be rejected if specific requirements are not fulfilled. See Annex 23 for details.

Time limit to complete the degree programmes

General degree and special degree students should complete their degrees within a specified number of semesters. The maximum period allowed for **both** three-year degrees and four-year degrees are **12 semesters (six years)** from first registration. Students are allowed to repeat examinations subject to the above time limit. Therefore, students are strongly advised to aim, to obtain good grades from the very beginning of their study programme.

DEGREE AWARDING CRITERIA

General Degree - Three year

To be eligible for the B.Sc. (General) Degree, a student must **'complete'** a minimum of **90** credits with at least **30** credits from each of Level I, Level II and Level III.

For physical science students, at least **48** credits of these should be from the core units with a minimum of 6 credits each from three main subjects (7 in the case of Chemistry, total 18-19) at each of Levels I and II, and 6 credits each from two main subjects (total 12) at Level III.

For biological science students, at least **54** credits of these should be from the core units with a minimum of 7 credits each from three main subjects (total 21) at each of Levels I and II, and 6 credits each from two main subjects (total 12) at Level III.

Furthermore, a student must have

- obtained a grade **not lower than C in courses aggregating to a minimum of 72 academic credits**, with a minimum of 24 academic credits in each of Levels I, II, and III,
- obtained **no** grade of NC (not complete), subject to the proviso that, in the event of the candidate being unable to sit for the final examination of a course unit for approved medical or other unavoidable reasons **during his/her final year only**, a mark of zero may be assigned to such final examination at the request of the candidate and with the approval of the Faculty Board, the course unit considered completed, and the overall mark computed and the final Grade assigned on that basis, this proviso being applicable for course units **totaling no more than 6 credits**,
- obtained grades of F in **no more than** 6 credits,
- obtained a grade of S (Satisfactory) or better in Enhancement Course Units totaling a minimum of 4 credits,
- Obtained a minimum Grade Point Average of 2.00,
- Completed the relevant requirements within a period of **six** academic years.

Award of Honours

- **First Class**

A student shall be awarded First Class Honours provided that he/she has,

a) obtained grades **not lower than C** in academic course units aggregating to **at least 80** academic credits,
b) obtained a minimum GPA of **3.60,**
c) completed the relevant requirements within a period of **three consecutive** academic years.

- **Second Class (Upper Division)**

A student shall be awarded Second Class (Upper Division) Honours provided that he/she has,

a) obtained grades **not lower than C** in academic course units aggregating to **at least 75** academic credits,
b) obtained a minimum GPA of **3.30,**
c) completed the relevant requirements within a period of **three consecutive** academic years.

- **Second Class (Lower Division)**

A student shall be awarded Second Class (Lower Division) Honours provided that he/she has,

a) obtained grades **not lower than C** in academic course units aggregating to **at least 75** academic credits,
b) obtained a minimum GPA of **3.00,**
c) completed the relevant requirements within a period of **three consecutive** academic years.

General Degree – Four year

To be eligible for the B.Sc. (General) Degree of 4 years duration, a student must '**complete**' a minimum of **120** credits with at least 30 credits from each of Level I, Level II, Level III and Level IV. For physical science students, at least **36** credits of these should be from the core units with a minimum of 6 credits each from three main subjects (7 in the case of Chemistry, total 18-19) at each of Levels I and II. For biological science students, at least **42** credits of these should be from the core units with a minimum of 7 credits each from three main subjects (total 21) at each of Levels I and II.

Level III and IV credits must be from the course units specified for the respective four-year degree programme, and should include an Industrial Training Project in Level IV.

Furthermore, a student must have,

- obtained a grade **not lower than C in courses aggregating a minimum of 96 academic credits,** with a minimum of 24 academic credits in each of Levels I, II, III, and IV,
- obtained **no** grade of NC (not complete), subject to the proviso that, in the event of the candidate being unable to sit for the final examination of a course unit for approved medical reasons **during his/her final year only**, a mark of zero may be assigned to such final examination at the request of the candidate and with the approval of the Faculty Board, the course unit considered completed, and the overall mark computed and the final Grade assigned on that basis, this proviso being applicable for course units **totaling no more than 8 credits,**
- obtained grades of F in **no more than** 8 credits,
- obtained a grade of S (Satisfactory) or better in Enhancement Course Units totaling a minimum of 4 credits, **and**
- fulfilled any other requirements approved by the Faculty Board for a given four year General degree, e.g. professional requirements,
- obtained a minimum Grade Point Average of 2.00,
- completed the relevant requirements within a period of **six** academic years.

Award of Honours

- **First Class**

A student shall be awarded First Class Honours provided that he/she has

a) obtained grades **not lower than C** in academic course units aggregating to **at least 105** academic credits,
b) obtained a minimum GPA of **3.60**
c) completed the relevant requirements within a period of **four consecutive** academic years.

- **Second Class (Upper Division)**

A student shall be awarded Second Class (Upper Division) Honours provided that he/she has,

a) obtained grades **not lower than C** in academic course units aggregating to **at least 100** academic credits,
b) obtained a minimum GPA of **3.30**
c) completed the relevant requirements within a period of **four consecutive** academic years.

- **Second Class (Lower Division)**

A student shall be awarded Second Class (Lower Division) Honours provided that he/she has,

a) obtained grades **not lower than C** in academic course units aggregating to **at least 100** academic credits,
b) obtained a minimum GPA of **3.00**
c) completed the relevant requirements within a period of **four consecutive** academic years.

Special Degree

To be eligible for the B.Sc. (Special) Degree, a student must '**complete**' a minimum of **120** credits with at least 30 credits from each of Level I, Level II, Level III and Level IV. For physical science students, at least **36** credits of these should be from the core units with a minimum of 6 credits each from three main subjects (7 in the case of Chemistry, total 18-19) at each of Levels I and II. For biological science students, at least **42** credits of these should be from the core units with a minimum of 7 credits each from three main subjects (total 21) at each of Levels I and II.

Level III and IV credits must be from the course units specified for the respective special degree programme, and should include a Research Project in Level IV.

Furthermore, a student must have

- obtained a grade **not lower than C in courses aggregating to a minimum of 96 academic credits,** with a minimum of 24 academic credits in each of Levels I, II, III, and IV,
- obtained **no** grade of NC (not complete), subject to the proviso that, in the event of the candidate being unable to sit for the final examination of a course unit for approved medical reasons **during his/her final year only**, a mark of zero may be assigned to such final examination at the request of the candidate and with the approval of the Faculty Board, the course unit considered completed, and the overall Mark computed and the final Grade assigned on that basis, this proviso being applicable for course units **totaling no more than 8 credits**,
- obtained grades of F in **no more than** 8 credits,
- obtained a grade of S (Satisfactory) or better in Enhancement Course Units totaling a minimum of 4 credits,
- fulfilled any other requirements approved by the Faculty Board for a given four year Special degree,
  e.g., professional requirements,
- obtained a minimum Grade Point Average of 2.00,
- completed the relevant requirements within a period of **six** academic years.

Award of Honours

- **First Class**

A student shall be awarded First Class Honours provided that he/she has

a) obtained grades **not lower than C** in academic course units aggregating to **at least 105** academic credits,
b) obtained a minimum GPA of **3.60**
c) completed the relevant requirements within a period of **four consecutive** academic years.

- **Second Class (upper Division)**

A student shall be awarded Second Class (Upper Division) Honours provided that he/she has

a) obtained grades **not lower than C** in academic course units aggregating to **at least 100** academic credits,
b) obtained a minimum GPA of **3.30**
c) completed the relevant requirements within a period of **four consecutive** academic years.

- **Second Class (Lower Division)**

A student shall be awarded Second Class
(Lower Division) Honours provided that he/she has,

a) obtained grades **not lower than C** in academic course units aggregating to **at least 100** academic credits,
b) obtained a minimum GPA of **3.00**
c) completed the relevant requirements within a period of **four consecutive** academic years

Special Requirements: B.Sc. (Pharmacy)

The B.Sc. (Pharmacy) Special Degree is a professional degree, which qualifies graduates to practice the profession of Pharmacy. To be eligible for this degree, a student must have obtained **a C grade** in each of the following units, in addition to the criteria specified for the award of a Special Degree.

Level III

(i) CH 3071 – Pharmaceutics I
(ii) CH 3024 – Pharmaceutical Chemistry
(iii) CH 3074 – Pharmacology I

Level IV

(i) CH 4070 – Pharmaceutics II
(ii) CH 4071 – Pharmacology II
(iii) CH 4075 – Pharmaceutical Law and Ethics

Option of reverting to the General Degree

A student reading for a B.Sc. four-year degree (General or Special) may request for the award of the B.Sc. three-year general degree, upon satisfying the requirements for the award of the B.Sc. three-year general degree, subject to the proviso that the requirement for completing 6 credits in each of two main subjects in Level III may be waived with the approval of the Faculty Board. A written request should be made to the Dean of the Faculty at the end of the third year or within two weeks of the release of the Level 4 semester 1 examination results.

Award of the Degree

A student should apply for the award of a Degree on satisfying the requirements. On completion of the B.Sc. General or B.Sc. Special degree, a student is entitled to an official transcript giving the grades in the respective course units after the confirmation of results by the University Senate.

FOUR YEAR GENERAL DEGREE PROGRAMME (Theme based)

The four-year General Degree (4G) programme is designed for general degree students who wish to pursue a career in industry if they do not get the opportunity to enroll in a special degree programme at the end of Level II.

The programme is oriented towards developing skills in students that are necessary to secure employment. It also provides **thematic** four-year degrees for those who may decide to pursue postgraduate degrees in particular areas. Each degree consists of a combination of taught courses and an industrial training oriented around a particular **theme.** The thematic courses are offered in various disciplines. In addition, courses will be offered in areas relevant to the industry, such as management and accounting, and will be designed to inculcate transferable ("soft") skills in students. Admission into certain thematic four-year programmes may be limited due to limitations in resources. Students wishing to apply for these programmes must fulfill the following eligibility criterion, as well as the selection criterion if places are limited.

Eligibility: A GPA of 2.50 at the end of Level II for **all** the courses followed

Selection: Total weighted mark obtained for all the Level I and II courses

There is only one entry point for the four-year degree programme, viz., at the end of the second year.

The list of students eligible to follow four year degree programmes will be announced at the end of the second year. The students must apply for the programme(s) of interest at the end of the second year. The student may register for the programme for which they are selected and register for the course units prescribed for that theme.The four-year degree programme provides an industrial training during the 8th semester. Currently available thematic programmes are described below and relevant courses are listed in Annex 21

IT Theme

Coordinator: Dr. S.S.N. Perera

This theme takes an integrated approach to provide students with a broad knowledge in Information Technology with industrial oriented experience. The program was designed with the help of expert individuals from industry. Currently the intake for the IT thematic degree is 20.

Electronics & IT Theme

Coordinator: Dr. H.H.E. Jayaweera

Introduced by the Department of Physics, the theme in Electronics & IT is aimed at developing essential skills in the application of electronics and information technology. The in-depth training will enable students to pursue careers in the related industry. The current intake is limited to 20.

Applied Statistics Theme

Coordinator: E.R.A.D. Bandara

The Applied Statistics theme is introduced with the intention of enhancing the employability of science graduates by developing management and data driven decision making skills. This programme was designed with the collaboration of industry personnel. The intake for this programme is 20. The IS & FM students and Physical Science students who have taken Statistics as a subject (P2, P4 and P6) at Levels I and II, and who have fulfilled the criteria for following a 4 year degree are eligible to follow this new theme.

Finance and Insurance Theme

Coordinator: Mr. M.H.K.M. Hameem

Finance and Insurance are areas with a great potential of applicable advanced research and rewarding career options in a wide range of industries. These fields have shown substantial growth despite the recent economic downturn, therefore there is high degree of guaranteed employability in comparison with other areas. Studying finance and insurance could be a good choice for potential students who wish to pursue their career either in postgraduate research or in the insurance sector. These fields are dense with job opportunities in a growing knowledge economy.

Courses are designed to provide insight into insurance, banking, finance and fundamentals of management in aspects of both theory and practice. The degree in Finance and Insurance will enable students to pursue a wide range of careers in the financial services industry and to gain professional qualifications.

Business and Environment Theme

Coordinator: Dr. N. Pallewatta

The Department of Zoology & Environment Sciences is offering a new 4 year thematic degree to provide opportunities in this newly emerging sector of employment. Rapid development of tourism and its associated service sectors, and gradual mainstreaming of sustainable development in the corporate sector, the inclusion of climate change impacts and adaptations in every sphere of activity has created a need for university graduates who can fulfill the demands created by these. This new theme has been designed in close collaboration with the private sector that relies on the products and services of the ecosystems in Sri Lanka, and those who have successfully marketed their organizations to a global clientele. The courses are designed to include student centered learning which in turn will provide a richer and more interactive teaching and learning environment. Leaders from the corporate world will teach alongside university academics and others who have much experience in molding persons for the world of work. The inclusion of group projects and industrial training is especially helpful to provide a wide range of competencies essential in the modern day workplace and opportunities for employment.

Horticulture and Sustainable Landscaping Theme

Coordinator: Dr. S.W. Ranwala

Introduced by the Department of Plant Sciences, the theme will focus on horticulture and landscaping with a strong emphasis on maintaining the sustainability of human-modified landscapes. Students following this theme will be provided with opportunities to understand basic landscape designs and landscape management practices for urban and suburban areas. In addition, students will be trained to develop entrepreneurial skills and computer literacy in the discipline. The programme will be taught by academic and professional experts, and will include a component of industrial training. The current intake is limited to 20 students.

Science & Management Theme

Coordinator: Dr G.H.C.M. Hettiarachchi

The Career Guidance Unit, Faculty of Science will be offering a four year General Degree program on the theme "Science and Management". This program is designed to provide students with a solid background in science as well as a grounding in managerial skills. The Science and Management theme aims to prepare students for executive careers in public/ private cooperation and institutions which are technology oriented. The students following this theme will learn the principles in their specific sequence/track (Environmental science, Chemistry, Physics, or other fields) and are expected to acquire the ability to apply them to solve problems and gain knowledge on fundamental principles of management, economics and accounting, experience in the world outside the classroom, and the background necessary for a career focused on science and management with the development of adequate soft skills.

Molecular Biology & Biotechnology Theme

Coordinator: Dr. N.V. Chandrasekharan

The Molecular Biology & Biotechnology theme is a 2-year program for which students can enroll at the end of the 2nd year. It is aimed at providing students a more application oriented program in biotechnology with a view to enhancing the employment opportunities of students while also benefiting those who want to pursue graduate studies. The program will consist of several courses with lectures, tutorials, laboratory practicals and a group project. The lectures will cover the scientific fundamentals of Molecular Biology and Biotechnology, and the major applications of Biotechnology in the fields of Medicine, Agriculture, Industry and Environment while the laboratory practicals and the group project will provide a training in some of the basic skills and techniques in Molecular Biology and Biotechnology with an emphasis on those relevant to the country. All students in their final year will also enroll in an approved internship program which will help students to get on-the-job experience and prepare them for future employment in industry.

Nuclear Technology 4G Theme

Coordinator: Dr. M.R. Lamabadusuriya

The main objective of the programme is to provide an overall knowledge and practical skills in nuclear technology which includes medical physics, nuclear medicine, radiochemistry, environmental radiation and nuclear analytical techniques. During the final year the students will have 120 hours of industrial or clinical practice in a relevant institute or major hospital in Colombo where they acquire hands on experience required for a career that combines the theory with the technology.Scopes of this degree program is to produce graduates with sound knowledge in all fields of Nuclear Science while promoting research and developments on environmental radiation radiochemical analysis and medical physics in Sri Lanka. In addition, this degree will provide the basic knowledge and skills for those who plan for postgraduate degrees in

THE DEGREE STRUCTURE

The degrees on offer

Students enter the Faculty of Science, University of Colombo through the intakes of

- Biological Sciences,
- Physical Sciences,
- Biochemistry & Molecular Biology, and
- Industrial Statistics & Mathematical Finance.

The faculty offers three Bachelor of Science (BSc.) degree programs, namely the,

- General Degree programme of three year duration
- General Degree programme of four year duration
- Special Degree programme of four year duration

The degree organization

The degree programme is based on a course unit system consisting of Subject Course Units and Enhancement Course Units. Each course unit has a Credit Rating.

The degree is determined upon the completion of a prescribed number of credits from the subject course units and enhancement course units offered in four academic years (maximum six academic years).

Title of the degrees

The three-year degree and the four-year degrees are named the **Bachelor of Science (B.Sc.) Degree**.

Medium of instruction

All lectures, practicals and examinations pertaining to course units are conducted in the **English** language.

General Information

Academic year

The academic programme of the Faculty of Science is based on a semester system with two semesters per year, each of 15 weeks duration. The year plan is scheduled so that minimum disturbance occurs due to various festivals and holidays. The general year plan under this scheme is shown below.

Semester 1	Semester 2
First half- 08 weeks	First half- 08 weeks
Mid-semester break- 01 week	Mid-semester break- 01 week
Second half- 07 weeks	Second half- 07 weeks
Study leave- 01 week	Study leave- 01 week
Examination -04 weeks	Examination -04 weeks
Vacation - 03 weeks	Vacation - 07 weeks

Subjects Offered

Subject course units for the degree are offered by seven academic departments of the faculty, namely Chemistry, Mathematics, Nuclear Science, Physics, Plant Sciences, Statistics and Zoology & Environment Sciences. These departments offer courses in 15 different subject areas. In addition, Computer Science is offered as a subject to all students in the faculty through the University of Colombo School of Computing (UCSC). During the Level III some of the Computer Science units are offered by the Industrial and Financial Systems (IFS), a leading private sector company. The subjects that the faculty offers under the different programmes and the letter codes assigned to them are given in the table below.

Subject	Letter Code
Applied Mathematics	AM
Biochemistry	BC
Chemistry	CH
Computer Science	CS/IT
Environmental Science	EN
Financial Mathematics	FM
Industrial Statistics	IS
Management Science	MS
Molecular Biology	MB
Nuclear Science	NS
Physics	PH
Plant Sciences	BT
Pure Mathematics	PM
Statistics	ST
Zoology	ZL

Academic programme

Credit value

The academic programme of the Faculty of Science is based on a Course Unit System. A Course Unit is a subject module, which has a credit value. A credit is a time-based quantity assigned to each Course Unit, which depends on the duration and the type of the course.

One credit is equal to 15 hours of lectures or 30 hours of practicals or a proportionate combination of lectures and practicals.

The minimum and the maximum credit rating of a course unit may vary from 01 credit to 08 credits except in the Internship /Industrial training module offered for the four year general degree programme.

Subject units

Subject units provide necessary academic knowledge and skills pertaining to various subjects. A subject unit comprises a large number of course units which are offered at different levels of the degree programme. Subject course units are classified as follows:

- Compulsory course units
- Elective course units

Compulsory course units provide the essential knowledge necessary to build the foundation of any given subject combination (stream), and are stream specific. Students in a given stream should offer all such units during their first and second years.

Elective course units are course units offered in addition to compulsory units to provide broader knowledge on various subject areas. Students may select from a basket of such units in order to make up the required number of credits.

Certain units, designated as **core units**, provide basic knowledge in particular subjects. These may be compulsory or elective according to the requirements of a given stream.

The academic programme is organized at four levels, Level I, Level II, Level III and Level IV, which represent respectively the first year, second year, third year, and the fourth year of study.

Enhancement Course (EC) units

In addition to **subject course units** (academic) students are required to offer a certain number of **enhancement course units** (non-academic) which provide knowledge on a wide range of disciplines, and soft skills that are required in today's society. Enrolment in enhancement courses will enable students to improve their inherited skills and gain competence in the activities of their liking. At present, the Faculty of Science offers EC courses in the areas of photography, languages, sports, electronics, library communication skills etc. More details of EC Courses are given in Annex 22. Students must complete at least four credits from enhancement courses during their study programme to graduate.

Career and Personal Development (CPD) Programme

The aim of the CPD programme is to complement the academic programmes of our faculty by providing a sequentially structured and supported process to enable undergraduates to achieve attributes that would lead to their professional and personal success.

Following an introductory workshop on career and personal development at the orientation programme for new entrants, a one credit course on CPD is offered at each of levels I and II of the undergraduate study programme (EC 1015 and EC 2015). Enhancement courses on Career Planning (EC 1016) during level I and Enterprise, Entrepreneurship and Innovation (EC 2020) at Level II are also offered. This exposure is continued through Levels III and IV by offering a two credit enhancement course on CPD conducted by the Association of Human Resource Professionals, Sri Lanka and the programme culminates in the 3 month Internship Training (FS 3001) and Service learning (FS 3002) that account for 6 and 8 academic credits, respectively

Biological Science/Biochemistry & Molecular Biology

All biological science students, including students of the Biochemistry and Molecular Biology direct intake, shall offer Plant Sciences, Chemistry, and Zoology as well as certain other required courses in Computer Science, Environmental Science, and Applied Mathematics.

Physical Sciences

Subject Combinations:

P1 Applied Mathematics, Physics, Chemistry, Computer Science*

P2 Applied Mathematics, Physics, Statistics, Computer Science*

P3 Applied Mathematics, Pure Mathematics, Physics, Computer Science*

P4 Applied Mathematics, Chemistry, Statistics, Computer Science*

P5 Applied Mathematics, Pure Mathematics, Chemistry, Computer Science*

P6 Applied Mathematics, Pure Mathematics, Statistics, Computer Science*

Industrial Statistics and Mathematical Finance

All Industrial Statistics and Mathematical Finance students shall offer Industrial Statistics, Financial Mathematics, Management Science, Computer Science.*

* Computer Science is offered as an additional (4^{th}) subject for all the combinations. Only three of the four specified subjects are compulsory for a subject combination.

DEGREE PROGRAMMES

The Faculty offers three BSc. degree programmes, namely, the **general degree programme of three-year** duration (3G), the **general degree programme of four-year** duration (4G), and the **special degree programme of four-year** duration. Initially all students should enroll in the corresponding BSc. general degree programme. Students who excel in the first two years then have the opportunity of enrolling in one of the BSc. special degree programmes. Students also have the opportunity of enrolling in the **general degree programme of four-year** duration at the end of their Level II, if they fulfill the specified requirements.

General degree programmes

Requirements for the three-year General Degree programme

In the three-year general degree programme of the Science intake, students are expected to follow course units in Levels I, II and III.

- **Biological Science / Biochemistry & Molecular Biology**

Biological Science students will follow a prescribed programme in their first two years, covering the three main disciplines, with some limited options in ancillary areas (see Annex 4 and 5).
In their Level III, students of the biological science intake will be required to register for the core/compulsory courses of any two disciplines from Chemistry, Plant Sciences or Zoology and other courses of their choice (See Annex 6). Students of the Biochemistry & Molecular Biology direct intake will follow a prescribed set of courses designed to give them intermediate and advanced knowledge in these areas (See Annex 7).

- **Physical Science/ Industrial Statistics and Mathematical Finance**

During the first two years, the faculty offers various subject combinations and students are expected to select one subject combination. Although subject combinations are defined in the third year as well, students are given flexibility to move across combinations to follow a variety of course units.

Each subject combination consists of four subjects, and in the first two years, students are required to select a subject combination, and course units from at least three subjects, specified within that combination.

The subjects thus selected are termed **main subjects**.Students must register for the compulsory course units from each main subject. In order to treat any subject offered by a student at a given level of the general degree programme as a main subject, he/she must register for at least **six** course unit credits from that subject (**seven** in the case of Chemistry).

In the three year general degree programme of the **Industrial Statistics and Mathematical Finance** intake, students are expected to follow course units as specified in the Annexes 8, 9 and 10 at Levels I, II and III, respectively.

Requirements for the Four-year General Degree programme

In the four-year general degree programme students are expected to follow course units at Levels I and II of their relevant programmes first, according to the instructions provided. If the student wishes to opt for the four-year degree programme, he/she may do so at the end of the Level II, provided that all the necessary requirements have been fulfilled. **Students who wish to be selected for the four-year general degree are required to obtain an overall GPA of 2.5 at the end of the first two years of study.**

Special Degree Programmes

Requirements for the Special degree Programme

In the four-year special degree programme, students are expected to follow course units at Levels I and II, of their relevant programmes first, according to the instructions provided on page 25. If the student wishes to be selected for the four-year special degree he/she may apply at the end of the second year, provided that all the necessary requirements have been fulfilled. More details of the special degrees are given on page 12.

Student intake, eligibility and selection criteria together with departmental requirements for selection for each special degree course are given on page 27. **Details of the course units offered during the Level III and IV for each of the special degree programmes are given in Annexes 11-20.** The list of special degree programmes available in the faculty is given below.

All academic credits accumulated over the entire four year period are considered for the award of the B.Sc. special degree.

Special Degree Programmes
Biochemistry & Molecular Biology[1,3]
Bio-Informatics[1]
Chemistry[1,2,3]
Computational Chemistry[1,2]
Computational Physics[2]
Engineering Physics[2]
Environment Science[1]
Finance, Business & Computational Mathematics[2]
Immunology & Integrative Molecular Biology[1]
Industrial Statistics[4]
Mathematical Finance[4]
Mathematics & Statistics with Computer Science[2]
Mathematics[2]
Nuclear Medical Science[1,2]
Pharmacy[1]
Physics[2]
Plant Biotechnology[1]
Plant Sciences[1]
Statistics with Computer Science[2]
Statistics[2]
Zoology[1]

1. [1]Available for Biological Science stream
2. [2]Available for Physical Science stream
3. [3]Available for Biochemistry & Molecular Biology stream
4. [4]Available for Industrial Statistics & Mathematical Finance stream

Selection Criteria for Special Degree Programmes

Students who wish to be selected for the 4 year special degrees are required to obtain a **minimum GPA of 2.0 for all courses at Levels I and II taken together.**

Selection for the special degrees is based on the grades obtained for the core/compulsory course units in the relevant subject areas and other specified courses wherever applicable, in Levels I and II of study, and student preference. The degree offered, student intake, eligibility criteria and selection criteria for the available special degrees are given below.

Biochemistry & Molecular Biology

Student intake: 24

Eligibility: GPA of 3.00 for CH core courses and at least a C grade each for CH 2013, CH 2014, BT 1011 and AM 1008.

Selection: Total weighted marks obtained for CH core and compulsory courses.

Chemistry

Student intake: 24

Eligibility: GPA of 3.00 for CH core courses and at least a C grade for AM 1008 for those who are not offering AM core courses at Levels I and II.

Selection: Total weighted mark obtained for CH core courses.

Computational Chemistry

Student intake: 10

Eligibility: GPA of 3.00 for CH core courses and at least a C grade each for CS 1101 and CS 2002, and also for AM 1008 for those who are not offering AM core courses at Levels I and II.

Selection: Total weighted mark obtained for CH core courses.

Pharmacy

Student intake: 12

Eligibility: GPA of 3.00 for CH core courses and at least a C grade each for ZL 2010 and AM 1008.

Selection: Total weighted mark obtained for CH core courses.

Physics

Student Intake: 10

Eligibility: GPA of 3.00 for PH core courses and GPA of 2.70 for AM core courses

Selection: Total weighted mark obtained for PH core courses.

Computational Physics

Student Intake: 10

Eligibility: GPA of 3.00 for each of PH and CS core courses and GPA of 2.70 for AM core courses.

Selection: Total weighted mark obtained for PH and CS core courses.

Engineering Physics

Student Intake: 10

Eligibility: GPA of 3.00 for PH core courses plus at least C grades each for PH 1021 and PH 2021 and GPA of 2.70 for AM core courses.

Selection: Total weighted mark obtained for PH core courses.

Mathematics / Finance, Business & Computational Mathematics

Student Intake: 12

Eligibility: GPA of 3.00 for AM core courses and GPA of 2.70 for PM core courses

Selection: Total weighted mark obtained for AM and PM core courses taken together

Mathematical Finance

Student Intake: 10

Eligibility: GPA of 3.00 for FM core courses (inducing PM 1001, PM 2001) and GPA of 3.00 for MS core courses offered by the Mathematics department.

Selection: Total weighted mark obtained for FM and MS core courses taken together.

Mathematics & Statistics with Computer Science

Student Intake: 10

Eligibility: GPA of 3.00 for each of ST, AM and CS core courses and at least C grades for PM 1001, PM 2001 and AM 1005

Selection: Total weighted mark obtained for ST, AM and CS core courses taken together

Nuclear Medical Science

Student intake: 06

Eligibility: At least a B grade for NS 2003 and a GPA of 3.00 for CH core courses and GPA of 3.00 for core courses either in ZL, BT or PH.

Selection: The highest weighted aggregate mark obtained for core courses of either BT, CH, ZL, OR PH.

Statistics

Student Intake: 15

Eligibility: GPA of 3.00 for ST core courses and GPA of 2.70 for AM core courses

Selection: Total weighted mark obtained for ST core courses.

Statistics with Computer Science

Student Intake: 10

Eligibility: GPA of 3.00 for each of ST and CS core courses and GPA of 2.70 for AM core courses

Selection Criteria: Total weighted mark obtained for ST and CS core courses taken together.

Industrial Statistics

Student Intake: 12

Eligibility: GPA of 3.00 for IS core courses and GPA of 2.30 for PM 1001 and PM 2001.

Selection: Total weighted mark obtained for IS core courses taken together

Plant Biotechnology

Student Intake: 08

Eligibility: GPA of 3.00 for BT core courses

Selection: Total weighted mark obtained for BT core courses

Plant Sciences

Student Intake: 08

Eligibility: GPA of 3.00 for BT core course units

Selection: Total weighted mark obtained for BT core courses

Bio-Informatics

Student Intake: 08

Eligibility: GPA of 3.00 for BT core courses, and combined GPA of 3.00 for CS 1101, CS 1102, and CS 2001 and at least a C grade for AM 1008.

Selection: Total weighted mark obtained for the BT core courses and CS courses.

Zoology

Student intake: 10

Eligibility: GPA of 3.00 for ZL core courses

Selection: Total weighted mark obtained for ZL core courses

Environment Science

Student intake: 10

Eligibility: GPA of 3.00 for EN 1008 and EN 2008 and GPA of 2.70 for core courses of either ZL, BT or CH

Selection: Total weighted mark obtained for EN 1008 & EN 2008

Immunology & Integrative Molecular Biology:

Student intake: 10

Eligibility: GPA of 3.00 for ZL core courses and GPA of 2.70 for BT 1011, CH 1012 and CH 2013

Selection: Total weighted mark obtained for ZL core courses and BT 1011, CH 1012, CH 2013.

MEDALS, PRIZES, AWARDS AND SCHOLARSHIPS

A summary of the Gold Medals, Prizes, Awards and Scholarships in the Faculty is given below. Details of the specific requirements for each Gold Medal, Prize, Award or Scholarship can be obtained from the Examinations branch of the University and the relevant Department of Study.

Gold Medals, Prizes and Awards given at the Convocation

Mr. and Mrs. V.W. Samaranayake Memorial Gold Medal for Statistics

The Mr. & Mrs. V.W. Samaranayake Memorial Gold Medal was founded by Professor V.K. Samaranayake, former Professor of Mathematics, University of Colombo, Mrs. V.K. Samaranayake and Mr. V.A. Samaranayake of the Department of Statistics, Kansas University, USA in memory of the late Mr. & Mrs. V.W. Samaranayake.

The award should be made to the student with the highest GPA among those having a GPA of 3.25 and above in the special degree programme in Statistics.

Coomaraswamy Prize

The Coomaraswamy Prize was founded at the Ceylon University College in 1922 by the late Sir Ponnambalam Arunachalam in memory of his uncle Sir Mutu Coomaraswamy.

The prize is awarded to the student who shows the highest competence in the General Science Degree programme.

Bhikaji Framji Khan Gold Medal for Chemistry

The Bhikaji Framji Khan Gold Medal for Chemistry was established at the Ceylon University College in 1938 by Mr. F.P. Khan. The medal is awarded to the student who shows the highest competence in Chemistry at the Special Degree examination.

Dr. C.A. Hewavitharana Memorial Prize for Physics

Dr. C.A. Hewavitharana Memorial Prizes were founded in 1951 by Mrs. C.A. Hewavitharana. One prize is awarded for Sanskrit and one for Physics, in memory of her husband, the late Dr. C.A. Hewavitharana, FRCS (Eng.) LRCP (Lond), a member of the Ceylon University College Council.

The prize is awarded to the student who shows the highest competence in Physics at the Special Degree examination.

Professor B.L.T. de Silva Memorial Award in Plant Sciences

The Professor B.L.T. de Silva Memorial Award was established in memory of the late Professor, B.L.T. de Silva, Professor of Botany, University of Ceylon, by his colleagues and students.

The award is for the student who exhibits the best performance in the Plant Sciences or Plant Biotechnology Special Degree programmes offered by the Department of Plant Sciences.

Justin Samarasekara Award for the Most Outstanding Science Student of the Year

The Justin Samarasekara Award was established in 1979 by Mr. Justin Samarasekara of Justin Samarasekara Associates, Colombo (Architects).

The award is for the most outstanding student in the faculty.

Dharmadasa Punchihewa Memorial Prize for Mathematics

The Dharmadasa Punchihewa Memorial Prize was founded by Mr. & Mrs. G.W. Jayasuriya in 1983, in memory of Mrs. Jayasuriya's father, the late Mr. Dharmadasa Punchihewa.

The prize is awarded for the best performance, with either a first or a second class upper division, in the Special Degree examination in Mathematics.

Mailvaganam Memorial Award in Physics

The Award was established in 1987 by Mr. H.D.S.A. Gunawardena (a student of Professor A.W. Mailvaganam), in memory of Professor A.W. Mailvaganam, Professor of Physics at the University of Ceylon and University of Colombo

The prize is awarded to the student placed first with either a First Class or a Second Class upper division in the Special Degree examination in Physics.

Sir Nigel Ball Award for Plant Sciences

This award was established in memory of Sir Nigel Ball, M.A., Sc.D. (Dub.) by Professor B.A. Abeywickrema. Sir Nigel Ball was appointed the Professor of Botany in the University College in 1924 and in 1942 in the University of Ceylon.

The award is for the best performance in Advanced Plant Physiology and Plant Biochemistry in the Special Degree programmes of the Department of Plant Sciences.

Professor P.C Sarbadhikari Award for Plant Sciences

This award was established in memory of Professor P.C. Sarbadhikari by Professor B.A. Abeywickrema. Professor P.C. Sarbadhikari, M.Sc. (Calcutta), Ph.D., D.Sc. (London) was appointed as a Lecturer in Botany at the University College in 1925. He was appointed the Professor of Botany in 1943.

This award is for the best performance in Plant Sciences in the General Degree programme.

Professor Stanley Wijesundera Memorial Gold Medal for Biochemistry and Molecular Biology

This award was established in memory of Prof. Stanley Wijesundera, formerly Vice-Chancellor, University of Colombo, by his wife Mrs. Anoja Wijesundera.

The award is for best performance in Biochemistry, Molecular Biology course units in the Special Degree programme.

Dharmachandra & Tamarasa Gunawardhana Memorial Gold Medal for Analytical Chemistry

This award was established by Professor H.D. Gunawardhana, Professor of Inorganic Chemistry and Mrs. P.C. Nanayakkara, in memory of their parents, Mr. H. Dharmachandra Gunawardhana and Mrs. Tamarasa Podimenike Handinnapola Gunawardhana.

This award is for the best performance in Analytical Chemistry in the Chemistry Special Degree programme

Professor B.A. Abeywickrema Award for Plant Sciences.

The staff members of the Department of Plant Sciences established this award in recognition of the excellent service rendered by Prof. B.A. Abeywickrema, formerly Professor of Botany.

This award is for the best performance in Plant Systematics and Ecology related courses (as specified by the Department) in the Plant Sciences Special Degree Programme.

Dr. Swarna Senathirajah Memorial Prize for Genetics and Plant Breeding

The University of Colombo Science Teachers Association established this endowment in 1985 in memory of Dr. (Mrs.) Swarna Senathirajah of the Department of Plant Sciences.

The prize is awarded to the Special Degree Student of the Department of Plant Sciences, who performs best in the Genetics and Plant Breeding courses of the Department of Plant Sciences.

The Award for the Best Student in the B.Sc. (General) Degree in Physical Sciences

Mr. Dhammika and the late Dr. Maya Gunasekara established this award in 1995.The award is made to the student who shows the highest competence and having a First Class, in Physical Science in the General Degree.

Joseph Nalliah Arumugam Memorial Award

Dr. (Mrs.) L.G. Arumugam established, in 1986, an endowment with the UGC in order to award five Scholarships and two Gold Medals to various universities in memory of her late husband Mr. Joseph Nalliah Arumugam, (CBS, CCS, B.Sc., and Barrister-at-Law). A gold medal is awarded to the student who shows the highest competence in the final examination in Science.

Professor R.S. Ramakrishna Gold Medal for Inorganic Chemistry

The award was established in 2001 in honor of the late Professor R.S. Ramakrishna by his students. A gold medal is awarded for the best performance in Inorganic Chemistry in the Chemistry Special Degree programme.

Professor Pearlyn Pereira Memorial Gold Medal for Physical Chemistry

The award was established in 2001 in memory of the late Professor Pearlyn Pereira by her students.

A gold medal is awarded for the best performance in Physical Chemistry in the Chemistry Special Degree programme.

P.B. Karunaratne Memorial Gold Medal for Ornithology

The Field Ornithology Group of Sri Lanka established the award in 2001 in memory of the late P.B. Karunaratne, field ornithologist.

A gold medal is awarded for the best performance in Ornithology in the Zoology Special Degree programme

The Field Ornithology Group Gold Medal For Business and Environment

The Field Ornithology Group of Sri Lanka established the above award for an environment related course in 2001.

A gold medal is awarded for the best performance in the Business and Environment stream of the four year General Degree Programme.

Gold Medal for the Best Final Year Project in Statistics

The above Gold Medal was established by the staff of the Department of Statistics.

A gold medal is awarded for the best performance in the final year project with an “A” grade in the Statistics special degree programme, having at least a GPA of 3.25.

Gold medal for Industrial Statistics

The above medal was established by the staff of the Department of Statistics.

The Gold medal shall be awarded to the student who obtains the highest GPA amongst those having a GPA of 3.25 or above in the Industrial Statistics Special Degree Programme.

Gold medal for the Best Final Year Project in Industrial Statistics

The above medal was established by the staff of the Department of Statistics.

The Gold medal shall be awarded to the student who obtains highest marks for the final year project with a grade “A or above” amongst those having a GPA of 3.25 or above in the Industrial Statistics Special Degree Programme.

Gold Medal for Organic Chemistry

The Gold Medal shall be awarded to the student who obtains the highest aggregate mark for the course units in Organic Chemistry offered in the B.Sc. Special Degree programme in Chemistry.

The Gulamhussein A.J. Noorbhai Gold Medals

The following Gold Medals were established by Dr.Tuwab Fazleabas F.R.C.S. (England) in 1999.

- **Gold Medal for Biochemistry and Molecular Biology**

  Awarded to a student who has shown the highest competence at the Special Degree examination in Biochemistry and Molecular Biology.
- **Gold Medal for Mathematics**

  Awarded to a student who has shown the highest competence at the Special Degree examination in Mathematics**.**
- **Gold Medal for Pharmacy**

  Awarded to the student who has shown the highest competence at the Special Degree examination in Pharmacy.
- **Gold Medal for Zoology**

  Awarded to the student who has shown the highest competence at the Special Degree examination in Zoology.
- **Gold Medal for Research Project in Zoology**

  Awarded to the student who has shown the highest competence in the research project in Zoology with an “A” grade.
- **Gold Medal for Research Project in Physics**

  Awarded to the student who has shown the highest competence in the research project in Physics with an “A" grade.

Professor V.K. Samaranayake Memorial Gold Medal for Statistics with Computer Science

Professor V.K. Samaranayake Memorial Gold Medal was founded by the Department of Statistics and will be awarded to the student who obtains the highest GPA among those having a GPA of 3.25 or above in the Special degree programme in Statistics with Computer Science.

Gold medal for the Best Final Year project in Statistics with Computer Science

The above Gold Medal was established by the Department of Statistics. The Gold medal is awarded to the student who obtains a minimum GPA of 3.25 and the highest marks for the final year project with an “A” grade in the Statistics with Computer science special degree programme.

Mr. & Mrs. D.P. Epasinghe Memorial Gold Medal for Mathematics

This award was established in 2004 by Emeritus Professor P.W. Epasinghe in memory of his parents. A gold medal is awarded to the student who has shown the highest competence in Mathematics at the Special Degree examination and having a First Class

Douglas Amarasekera Prize for the Best Student in Mathematics

Established in 2004 in the memory of the late Douglas Amarasekera, former Professor of Mathematics, University of Colombo and is awarded to the student who performs best in the special degree Pure Mathematics courses with at least a 2nd class upper division.

Mr. A.G.W. Perera Memorial Gold Medal for Engineering Physics

This Medal was established in memory of Mr. A.G.W. Perera. The Gold Medal shall be awarded to the student who obtains the highest GPA among those having a GPA of 3.5 or above and a First Class in the Engineering Physics Special Degree programme.

The Award for the Best Student in the B.Sc. (General) Degree in Biological Science

This is awarded to the best student (based on the weighted average) in the biological Science stream. However, the student will only be eligible for the award if he/she has obtained a B.Sc. (General) degree with First Class Honours.

The award should not be made to students who have been found guilty of misconduct, and if any award is not made during any year, the amount of money available for such award should be added to the capital.

Dr. Sarath Gunapala Gold Medal for Computational Physics

This Gold Medal shall be awarded to the student who obtains the highest GPA among those having a GPA of 3.5 & above and a First Class in the Computational Physics Special Degree programme.

Scholarships

Prizes and Scholarships that are awarded during the study period

Arthur Lambert Rupasinghe Memorial Scholarship

The Arthur Lambert Rupasinghe Memorial Scholarship was established at the Ceylon University College in 1933, under the will of the late Mr. G.L. Rupasinghe, in memory of his brother Arthur Lambert Rupasinghe.

The award is for a student following the Special Degree programme in Physics and is based on the performance in the first two years.

Clarence Amarasinghe Scholarship

Mrs. Senehelatha Amarasinghe endowed two scholarships in memory of her parents, the late Mr. & Mrs. N.D.S. Silva and her late husband Mr. Clarence Amarasinghe.

The award is for a student following a Special Degree programme and is based on financial need and performance in the first two years.

Charles M. Dias Memorial Scholarship

The Charles M. Dias Memorial Scholarship was founded in 1983 by Professor and Mrs. Hiran D. Dias in memory of his late father Mr. Charles M. Dias.

The scholarship is for a male student from the Kalutara District and is based on the performance in the first year examination in Science.

W. Charlotte Peries Scholarship in Chemistry

The W. Charlotte Peries Scholarship in Chemistry was founded in 1986 by Professor W. Pearlyn Daisy Pereira (nee Peries) of the Department of Chemistry, University of Colombo, in memory of her late mother, Mrs. W. Charlotte Peries.

The scholarship is awarded to a Physical Science student following the Special Degree in Chemistry and is based on the performance during the first two years.

C.L. de Silva Memorial Prize

This Prize was established in 1958 in memory of the late C.L. de Silva, Lecturer in Chemistry, University of Ceylon.

The prize is awarded to a student reading for the Special Degree in Chemistry and is based on the performance in the first two years.

Department of Plant Sciences Staff Prize

The Department of Plant Sciences Staff Prize was established in 1974, with contributions from the members of the academic staff and the well-wishers of the Department.

The prize is awarded to a student reading for the Special Degree in Plant Sciences and is based on the performance in the first two years.

Kirthisinghe Memorial Prize in Zoology

The Kirthisinghe Memorial Prize in Zoology was founded in 1981 by Dr. D. Kirthisinghe and Mrs. L.R. Amarasuriya, in memory of their late father Prof. P. Kirthisinghe who was on the staff of the University of Colombo.

The award is for the best student admitted to the Special Degree programme in Zoology.

Prof. J.E. Jayasuriya Prize for Mathematics

This prize was established by Mrs. J.E. Jayasuriya in the memory of her husband, late Prof. J.E. Jayasuriya former Professor of Education. The prize is based on the performance in Mathematics in the first year examination in Science and on parental income.

Dr. Shamol Basu Memorial Scholarship

This Scholarship was established in 1992 by the family of Dr. Shamol Basu, in memory of Dr. Shamol Basu who died whilst in service at the University of Colombo.

The scholarship is awarded to a student following the Special Degree programme in Chemistry and is based on the first two years performance in Chemistry.

P.P. Jayawickrema Memorial Scholarship

This Scholarship was established in 1993 by Mrs. Rohini Jayawickrema in memory of her late husband Mr. P.P. Jayawickrema.

The scholarship is awarded for competence in Physics in the first year examination.

Mr. & Mrs. H.D.P. Gunawardena Memorial Prize in Physics & Mathematics

This Award was established in 1987 by Mr. H.D.S.A. Gunawardena of 283/8, Thimbirigasyaya Road, Colombo 05, in memory of his parents who were principals of schools in the North-Western Province.

The prize is awarded to a student from the North-Western Province and is based on the performance in Physics and Mathematics in the first year examination.

The Gulamhussein A.J. NoorBhai Scholarships

The following Scholarships were established by Dr.Tuwab Fazleabas F.R.C.S. (England) in 1999.

1. Scholarship for Mathematics

Awarded to a third year student following the Mathematics Special Degree programme and has performed best in Mathematics in the first two years.

2. Scholarship for Zoology

Awarded to a third year student following the Zoology Special Degree programme and has performed best in Zoology in the first two years.

Douglas Amarasekera Bursaries

Established in the memory of the late Douglas Amarasekera, former Professor of Mathematics, University of Colombo. The bursary is given to 4 students following Pure Mathematics as a subject and is based on academic performance and family income.

Kottegoda Gnanalankara Thero Scholarship for Mathematics

This scholarship is given to a student from Southern or Western Province and is based on the performance in Pure and Applied Mathematics courses in the first year and on his/her family income.

Astron Scholarship for Pharmacy

Astron Ltd established the scholarship in 2004. The scholarship is given to the student who performs best at the third year special degree examination in Pharmacy.

Prof. H.D. Gunawardhana Scholarship

This Scholarship was established in 2011 by the well-wishers of the Department of Chemistry.

The Scholarship is awarded annually to a student following the Special Degree Programmes in Chemistry or Computational Chemistry. It is based on the performance at the Level III examination

Dr. Sujatha Hewage Scholarship

This Scholarship was established in 2011 by the well-wishers of the Department of Chemistry.

The Scholarship is awarded annually to a student following the Special Degree Programme in Pharmacy or Biochemistry & Molecular Biology. It is based on the performance at the Level III examination.

Prof. E. Dilip de Silva Scholarship

This Scholarship was established in 2016 by the former students and well-wishers of Professor E Dilip de Silva.

The Scholarship is awarded annually to a student following the Special Degree Programme in Chemistry. It is based on performance in the first two years and financial need.

Prof. P. C. B. Fernando and Clodagh Fernando Award for the Best Undergraduate Research Project in the Immunology and Integrative Molecular Biology Programme

Awarded to a student of the Special Degree in the Immunology & Integrative Molecular Biology Programme of the Department of Zoology and Environment Sciences, who obtains the highest mark (at least an 'A' grade) for the final year research project, and has completed all other requirements for graduation.

Prof. S. W. Kotagama Gold Medal for the Best Student in Environmental Science (Special Degree

Established by the Base for Enthusiasts of Environmental Science and Zoology (BEEZ), this Gold Medal shall be awarded to the student who obtains the highest GPA from among those who fulfil the requirements for a First Class Honours in the Environmental Science Special Degree programme

THE DEPARTMENTS OF STUDY

The Faculty of Science comprises seven departments that specializes in diverse field of study. Each department has academics who engage in teaching and multidisciplinary research and development activities. These departments within the Faculty Science are:

- Department of Chemistry
- Department of Mathematics
- Department of Nuclear Science
- Department of Physics
- Department of Plant Sciences
- Department of Statistics
- Department of Zoology & Environment Sciences.

In addition the Faculty of Science has a Science and Technology Cell which functions as an independent unit.

Department of Chemistry

Chemistry is often referred to as the "Central Science" as it stands between and significantly overlaps with mathematics, physics, and biology. Chemistry is an integral component of applied sciences such as pharmaceutical, biomedical, agricultural and environmental science. Students with a strong background in chemistry are at a significant advantage being able to work and apply their knowledge in these areas and a number of other related fields. In this context the Department of Chemistry has designed and offers a carefully planned syllabus to equip the student with the required theoretical knowledge and the practical training to face the multifaceted challenges they might encounter on graduation. The department provides the basic background in all areas of chemistry in the first two academic years. General Degree students in their third and, where relevant, fourth years are given exposure to more applied and industry oriented courses while students following Special Degree programmes are exposed to more specialized and advanced aspects of chemistry. The department also conducts a number of M.Sc./Diploma programmes with a view to providing an opportunity for postgraduate students, especially for those employed, to enhance their knowledge in areas of their choice. The Department of Chemistry plays a central and a unique role among the seven departments that make up the Faculty of Science.

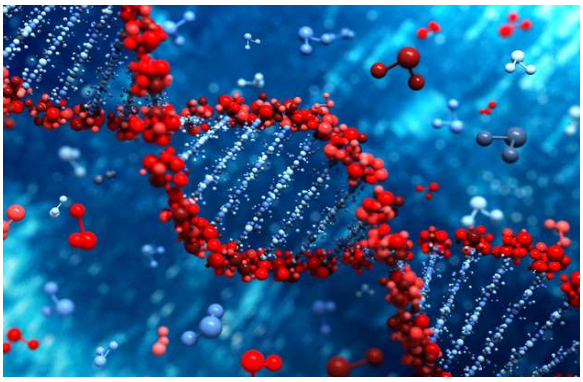
Academic Programmes

Undergraduate Programmes

General Degree:

The Department of Chemistry offers a number of core, compulsory and elective courses in chemistry open for both physical science and biological science students. The core / compulsory courses are designed to provide the foundation not only to further knowledge in chemistry but also in other related areas. The elective courses are designed to cover topics of more general interest.

The Department will also be offering a four-year General Degree programme on the theme Molecular Biology and Biotechnology.

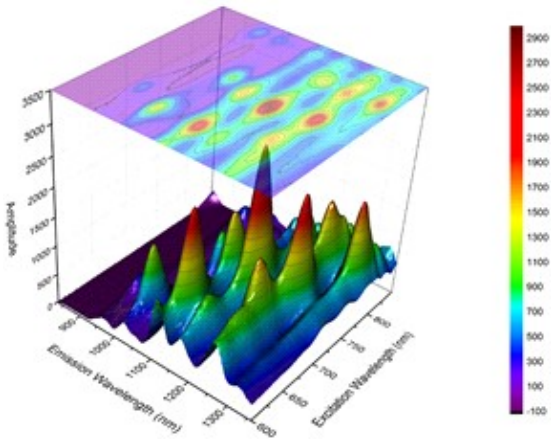


Special Degree:

The department conducts the following Special Degree programmes:

Chemistry
Biochemistry & Molecular Biology
Computational Chemistry
Pharmacy

The department has joined hands with the Faculty of Medicine, University of Colombo to conduct the Special Degree Programme in Pharmacy.



Postgraduate Programmes

M.Sc./Postgraduate Diploma:

Presently the Department of Chemistry conducts three M.Sc. / Postgraduate Diploma programmes.

•The M.Sc./Postgraduate Diploma Programme in Analytical Chemistry was initiated in 1975 and is the oldest and longest running M.Sc. programme in the country. Currently the annual intake stands around 50 students.

•The M.Sc./Postgraduate Diploma in Applied Organic Chemistry commenced in April 2006. This programme has an annual intake of 25 students.

•The M.Sc./Postgraduate Diploma in Chemistry Education commenced in June 2007. The annual intake is around 15 students.

M.Phil. / Ph.D. Degree:

The Department of Chemistry enrolls students to pursue M.Phil and Ph.D. degree programmes under the supervision of senior faculty members of the department. The number of students in these programmes varies and depends on the availability of research grants and the facilities in the department.

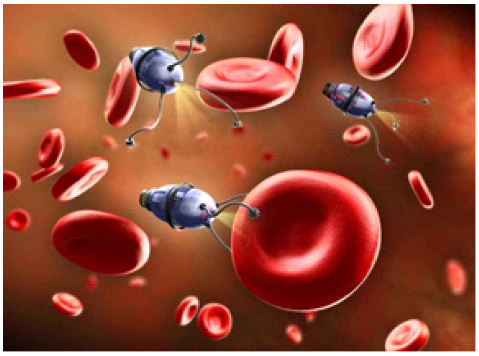
Industrial Services

Analytical Services

The Centre for Analytical Research and Development (CARD) was established in the Department in collaboration with Dalhousie University, Canada in 1980. CARD is a central body that provides analytical and other services to the industry and institutions in Sri Lanka. Over the years the department has been involved in a number of activities including analytical and consultancy services, as well as training and research programmes. This has undoubtedly contributed to the requirements of both the private and the public sectors of the country.

Molecular Biology: Products and Services

The Biotechnology laboratory of the Department of Chemistry offers consultancies, custom services and undertakes contract research in Molecular Biology and Biochemistry. These include cloning, construction and screening of DNA libraries, recombinant protein production *etc*. The laboratory also offers a range of Molecular Biology products and reagents for research and teaching including enzymes, DNA and RNA isolation kits, DNA and protein markers *etc*.



Sri Lanka Pharmaceutical Laboratory

Sri Lanka Pharmaceutical laboratory is a collaborative project between the University of Colombo, the Ministry of Industry & Commerce and the Sri Lanka Pharmaceutical Manufacturer's Association. The Laboratory mainly services the industry and analytical services are open to other sectors as well.

Extension Courses

The Department conducts specialized courses /workshops to cater to the individual needs of industrial organizations and research institutes. These workshops are conducted as and when requested and are designed taking into consideration the special requirements of the interested client.

Academic Staff...

Head

Senior Professor R.D. Wijesekera

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Department of Mathematics

The Department of Mathematics has been an integral part of the Sri Lankan University system since its inception in 1921 and is one of the most prestigious and well-recognized mathematics departments of the present day university system. Until 1967 when the University of Colombo was formed, the Department of Mathematics served both the Science and the Arts Faculties. Mathematics Honours Classes were held from as early as 1922. The department has been housed in the central building of the University, the old Royal College building, since the acquisition of it in 1923.

Mathematics, both an art and a science, provides essential tools for the advancement of many areas in the sciences, engineering, finance and economics. Pure Mathematics lies at its heart and is a core subject of human thought. It teaches logical and abstract thinking which is essential to form a sound basis for learning. Therefore, Mathematics plays a crucial role in education at the primary and secondary levels. At the tertiary level a basic knowledge of Mathematics is essential for every graduate in pursuing a successful career in today's society. In view of this, the department strives to design its curricula and organizes its services and activities to realize the full potential of the mathematical ability of its students and staff.

Academic Programmes

Undergraduate Programmes

General Degree:

The department offers courses in Applied Mathematics and Pure Mathematics for Physical Science students in the first, second and third years of the general degree programme. It also offers courses in Financial Mathematics and Management Science for general degree students in the Industrial Statistics and Mathematical Finance stream. Many general degree courses are job oriented.

The Pure Mathematics courses offered to the students during the first three years enable them to develop their analytical thinking and logical writing skill. The Applied Mathematics, Financial Mathematics and Management Science courses form the knowledge base for various Applications in the Sciences, Engineering, Finance and Economics.

Special Degrees: The Department at present offers four special degree programmes, viz.,

- Mathematics.
- Finance, Business and Computational Mathematics.
- Mathematics and Statistics with Computer Science.
- Mathematical Finance.

The Special Degree in Mathematical Finance is offered to 10 students from the Industrial Statistics and Mathematical Finance stream.

The special degrees are of high academic quality and are well recognized. Many graduates with a special degree obtain positions in the public and private sectors.

4G Theme: Recently, department introduced a 4 year general degree programme which is called “Finance and Insurance” to the Physical Science and IS & MF students.

Postgraduate Programmes:

Presently the Department of Mathematics conducts two M.Sc./Postgraduate Diploma programmes. They are

- The M.Sc./Postgraduate Diploma in Financial Mathematics
- The M.Sc. / Postgraduate Diploma in Mathematics Education.

The Department also conducts the Diploma programme in Corporate Finance.

Research Programmes

There are several local / international peer reviewed research publications appearing in areas related to Mathematical Modelling, Graph Theory, Quantum Algorithm, Group Theory, Associative Algebra and Category Theory *etc*. published by the department members. We also conduct student /staff projects collaborated with research centers, government and non-government institutions.

Services

The Department of Mathematics jointly with the Sri Lankan Olympiad Mathematics Foundation, a non-profit organization dedicated to popularizing mathematics at school level, conducts two highly competitive Mathematics competitions namely the Sri Lanka Mathematics Competition (SLMC) and the Sri Lanka Mathematics Challenge Competition (SLMCC) annually. The Sri Lankan team to the International Mathematics Olympiad (IMO) is selected based on the performance of students at these two competitions.

“Math-Den"

The room 107 in the Mathematics building is the hang-out for the third and fourth year students in our special degree programs. These students, whenever they are in this room, are ready and willing to help any student in the university who would walk in with their questions in Mathematics. This is a service provided to the student body of the university by the Department of Mathematics. The room is open from 8.00 am to 4.30 pm, Monday through Friday, except on declared holidays of the Faculty of Science.

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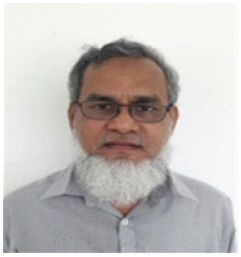

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Department of Nuclear Science

Nuclear Science being the study of the atomic world, is incorporated with a spectrum of wide range of scientific subjects. It consists of radiobiology, radiochemistry, nuclear physics and many other combinations of subjects.

The Department of Nuclear Science of Faculty of Science, is the only department within the whole university system which offer training and practical knowledge on Nuclear Science in Sri Lanka. Previously known as the Radio Isotope Centre (RIC), it was established in 1961 through the recommendation made by a preliminary assistance mission of the International Atomic Energy Agency. Since then it has come a long way through, to become the one and only resource center in Sri Lanka with trained competent staff in Nuclear Science to offer a variety of services including teaching and research at undergraduate and post graduate levels.

Academic programmes

Undergraduate

The department offers a variety of course units for undergraduate students not only within the department but also for other departments, faculties and universities.

General Degree: The department offers course units in a wide range of combinations for the students reading for the general degree from the level II. These include Radiobiology, Medical Physics and Nuclear Technologies in Sri Lanka.

4G Theme: Additionally, for the students who follow the four-year general degree, the department offer the 'Nuclear Technology' degree theme. This degree programme will provide the student a comprehensive knowledge on various radio isotopic techniques used in different disciplines.

Special degree: Our department offers a special degree in Nuclear Medical Science which consists of diagnostic and therapeutic nuclear medicine, medical physics, applied nuclear science, health physics and other related disciplines.

Post graduate

We offer Master's Degrees in Nuclear science and Medical physics. Medical physics is the branch of applied physics which combines the medicine with physics. It's a profession oriented program for Medical physicists.

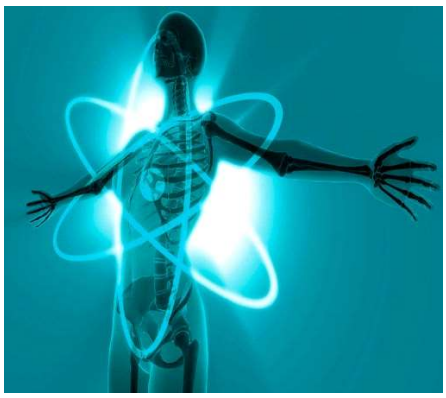
M.Sc. in Nuclear Science commenced in 1982 in collaboration with the Atomic Energy Authority. The main aim of this course was to meet the needs of the expanding fields of research and industrial applications of nuclear technology in Sri Lanka. Both these degrees are essentially important for professionals attached to related industries.

In addition to the Master's Degrees, we offer Diploma course in Radiation Protection. The main objective of this course is to develop necessary skills in researchers and radiation workers to work with radiation and radioisotopes while minimizing the radiation exposure to themselves and their colleagues at the work places.

Research Programmes

Academic staff of the department is specially trained in research in various fields of ionizing radiation. Main areas of research carried out by the researchers in the department are related to environmental radioactivity, nuclear analytical techniques in pollution monitoring with special reference to heavy metals, medical physics and applications of Nuclear Techniques in elemental analysis.

Our lecturers work in collaboration with the state and private institutions for research and teaching such as the SLINTEC and Sri Lanka Atomic Energy Board.



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Department of Physics

Established in 1921 under the University College affiliated to the University of London, the Department of Physics of the University of Colombo with its rich history remains one of the most prestigious institutions promoting Physics in the region. The department offers both undergraduate and postgraduate programs under a variety of physics and technology related themes, while extending its services by offering external courses, training programs and professional services to both the public and private sectors. The department also houses a center for instrumentation development and a unit dedicated for Physics education.

Academic Programmes

Undergraduate

General Degree: The department offers courses for both the 3 year and 4 year general degree programs while, the 4 year general degree is offered under a specialized theme, IT & Electronics. The aim of this 4 year general degree program is to produce individuals having core practical skills and related industry exposure able to take up challenging careers in the industry. The current student intake for this program is limited to 20.

Special Degrees: The department offers three Special degree programs under the following themes:

- Physics
- Engineering Physics
- Computational Physics

These programs have been designed to provide the students with a contemporary knowledge of Physics and to develop basic research skills. The student is thereby well equipped to continue his/her education at post- graduate level or to be gainfully employed. Every academic year, 30 students (10 per special theme) are selected on a competitive basis, to follow the special degree programs.

Postgraduate

Master's Degree Programs: The department offers two postgraduate diploma//masters in science degree programs designed to suit the current needs of the country. The programmes are,

- M.Sc. in Applied Electronics
- M.Sc. in Physics Education

The resource people for the program includes academic staff of the department and many professionals/experts from the related fields.

Research Degree Programs: Currently as many as 40 students pursue in research degrees (M.Phil. /Ph.D.), under the close supervision of a department academic staff member. The research programs which are primarily funded through state agencies also facilitate international collaborative research and joint degree programs. Graduating students mostly either hold positions in local academia, continue to pursue R&D positions of international repute or may even pioneer a spinoff company based on their research innovations

Research Groups

The research groups in the department often work in collaboration with foreign and local universities/institutions under different themes, mainly related to,

- Atmospheric and Lightning Physics
- Astronomy & Space Science
- Condensed Matter Physics
- Computational Physics
- Robotics
- Biomedical Imaging Physics
- Instrumentation Physics

The active research programs of the department continue to enrich the overall student education experience in the Faculty of Science.

Extension Programs

The department continues to contribute to the national development by dissemination of knowledge through extension programs. Following programs are conducted by the department on a regular basis;

- Training course on Microcontroller Programming and its Applications
- Workshop in Electronics for A/L Teachers
- Workshop in Electronics & IT for technical staff

Services

The Department offers a wide range of services and consultancies to the state and private sectors and the general public. The areas include lightning protection, industrial automation, thin film coating, high temperature treatments, radiation measurements, software development for physics teaching and construction of laboratory equipment.

In addition, the department trains school students for the International and Asian Physics Olympiad, International Astronomy and Astrophysics Olympiad and Junior Science Olympiad Competitions.

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Department of Plant Sciences

Teaching and research in the department are amply supported teaching and research laboratories, lecture theaters with audio visual facilities, plant houses and a herbarium. Facilities are also available for tissue culture, molecular biology, microbiology, ecology, plant identification, phyto-chemical analyses and computing, as well as for field work.

Academic Programmes

Undergraduate

General Degree**:** The courses a student may offer from the department in the first two years of the B.Sc. degree programme are diverse and have been designed to address all aspects of Plant Science at a fundamental level. Students opting for a 3 year general degree have the opportunity to select in their third year, courses that cover highly applied aspects of the field, such as plant pathology, horticulture, plant breeding, microbiology and plant tissue culture.

Students who wish to proceed to the 4 year general degree theme "Horticulture and Sustainable Landscaping" will be provided courses that cover highly applied aspects of the field such as horticulture, landscaping, plant breeding, tissue culture as well as development of a business plan, and a component of industrial training in the fourth year.

Special Degrees**:** The department offers three special degree programmes, and students may opt to specialize in one of the following subject areas in their third and fourth years of study

- Plant Science
- Plant Biotechnology
- Bioinformatics

The Special Degree in Plant Science provides an excellent training opportunity, especially in field-based plant science courses, and caters to students who wish to develop and enhance their skills in areas of biodiversity conservation, environmental science, taxonomy, ecology, and many other subjects of Plant Sciences.

The four year Special Degree program in Plant Biotechnology, enhances the knowledge and practical skills of the students specifically in a wide array of plant based industries. Students are exposed to several employment oriented courses. Industrial exposure and the relevant practical activities of the course modules will advance their careers by broadening their practical skills and understanding of this dynamic field.

The Special Degree in Bioinformatics is offered for the first time in the country and provides training in analysis and management of biological data using information technology.

Postgraduate

The department at present conducts two M.Sc. degree programmes with a strong research component.

- Plant Cell and Tissue Culture
- Agricultural Microbiology

In addition, students work on postgraduate degrees (MPhil/PhD) by research, on different disciplines related to Plant Sciences.

Research Programmes

The research conducted in the Department has strong links with research centres, government institutes and industry. Currently there are more than 15 postgraduate students reading for research degrees (MPhil/PhD) working in the department, under the able supervision of senior academic staff.

Services Offered

Herbarium - The herbarium in the Department of Plant Sciences houses over 3000 plant specimens of higher and lower plant families and about 100 macro fungi species.

Vegetation surveys and microbial testing of samples of plants, water and soil are offered upon request.

The academic staff is heavily engaged in the commercialization oriented research through the Colombo Science and Technology Cell.

Academic staff is engaged in projects of the state Ministries and industry through which knowledge is disseminated.

Diploma Courses / Extension Programmes

The Department conducts the following Diploma and Certificate courses;

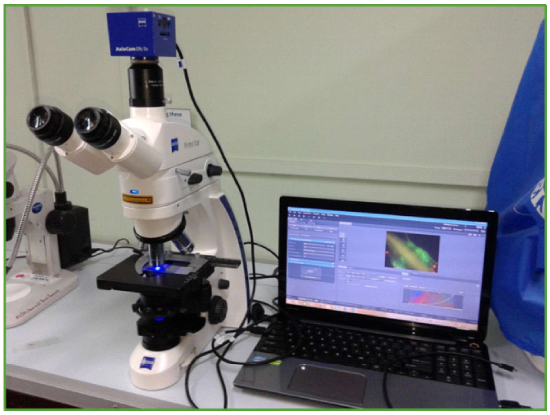
- Diploma in Biodiversity Management (DBIOM), jointly with the Department of Zoology & Environment Sciences,
- Diploma in Microbiological Techniques, and
- Online certificate course in Bioinformatics.

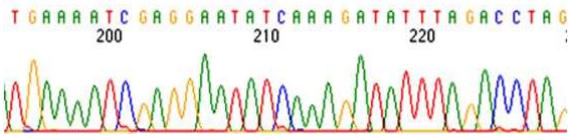
The Diploma in Biodiversity Management is a multidisciplinary course intended for persons wishing to pursue a career in the field of biodiversity assessment, conservation and sustainable development.

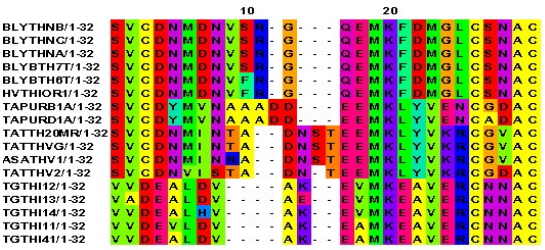
The programme is delivered through a variety of teaching modes, including e-learning, classroom lectures and discussions, laboratory and field practicals.

The Diploma in Microbiological Techniques addresses the application of the multi-faceted discipline microbiology. This programme is specially designed to produce a high caliber employee, competent in the microbiological techniques in biotechnology and agriculture based industries.

The online certificate course in Bioinformatics offers basics in this newly emerged field in science and bioinformatics, which utilizes computer techniques to understand the behavior, structure and function of Biological molecules. This course provides basic knowledge in Bioinformatics and hands-on experience in the application of techniques and tools in Bioinformatics to real biological data.







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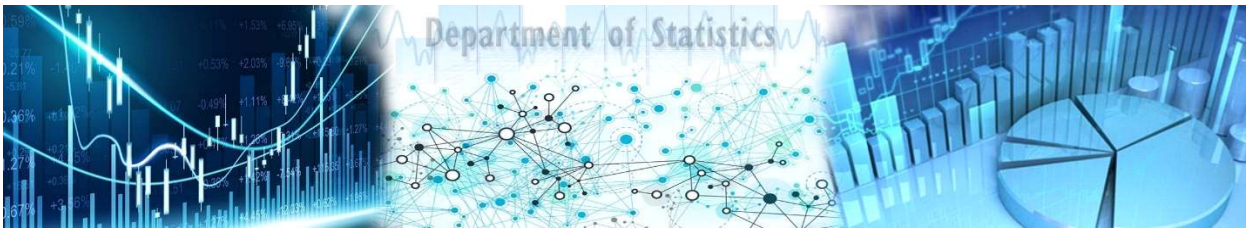
Department of Statistics



The Department of Statistics (DST) is the first Statistics Department formed within a Faculty of Science in the present university system in Sri Lanka.

It was formed in June 2001. Although DST is a young department, it offers many undergraduate and postgraduate statistics courses that are at the forefront of current knowledge and practice. The department originated as a Statistical unit which was first under the Department of Mathematics. The link between this Unit and the Department of Applied Statistics, University of Reading, UK, during the period 1974-1984 led to the major development of Statistics courses in 1985.

The vision of the DST is to be a centre of excellence in Statistics in Sri Lanka. Statistics plays an important and ever-increasing role in many fields and specializations. The mission of the department is to develop and offer programs that will produce quality graduates who are highly employable excelling both in the academia and industry, contributing towards the field of statistics.

The department currently offers diverse and flexible tracks and/or double majors that will make its students highly competitive in the job market.

Academic Programmes

Undergraduate Degrees

General Degree:

The DST offers Statistics subjects from the first year onwards to students in Physical Science in the Faculty and the UCSC. It also offers the degree programme Industrial Statistics & Mathematical Finance (IS&MF) jointly with the Department of Mathematics, for a direct intake of 90 students. The Department offers around 70 course modules for a given year and interacts with around 1200 students.

4G Theme in Applied Statistics:

Focusing on the demand by the industry for graduates with a sound knowledge of Statistics, together with computing, management and numerical skills, the DST offers a 4-year thematic degree in Applied Statistics to the Physical Science and IS&MF Students from the year 2015.

Special Degrees:

DST currently conducts THREE special degree programmes, "Statistics" (ST), "Statistics with Computer Science" (ST+CS) and " Industrial Statistics" (IS).

Postgraduate Degrees:

The DST has been conducting the Postgraduate Diploma/M.Sc in Applied Statistics since 1974.

The DST also offers a two year part time course leading to an M.Sc Actuarial Science. This programme is conducted with the guidance from the Institute and Faculty of Actuaries of the United Kingdom.

The Department also has an M.Phil. / Ph.D. programme with around 10 students currently pursuing research in different areas of Statistics.

Research Programmes

The DST enjoys several areas of strength in research. It has expertise in areas such as Medical Statistics, Operational Research, Sample Surveys, Linear Models & Multivariate Methods, Statistical Modelling, Data Mining, and Quality Control. DST academics have published many research articles in peer-reviewed journals and have made several presentations at international / local fora.

Center for Data Science

The Center for Data Science is established as the research and development unit of the Department of Statistics to engage in and facilitate research and development in Data Science tools and techniques and to bridge the gap between academics and industry in the field of Data Science.

It facilitates collaboration between academics and industry, both foreign and local, through research, enhancement programs and consultancy projects. Further it provides opportunities to undergraduates and postgraduates to pursue careers as data scientists who are currently in high demand locally and internationally.

Services

The department offers a variety of services to both internal university community as well as to the outside community. Namely it offers,

- assistance in data analysis from simple to advanced problems.
- assistance in designing, conducting, and analyzing surveys.
- statistical advice for researchers on various experiments, and projects
- assistance in statistical computing.
- short courses, workshops, and seminars on statistics for the public and private sector.
- assistance in designing, conducting, and evaluation of recruitment tests.
- the Department, through its newly formed Center for Data Science, are involved with collaborative projects related to data science.

While offering services to the outside community through collaborative projects and consultancies, the Department also offer their services to university internal community free of charge.

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Department of Zoology & Environment Sciences

The Department of Zoology and Environment Sciences offers a comprehensive programme for students entering the Faculty of Science, which embodies the subject areas of Zoology, Environmental Science, Molecular Biology and Immunology. The programme is so designed not only to provide students with a sound knowledge in these subject areas, but also offers opportunities to develop and improve their communication and other generic skills that would increase their employability.

In keeping with the major curriculum revision in 2003 and several others including one in 2012, which have taken into consideration the emerging trends in global education development and national employment, the department has incorporated new subject areas as well as modern teaching, learning and assessment techniques. The programme is well balanced and incorporates both in-class teaching and field based learning components. Students also engage in many activities outside their academic programme that helps to vastly improve their communication and interpersonal skills.

The Department of Zoology and Environment Sciences is particularly known for the friendly staff that makes every effort to provide the students with a pleasant and fruitful learning experience in the university.

Academic Programmes

Undergraduate Programme

General Degree: Zoology and Environment Science are offered as subjects for the three-year B.Sc. General degree offered by the Faculty of Science. The courses have been designed with a view to providing a fundamental knowledge in Zoology and Environment Science in the first and second years and introducing the multidisciplinary nature and

The Department also offers a four-year general degree programme on the theme Business and Environment that includes an industrial training component.

Special Degrees: The department offers three Special degree programmes and students may specialize in any one of the following:

- Zoology
- Environmental Science
- Immunology & Integrative Molecular Biology

Students who are selected to these programmes must follow a set of courses, which covers the necessary fundamental and applied aspects of the specialized areas.

Many final year research projects of our special degree students now cover inter-disciplinary areas where our academics, supervise projects with several others who are drawn from diverse fields such as, clinicians from the national hospital system, engineers, research scientists from government and private sector organizations as well as academics from other universities.

Postgraduate Degrees

The Department also offers a Master's Degree in Environmental Science (2 years) and a Postgraduate Diploma in Climate Change & Environment Management (1 year). The teaching staff of these programmes includes members of the department and many leading professionals / experts in various fields of environment science outside the university, who add value to these programmes due to their professional experience in their relevant field. The programmes cover a multitude of disciplines such as cleaner production, climate change, environmental policies and laws, ecotoxicology, disaster risk reduction and biodiversity and natural resource management.

Postgraduate Research

The Department provides the opportunities for suitably qualified graduates to undertake postgraduate studies leading to both M.Phil. and Ph.D. degrees, under the supervision of its staff members.

The Department excels in its research capabilities providing research opportunities in diverse fields such as Wildlife Ecology, Eco-tourism, Ornithology, Evolutionary Biology, Limnology, Ecotoxicology, Climate Change, Environmental Toxicology, Immunology & Molecular Biology of human and animal diseases, Conservation Biology, Entomology, Human Genetics, Reproductive Physiology and Aquatic Biology under the guidance of its academic staff members. Much of this research work is published in both local and international journals. The postgraduate research programmes of the department enriches the undergraduate programme by providing opportunities for students selected for the special degree programmes to participate in some components of on-going research activities.

Other Programmes

The department also conducts two other programmes for external students. The newest addition is the Diploma in Wildlife Conservation (9 months) which is conducted in collaboration with the Department of Wildlife Conservation (DWLC) for park rangers. The other is the Diploma in Biodiversity Management (1 year) which is conducted jointly with the Department of Plant Sciences for nature enthusiasts.

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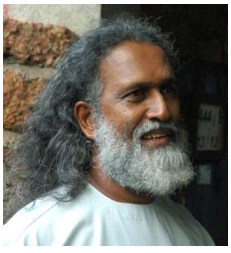


CAREER GUIDANCE UNIT

"Believe in Achieving"
Career Guidance Unit
Faculty of Science

Why Career Guidance?

Today, academic knowledge singlehandedly does not suffice to grow and excel in professional and personal life. Therefore, career and personal development are essential aspects of undergraduate training.

It is important that our graduates not only be academically and technically sound, but also have the knowhow in other personality fronts. Thus it is essential to develop transferable / life skills, attitudes, beliefs, and behaviors of undergraduates that would eventually lead to both their professional and personal success.

Vision:

Guiding and providing required resources to support career & life aspirations of undergraduates of the Faculty of Science.

Mission:

To become a center of excellence to empower students with the required knowledge and experience to mold and fortify their professional, higher educational, career and life aspirations through a well-crafted series of events and programmes.

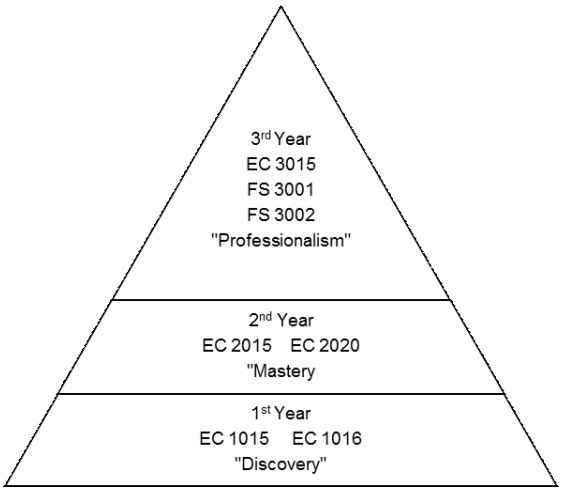
Objectives:

- Helping students to profile themselves and realize their true potential within the realm of their personality.
- Creating an environment where students identify personality development in themselves in relation to professional expectations.
- Introducing the students to the world of work and its dynamics.
- Helping the students transform their academically strengthened knowledge to suit industry and academia.
- Helping develop a robust career / life plan for oneself and make the right decisions in life.

Career Related Learning Pyramid

Career-related learning is a process of learning, designed to help students to develop the knowledge, confidence and skills they need to make well-informed, relevant choices and plans for their future, so they can progress smoothly into further learning and work.

The following pyramid outlines the comprehensive programme on career and personal development of our faculty.



Level I – "Discovery"

The first year programme revolves around Self-Discovery, and takes you through a maze of topics and tools, so that you understand your potential and mould your thinking to build a career / life plan for your future.

- EC 1015 - Career and Personal Development I
- EC 1016 - Career Planning

Level II – "Mastery"

The second year involves the infusion of skills required by professionals. The skills training will be conducted by industry specialists with specific domain knowledge, e.g., presentation skills by Toastmasters.

- EC 2015 - Career & Personal Development II
- EC 2020 - Enterprise, Entrepreneurship, and Innovation

Level III – "Professionalism"

The Association of HR Professionals (AHRP) of Sri Lanka will conduct a series of sessions to build confidence and prepare you for post-graduate studies or a life of work ahead. The AHRP will build bridges to help you to cross over into the life of a professional. The internship and service learning courses listed below are academic courses that will provide you with hands-on experience in the world of work.

- EC 3015 - Career & Personal Development III
- FS 3001 - Internship Training
- FS 3002 - Service Learning

Eligibility Criteria of Academic Courses

Internship Training (FS 3001)

The training is for 12 weeks full time or the equivalent thereof, and is worth **6 academic credits.** Selection to the programme will be based on the following:

a) Satisfying the degree requirements for the first two years

b) Completing a minimum of 15 credits in the fifth semester of which 12 should be from core courses.

c) Obtaining a GPA of 2.50 by the end of the 4th semester. Students with a GPA between 2.45 and 2.50 will be interviewed and possible candidates will be selected.

d) Satisfying the enhancement course requirements by the end of the fifth semester (Students who followed the EC 1015 & EC 2015 are given priority)

e) Obtaining at least a 'Meritorious' grade for the enhancement course on Career and Personal Development III (EC 3015)

Important:

A student registered for the Internship Training, cannot revert back to register for 6 regular academic credits by course work within the same semester after the period allowed for registration has elapsed. If a student re-registers for academic credits by course work in the following year it will be considered as his second attempt.

Service Learning (FS 3002)

The duration of this programme is 6 months part time and it is worth **8 academic credits.**

For this programme, at least 400 hours of engagement are expected and evaluated.

Selection to the programme will be based on the following:

(a) Satisfying the degree requirements for the first two years

(b) Obtaining a GPA of 2.50 at the end of the 4th semester. Students with a GPA between 2.30 and 2.50 will be interviewed and possible candidates will be selected.

Important:

A student registered for the Service Learning, cannot revert back to register for 8 regular academic credits by course work within the same semester after the period allowed for registration has elapsed. If a student re-registers for academic credits by course work in the following year it will be considered as his second attempt.

Career Guidance Committee

We are a group of dedicated volunteer academic staff members who help students to develop their soft skills. We work closely with students who are interested in exploring opportunities and developing themselves.

With the unstinted support from various corporate sector partners, enthusiastic alumni and well-wishers, opportunities to gain experience are plentiful and continuously growing.

Co-Directors:

Professor Deepthi Wickramasinghe (Zoology & Env.Sci)

Dr. Chamari Hettiarachchi (Chemistry)

Secretary:

Dr. Gayani Galhena (Zoology & Env.Sci)

Subcommittee Chairpersons:

EC 1015:

Dr. Chandrika Nanayakkara (Plant Sciences)

Dr. Hiran Jayaweera (Physics)

EC 1016:

Dr. Inoka C. Perera (Zoology & Env.Sci)

EC 2015:

Dr. E.Y.K. Lokupitiya (Zoology & Env.Sci)

EC 2020:

Dr. Sudheera Ranwala (Plant Sciences)

Dr. Dilushan Jayasundara (Physics)

EC 3015:

Dr. Iroja Caldera (Plant Sciences)

Dr. Sameera Ariyawansa (Plant Sciences)

FS 3001:

Dr. Chamari Hettiarachchi (Chemistry)

FS 3002:

Professor Deepthi Wickramasinghe (Zoology & Env.Sci)

Career Guidance Unit Office

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COLOMBO SCIENCE & TECHNOLOGY CELL

Colombo Science and Technology Cell (Cell) was established on September 26th 2013 with the funds from the Higher Education for the Twenty first Century (HETC), Quality Innovation Grant (QIG)-window 4, in order to support the researchers at the Faculty of Science to commercialize their research findings. The HETC project was done by the Ministry of Higher education in order to "enhance the capacity of higher education system and to deliver quality higher education services in line with equitable, social and economic development needs" of Sri Lanka.

If an academic staff member has a technology which can be used by an industry, they are encouraged to submit a Tech Brief followed by an Invention Disclosure Form (IDF). Undergraduates and postgraduates can get involved in this process through an academic staff member. The Cell will function as the Tech Transfer office during this process which requires continuous dialog between interested industry partners and the research team.

The key steps involved in this process is given below

1. Submission of a Tech Brief and initial evaluation
2. Filling the Invention Disclosure Form (IDF)
3. Evaluation of IDF: Technology Readiness Level (TRL)
4. Decision regarding Intellectual Property (IP) protection
5. Marketing the innovation
6. Licensing the technology

Further details about the Tech Transfer process can be obtained from the link below.
http://science.cmb.ac.lk/cell

Success stories of the Cell

Collaboration with Darley Butler & Co. Ltd: At The product launch "Bio Clean" on November 30th, 2015

Collaboration of Hemas Manufacturing (Pvt) Ltd: At the MOSGUARD Launch on October 10th 2017

How to conduct a productive research project as an undergraduate

The Universities and private companies, world over, carry out a patent landscape search before embarking on new research projects. This approach will help the researchers to gather a lot of information on available technologies while finding gaps in the patent arena to invest the limited resources in the right direction. The Cell can provide useful information in this regard through the Technology Innovation Support Center (TISC) which was established with the technical support from World Intellectual Property Organization (WIPO) and National Intellectual Property Office (NIPO).

NOTE: Dream about inventing from day one! Consider protecting your inventions before publishing!

STUDENT SOCIETIES

There are several societies based in the faculty that promote student interests and activities. They are listed below.

1. Physics Society
   (Department of Physics)
2. Astronomy Society
   (Department of Physics)
3. Colombo Innovation & Robotics Club
4. Base for Enthusiasts of Environment Science and Zoology (BEEZ)
   (Department of Zoology & Env. Sci.)
5. Botanical Society
   (Department of Plant Sciences)
6. Chemical Society
   (Department of Chemistry)
7. Epsilon-Delta Society,
   (Department of Mathematics)
8. Gaveshakayo
   (Department of Physics)
9. Stat Circle
   (Department of Statistics)
10. Science Society
11. AIESEC University of Colombo
12. Catholic Students' Movement University of Colombo
13. Gavel Club of the University of Colombo
14. Rotaract Club of Faculty of Science
15. Students' Association for Industrial and Financial Analysis (SAIFA)

The Physics Society

The Physics society of University of Colombo is one of the leading student societies registered in the University, and it is the main student body of the Department of Physics of Faculty of Science. The society is an ideal platform for students having great interest in physics to expand their knowledge in Physics by meeting academics involved in research and developments of the field of Physics. And also it is a great place to enhance leadership and team work skills through various activities aimed to create awareness about Physics among the student community.

The year plan of the society comprises of various activities and projects which are aimed to create awareness with regard of Physics throughout the University and the country. Some of the main activities and projects of the society are as follows,

- Monthly guest lectures delivered by both local and foreign academics in the field of Physics.
- Physics forums on day to day Physics.
- “Insight”, Physics day and exhibition organized for A/L students all across the country.
- Workshops on Physics practicals aimed towards A/L physics teachers all across the country.

In addition to these the society organizes activities such as,

- “Sathsara”, the annual padura event of the Department of Physics.
- The annual shramadhana campaign.
- The annual trip of the Department of Physics.

"Sathsara the annual padura event"

Annual sharamadhana campaign

The Base for Enthusiasts of Environmental Science and Zoology (BEEZ) established in 2015 is a student body with a common interest in Zoology and Environmental Sciences.

The main goals of this society are to foster interest in zoology and the Earth's natural resources among university students as well as the general public, educate people on conservation issues and organize community projects.

Although relatively new, the society has been active and has conducted many projects over the past year.

The "Goodwill Journey" to Jaffna

Last year's environment commemoration program prompted the Colombo University Zoology Department (BEEZ) to counter climate change and global warming. It was decided to start the project in Jaffna with the University of Jaffna, Zoology Department, not only to create awareness on climate change and global warming but also to promote goodwill and harmony between the two universities and communities. Hundreds of tree species native to Jaffna were planted in schools, and a friendly cricket tournament provided a great end to the project.

Commemorating World Environment Day 2017

The 2017 theme of "Connecting People with Nature" was one which BEEZ took to heart, and a panel discussion was organized together with Biodiversity Sri Lanka and some of Sri Lanka's leading corporate sector organizations addressing this theme. Additionally, competitions were organized for schoolchildren.

Other Green Initiatives -

BEEZ has planned out a series of activities as part of the green initiatives it has undertaken this year. The activities, among others, include a sharmadana campaign organized in the Faculty of Science, a large scale Green Conference bringing together the best minds working on climate change and environmental issues in Sri Lanka, and polythene and dengue free awareness programmes.

BEEZ is open to all undergraduates of the Faculty of Science.

The Botanical Society

The Botanical Society (BOTSOC) of the Faculty of Science, University of Colombo is an active student body which is based in the Department of Plant Sciences. It is one of the oldest student societies in the Faculty, having being established in the 1960s'.

The society aims to cultivate an interest in plants and environment amongst the student population of the Faculty, whilst at the same time involving themselves in charitable causes. In order to achieve this aim, the society conducts a number of activities throughout the year.

Each year a 'Plant Sale' is organized in the first semester where many different varieties of plants are sold. This popular event is well attended by staff and students of all Faculties of the University. Society members propagate many of the plants themselves and play an active role educating the potential buyers on plant growth and maintenance.

A 'Shramadana' Programme is also traditionally organized by the society in the first semester. During this event the students of the society get together and clean up the premises and surroundings of the Department of Plant Sciences.

In the second semester a charity event is organized based on uplifting the facilities of a rural school. The members themselves create a project proposal and organize all aspects of the project from liasing with the respective school to funding. Members contribute in many aspects for this activity.

In the recent past the society was able to renovate science laboratories and classrooms of several rural schools whilst gifting necessary items to uplift sports and music in these schools. An educational workshop is organized in parallel to this charity event and provides a helping hand for students preparing for their Ordinary Level examination.

The annual trip organized by the society is eagerly looked forward to by the members. The trip usually involves visiting places with scenic natural beauty. A hike is also organized and during the most recent trip members hiked through a forest to see a hidden waterfall.

The Society also organizes guest lectures of current interest covering diverse topics such as plant taxonomy, plant-animal interactions, bioinformatics and niche modeling.

All students of the Faculty of Science are welcome to join the Botanical Society.

Chemical Society
University of Colombo

The Chemical Society of the University of Colombo ('ChemSoc') comprises an active group of undergraduates following special degree programmes offered by the Department of Chemistry, University of Colombo. The society organizes many events throughout the year both in relation to the subject and various community service projects.

Project SAHAS 'Scholarly Access in Helping the Advancement of Science', is the signature community service project organized annually by the ChemSoc targeting Advanced Level students in rural areas. This project includes a series of interactive seminars, tutorial discussions and hands-on experience in chemistry practical experiments to enhance their understanding of the core principles of Chemistry. Furthermore, distribution of stationary items and laboratory glassware among participants is carried out as a part of the SAHAS programme.

The 'ChemSoc Quiz' is another annual project which provides a platform for Advanced Level science students island-wide to showcase their theoretical and practical knowledge in chemistry. The main goal of this project is to recognize and reward outstanding students, thereby encouraging them to pursue their higher studies in chemistry.

Apart from these main projects, the ChemSoc also organizes guest lectures spanning the academic year, to educate undergraduates to keep abreast of the new scientific advances.

Chemistry magic shows are conducted by ChemSoc on request from schools throughout the island. The main objective is to arouse students' interest in chemistry.

The dedicated team of ChemSoc members makes every effort to share their knowledge and skills to inspire the next generations to pursue the fascinating discipline of chemistry.

Epsilon Delta Society

The Epsilon Delta Society is a mathematics society run by the students of the Department of Mathematics in the University of Colombo. It has presently emerged popular as one of the main and most active student organizations in the Faculty of Science of the university.

The Epsilon Delta Society was founded on the 29th of August 2005. The unflagging mission of the society is to stimulate an interest in the students in mathematics, especially in pure mathematics, and related sciences, to help them discover their capabilities in these fields, and also to create an ideal platform for them to enhance their mathematical skills. Further, the society works closely with the academic staff and the academic support staff of the Department of Mathematics in order to provide the students, both in and out of the university, with an invaluable opportunity to be nurtured within a prestigious and erudite academic environment.

It is quite striking and admirable that the members in the society volunteer for the Sri Lanka Olympiad Mathematics Foundation so as to conduct the national level selection tests, to organize preparatory seminars in certain schools, and also to guide the selected teams up to the international events. Moreover, the society undertakes the activities pertaining to the distribution of certificates for the participants and winners of the Sri Lanka Olympiad Mathematics Competition.

A magazine had also been published once in the year 2015 which incorporated interesting and beautiful topics, relating mathematics to the real world which clinches the attention of any reader coming from any background.

In addition to this, the Epsilon Delta Society regularly hosts an event called the “Math Circle” where the members and other attendees discuss such stimulating and enlightening topics as mathematical paradoxes, concept behind infinity, prime numbers etc.

This event has created an absolute podium for the students to share their passion for mathematics with their peers while earnestly exploring and pondering over the unsolved mysteries in the world of mathematics. The unflinching commitment of the members of the Epsilon Delta Society has enabled the young people in the country to see the world through the eyes of a true mathematician.

Stat Circle

The "Stat Circle" is a society formed by the students of the Faculty of Science, University of Colombo in the year 2002. The aims of the society are to enhance the statistical knowledge of the students and the outside community and to communicate and exchange ideas with other societies, universities, the industry as well as school children.

The most prominent annual event of the Stat Circle is the "Stat Day", which is held with the participation of many distinguished guests from the government sector, private sector and academia. In addition, undergraduates from state universities and school students also gather for this outstanding event.

The Stat Day consists of speeches, a panel discussion, student sessions by the best performing students of the Department, an Inter-University Quiz Competition and an Inter-School Poster Competition. So this event has become really significant for all those who are interested in the field of Statistics, since the audience would gain the rare opportunity to learn about new aspects and evolvement in the field through outstanding individuals who have mastered the field.

The Stat Circle has initiated in the year 2017, a series of motivational speeches titled "Inspirus" which will enlighten and encourage the students of the Faculty to be the best they could be. Renowned public speakers and successful personnels will join hands with the society for this purpose.

"Shilpa Shakthi" is another key event organized by the Stat Circle with the main aim of extending the knowledge of Statistics among school children. It will mainly include seminars for Advanced Level students in the stream of Mathematics covering Probability and Statistics which is part of the Combined Mathematics syllabus. Another main objective of holding this event is to provide the youngsters a basic understanding about the importance of the field of Statistics. This would be an attempt to raise their enthusiasm and to encourage them towards this field which would then result in some passionate valuable future statisticians.

Stat Circle is a platform that supports its members to add value to their lives. Further it helps them to reach out to the society at large to serve the world while developing themselves.

Stat Circle is not only about gaining knowledge in Statistics, but being a member in it would surely improve their skills to face the industry world with much more confidence and passion.

AIESEC is a global platform for young people to explore and develop their leadership potential through powerful team experiences and cross cultural exchanges. We are a non-political, independent, not-for-profit organization run by undergraduates and recent graduates of institutions of higher education. Our members are interested in a broad spectrum of areas such as world issues, leadership and management. AIESEC does not discriminate on the basis of ethnicity, gender, sexual orientation, religion or social origin.

The AIESEC network includes approximately 70,000 members in 127 countries and territories, and is recognized by UNESCO. The international headquarters is in Rotterdam, Netherlands. We have a strong alumni-base which includes a wide range of individuals, professionals, entrepreneurs, business personnel, and even a Nobel Prize winner.

The membership of AIESEC within the University of Colombo spans across the different faculties, providing a platform for undergraduates from varying backgrounds to work together. Our members are always encouraged to step out of their comfort zone and push their boundaries for personal and professional development. The members get a unique opportunity of networking globally and as a result they have exposure to many different nationalities. In addition to the University of Colombo, AIESEC also operates in the University of Moratuwa, University of Kelaniya, University of Sri Jayewardenepura and University of Peradeniya, providing opportunities for collaboration.

Some of the events organized by AIESEC - University of Colombo were -

The Global Village and Intern Conference bringing varied cultures and individuals from across the globe on to one platform, providing participants an invaluable opportunity to experience different cultures. AIESEC - Sri Lanka, annually conducts national conferences namely NLDS, NatCon, ExCon to enhance our members' professional skills, to provide networking opportunities and to impart knowledge on organizational strategies.We as AIESECers are looking forward to developing ourselves, while working in a highly motivated and a friendly environment. You are our next generation! If you are a person who desires to challenge yourself to bring out the leader in you, then come join us at AIESEC - University of Colombo.

Catholic Student's Movement University of Colombo

The Catholic Students' Movement of University of Colombo is an active movement in the university, which consists mainly of Catholic undergraduates of University of Colombo. It is being monitored and guided by the Holy Catholic Church through the presence of a chaplain. CSM of University of Colombo is also a part of the CSM of the Colombo Region, which includes Catholic Movements of Universities of Jayawardhanapura, Kelaniya and Moratuwa.

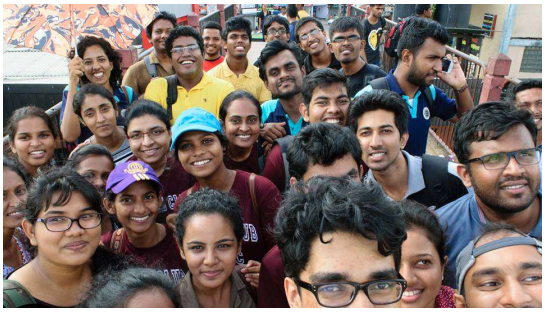
CSM aims to develop the spirituality of the catholic undergraduates and encourage coexistence and harmony in our multicultural and multi-religious society. It plays a major role in uniting the undergraduates of different academic years and faculties and forming strong bonds of friendships.

CSM organize many events within and outside the university. The most famous event would be the Annual Carol Service of the university, which is organized by the CSM. Apart from the carol service Sabbath Day, May Feast, Annual Retreat and Charity programs are few events that are being organized by the CSM of UOC.

Gavel Club

Gavel Club of the University of Colombo was first introduced to uplift the standards of communication, language and leadership skills of undergraduates.

The club is open to all the Faculties and fluency in English is NOT required to join the club. At Gavel, you can be yourself and express your ideas and views to an audience and improve yourself as a communicator as well as a leader.



The Club is an affiliation of Toastmasters International, USA. Following similar Toastmasters Club meeting protocols, the Club provides a supportive and positive learning experience in which members are empowered to develop these skills, resulting in greater self-confidence and personal growth. The Club currently has a membership of over 65 undergraduates from 6 faculties.

Our Gavellers are regular participants of speech competitions organised by various clubs. The Club's biggest achievements to date were the organization of the first ever Intra-University Best Speaker Competition of the University of Colombo 'Oration 2016' and first ever all island humorous and speech evaluation competition for the youth of Sri Lanka 'Enliven 2017'.

Under the motto of *Gavel Never Stops*, the Club caters to a wide variety of individuals by organising regular workshops conducted by distinguished Toastmasters as well as speakers. One other initiative of the Club is *Gavel under the Trees*, a creative and innovative platform, designed solely to improve the overall Gavel experience by providing a platform for an insightful discussion in a leisurely environment.

The Club meets at least once every week and it has some new and exciting plans for the upcoming year. So come join with us!

ANNEXES

ANNEX 1 - PS 1: Physical Science, Level I

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	P1	P2	P3	P4	P5	P6	
S1		PH 1001	Modern Physics	2	30 L	X	X	X	O	O	O	
		PH 1004	Thermodynamics	1	15 L	O	O	O	O	O	O	
		PH 1020	Physics Laboratory I	2	60 P	X	X	X				
S2		PH 1002	Modern Optics	1	15 L	O	O	O	O	O	O	
		PH 1003	Waves & Vibrations & Circuit Theory	2	30 L	X	X	X	O	O	O	
		PH 1021	Electronics & Computing Laboratory I	2	60 P	O	O	O				
S1		CH 1008	General & Physical Chemistry	2	30 L	X			X	X		
		CH 1010	Calculations in Chemistry	1	15 L	O			O	O		
		CH 1011	Practical Chemistry Level 1	2	60 P	X			X	X		
S2		CH 1012	Organic Chemistry	3	45 L	X			X	X		
		CH 1006	Impact of Chemistry on Society	2	30 L	O			O	O		
S1		AM 1001	Differential Equations I	2	30 L	X	X	X	X	X	X	■
		AM 1002	Vectors	2	30 L	X	X	X	X	X	X	■
		AM 1006	Geometry with Applications	2	30 L	O	O	O	O	O	O	
S2		AM 1003	Matrices	2	30 L	X	X	X	X	X	X	■
		AM 1005	Graph Theory	2	30 L	O	O	O	O	O	O	
S1		ST 1006	Introduction to Probability & Statistics Probability & Distributions	2	30 L	X		X		X		
		ST 1008	Exploratory Data Analysis	2	30 L		X		X		X	
		ST 1009		2	15 L 30 P		X		X		X	
S2		ST 1010	Statistical Theory	2	30 L		X		X		X	
		ST 1011	Introduction to Surveys	2	15 L 30 P	O	O	O	O	O	O	
		ST 1012	Basic Statistical Computing	2	15 L 30 P	O	O	O	O	O	O	
S1		PM 1001	Calculus I	2	30 L		O	X	O	X	X	
		PM 1004	Sets and Combinatory	2	30 L			X		X	X	
S2		PM 1002	Algebra	2	30 L			X		X	X	
S1		CS 1102	Introduction to Computing	3	45 L	X	X	X	X	X	X	
S2		CS 1101	Fundamentals of Programming	3	30 L 30 P	X	X	X	X	X	X	

X: Core courses ■ : Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Note:

1. Students must select all core courses (X) from **at least** three subjects out of the four within each stream, and enough electives to make up at least 30 credits.
2. All Physical Science students must register for compulsory courses marked with a ■
3. ST 1006 is a compulsory course for P1, P3 and P5 students.
4. ST 1008 is a compulsory course for P2, P4 and P6 students.

Combinations:

P1	Physics, Chemistry, Applied Maths, Computer Science	AM/PH/CH/CS
P2	Physics, Applied Maths, Statistics, Computer Science	AM/PH/ST/CS
P3	Physics, Applied Maths, Pure Maths, Computer Science	AM/PHPM/CS
P4	Chemistry, Applied Maths, Statistics, Computer Science	AM/CH/ST/CS
P5	Chemistry, Applied Maths, Pure Maths, Computer Science	AM/CH/PM/CS
P6	Applied Maths, Statistics, Pure Maths, Computer Science	AM/ST/PM/CS

ANNEX 2 - PS 2: Physical Science, Level II

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	P1	P2	P3	P4	P5	P6	
S1		PH 2001	Analogue and Digital Electronics I	2	30 L	X	X	X	O	O	O	
		PH 2002	Physics of Semiconductor Devices	1	15 L	O	O	O	O	O	O	
		PH 2021	Electronics and Computing Laboratory II	2	60 P	O	O	O				
S2		PH 2003	Electromagnetic Theory	2	30 L	X	X	X	O	O	O	
		PH 2004	Special Relativity	1	15 L	O	O	O	O	O	O	
		PH 2020	Physical Laboratory II	2	60 P	X	X	X				
S1		CH 2011	Practical Chemistry Level II	2	60 P	X			X	X		
		CH 2012	Intermediate Physical Chemistry	3	45 P	X			X	X		
S2		CH 2002	Inorganic and Analytical Chemistry	2	30 L	X			X	X		
		CH 2013	Introduction to Biochemistry	2	30 L	O			O	O		
S1		AM 2001	Differential Equations II	2	30 L	X	X	X	X	X	X	■
		AM 2003	Linear Programming	2	30 L	X	X	X	X	X	X	■
S2		AM 2002	Numerical analysis	2	30 L	X	X	X	X	X	X	■
		AM 2004	Optimization	2	30 L	O	O	O	O	O	O	
		AM 2005	Differential Equations III	2	30 L	O	O	O	O	O	O	
S1		ST 2006	Basic Statistical Inference	3	45 L	O	X	O	X	O	X	
		ST 2007	Applications in Statistical Inference	1	30 P		X		X		X	
		ST 2008	Statistical Methods in Quality Control	2	30 L	O	O	O	O	O	O	
S2	ST 2006	ST 2004	Analysis of Variance and Design of Experiments	2	30 L	O	X	O	X	O	X	
	ST 2006	ST 2009	Applied Non-Parametric Methods	2	30 L	O	O	O	O	O	O	
		ST 2010	Introduction to Statistical Modeling	1	15 L		O		O		O	
S1		PM 2001	Calculus II	2	30 L		O	X	O	X	X	
		PM 2002	Linear Algebra	2	30 L			X		X	X	
S2		PM 2004	Logic and introduction to Analysis	2	30 L			X		X	X	
S1		NS 2003	Introduction to Nuclear Science	3	45 L	O	O	O	O	O		
S2	NS 2003	NS 2004	Nuclear Technology in Sri Lanka	1	15 L	O	O	O	O	O		
S1		CS 2001	Internet Technologies	3	30 L 30 P	X	X	X	X	X	X	
S2		CS 2002	Fundamentals of Software Engineering	3	45 L	X	X	X	X	X	X	

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Note:

1. Students must select all core courses (X) from **at least** three subjects out of the four within each stream, and enough electives to make up at least 30 credits.
2. All Physical Science students must register for compulsory courses marked with a ■

Combinations:

P1	Physics, Chemistry, Applied Maths, Computer Science	AM/PH/CH/CS
P2	Physics, Applied Maths, Statistics, Computer Science	AM/PH/ST/CS
P3	Physics, Applied Maths, Pure Maths, Computer Science	AM/PHPM/CS
P4	Chemistry, Applied Maths, Statistics, Computer Science	AM/CH/ST/CS
P5	Chemistry, Applied Maths, Pure Maths, Computer Science	AM/CH/PM/CS
P6	Applied Maths, Statistics, Pure Maths, Computer Science	AM/ST/PM/CS

ANNEX 3 - PS 1: Physical Science, Level III.

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	P1	P2	P3	P4	P5	P6	
S1		PH 3001	Quantum Mechanics	3	45 L	X	X	X				
		PH 3008	Astronomy	3	45 L	O	O	O	O	O	O	
S2		PH 3004	Nuclear Physics	3	45 L	X	X	X				
		PH 3002	Environmental Physics	3	45 L	X	X	X	O	O	O	
S1		CH 3001	Topics in Analytical Chemistry I	2	30 L	X			X	X		
		CH 3002	Practical Analytical Chemistry	1	30 P	X			X	X		
		CH 3003	Industrial Chemistry	2	30 L	X			X	X		
		CH 3004	Laboratory Management	1	15 L	X			X	X		
		CH 3006	Computational Chemistry	2	30 L	O	O	O	O	O	O	
		CH 3008	Quality Management	1	15 L	O			O	O		
		CH 3010	Environmental Chemistry	2	30 L	O	O	O	O	O	O	
S2		CH 3005	Chemical Technology	2	30 L	O	O	O	O	O	O	
		CH 3007	Topics in Analytical Chemistry II	1	15 L	O			O	O		
		CH 3024	Pharmaceutical Chemistry*	2	30 L	O			O	O		
S1		AM 3005	Mathematical Methods	3	45 L	X	X	X	X	X	X	
		AM 3004	Mathematical Modeling in Economics and Business	3	45 L	X	X	X	X	X	X	
		AM 3006	Financial Mathematics	3	45 L	X	X	X	X	X	X	
S2		AM 3007	Computer Applications in Combinatorics	3	30 L 30 P	O	O	O	O	O	O	
		AM 3002	Computer Applications in Discrete Mathematics	3	30 L 30 P	O	O	O	O	O	O	
S1	ST 2006	ST 3006	Regression Analysis	2	30 L	O	X	O	X	O	X	
		ST 3007	Operational Research	3	45 L	O	X	O	X	O	X	
	ST 2006	ST 3009	Applied Time Series	2	30 L	O	X	O	X	O	X	
	IS 1009/ ST 2006	IS 3001	Sampling Techniques	2	30 L	O	O	O	O	O	O	
S2	ST 2008	ST 3012	Statistical Process Control	2	30 L	O	O	O	O	O	O	
S1		PM 3002	Complex Analysis	3	45 L			X		X	X	
S2		PM 3003	Algebra	3	45 L			X		X	X	
		PM 3001	Real Analysis	3	45 L			X		X	X	
S1		IT 3003	Advanced Programming Techniques	3	30 L 30 P	X	X	X	X	X	X	
		CS 3101	Rapid Application Development and Visual Programming Technologies	3	30 L,30 P	X	X	X	X	X	X	
S2		IT 3001	Management Information Systems	3	30 L 30 P	X	X	X	X	X	X	
		IT 3002	Database Systems	3	30 L 30 P	X	X	X	X	X	X	
S1		NS 3017	Applied Nuclear Science	3	30 L 30 P	O	O	O	O	O	O	✸
S2		NS 3018	Health Physics	3	30 L 30 P	O	O	O	O	O	O	✸
		NS 3019	Medical Physics	3	45 L	O	O	O	O	O	O	
S2		FS 3001	Internship Training	6	_	O	O	O	O	O	O	
		FS 3002	Service Learning	8	240 P	O	O	O	O	O	O	

X: Core courses n: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Note:

1) In this Annex, core courses in some disciplines are elective. Students are required to offer a minimum of 6 core credits in each of two Main Subjects in their combination.
2) Department permission is required to offer the Special Degree course CH 3024 (marked with an asterisk).
3) Courses having field components are marked with a ✸
4) Students can register for either FS 3001 OR FS 3002.

ANNEX 4 - BS 1 / MBM 1: Biological Science / Biochemistry & Molecular Biology (Direct Intake), Level I

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours		
S1		BT 1011	Genetics and Cell Biology	2	30 L	X	
		BT 1009	Genetics and Cell Biology Practicals	1	30 P	X	
		BT 1008	Plant Resources	1	15 L	X	
		BT 1013	Plant Structure	1	5 L 20 P	O	
S2		BT 1012	Variety of Plant and Microbial Life	2	30 L	X	
		BT 1010	Variety of Plant and Microbial Life Practicals	1	30 P	X	✸
		BT 1114	Flora of Sri Lanka	1	5 L 20 P	O	
S1		CH 1008	General and Physical Chemistry	2	30 L	X	
		CH 1010	Calculations in Chemistry	1	15 L	O	
		CH 1011	Practical Chemistry Level I	2	60 P	X	
S2		CH 1012	Organic Chemistry	3	45 L	X	
		CH 1006	Impact of Chemistry on Society	2	30 L	O	✸
S1		ZL 1009	Evolution and Biogeography	2	15 L 30 P	X	✸
		EN 1008	Introduction to Environmental sciences	3	30 L 30 P	■	✸
S2		ZL 1008	Variety of Animal Life	3	30 L 30 P	X	✸
		ZL 1010	Animal Behaviour	2	15 L 30 P	X	
S1		AM 1008	Mathematics for Biological Science Students	2	30 L	■	
S1		CS 1102	Introduction to Computing	3	45 L	■	
S2		CS 1101*	Fundamentals of Programming	3	30 L 30 P	O	

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Courses having field components are marked with a ✸

*To be eligible for the Special Degrees in Computational Chemistry students must offer CS 1101.
*To be eligible for the Special Degrees in Bioinformatics students must offer CS 1101 and CS 1102.

ANNEX 5 - BS 2 / MBM 2: Biological Science / Biochemistry & Molecular Biology (Direct Intake), Level II.

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours		
S1		BT 2014	Principles of Microbiology	1	15 L	X	
		BT 2015	Introductory Molecular Biology and Recombinant DNA Technology	1	15 L	X	
		BT 2001	Biostatistics	2	15 L 30 P	■	
		BT 2016	Microbiology & Molecular Biology Practicals	1	30 P	X	
S2		BT 2017	Plant Biochemistry and Physiology	2	30 L	X	
		BT 2018	Plant Biochemistry and Physiology Practicals	1	30 P	X	
		BT 2013	Plant Development	1	15 L	X	
S1		CH 2011	Practical Chemistry Level II	2	60 P	X	
		CH 2012	Intermediate Physical Chemistry	3	45 L	X	
S2		CH 2002	Inorganic and Analytical Chemistry	2	30 L	X	
		CH 2013	Introduction to Biochemistry	2	30 L	■	
		CH 2014	Genome Structure and Organization	1	15 L	O	
S1		ZL 2010	Animal Form and Function	3	30 L 30 P	X	
		EN 2008	Fundamentals of Environmental Management	3	30 L 30 P	O	✸
S2		ZL 2009	Principles of Ecology	3	30 L 30 P	X	
		ZL 2011	Biosystematics	1	15 L	X	
S1		NS 2003	Introduction to Nuclear Science	3	45 L	O	
S2	NS 2003	NS 2004	Nuclear Technology in Sri Lanka	1	15 L	O	
S1		CS 2001	Internet Technologies	3	30 L 30 P	O	
S2		CS 2002	Fundamentals of Software Engineering	3	45 L	O	

X: Core courses n: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Courses having field components are marked with a ■

Note:

1. To be eligible for the Special Degree in **Bioinformatics**, students must offer CS 2001.
2. To be eligible for the Special Degree in **Computational Chemistry**, students must offer CS 2002.
3. To be eligible for the Special Degree in **Environmental Science**, students must offer EN 2008.
4. To be eligible for the Special Degree in **Nuclear Medical Science,** students must offer NS 2003.
5. To be eligible for the Special Degree in **Biochemistry & Molecular Biology**, students must offer CH 2014

ANNEX 6 – BS 3: Biological Science, Level III

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours		
S1		BT 3001	Plant Pathology	3	30 L 30 P	X	
		BT 3003	Plant Molecular Biology	2	30 L	O	
		BT 3006	Plant Tissue Culture Technology	3	30 L 30 P	X	✸
S2		BT 3002	Horticulture	3	30 L 30 P	X	✸
		BT 3105	Applied Microbiology	3	30 L 30 P	X	✸
		BT 3073	Methods in Plant Breeding	2	20 L 20 P	O	✸
S1		CH 3001	Topics in Analytical Chemistry I	2	30 L	X	
		CH 3002	Practical Analytical Chemistry	1	30 P	X	
		CH 3003	Industrial Chemistry	2	30 L	X	
		CH 3004	Laboratory Management	1	15 L	X	
		CH 3008	Quality Management	1	15 L	O	
		CH 3010	Environmental Chemistry	2	30 L	O	
S2		CH 3005	Chemical Technology	2	30 L	O	
		CH 3007	Topics in Analytical Chemistry II	1	15 L	O	
		CH 3024	Pharmaceutical Chemistry*	2	30 L	O	
		CH 3027	Molecular Biology*	2	30 L	O	
S1		ZL 3010	Fish Biology and Fisheries	3	30 L 30 P	X	✸
		ZL 3015	Introduction to Biological Psychology	1	15 L	O	
		ZL 3019	Pest Management	2	15 L 30 P	X	✸
		ZL 3020	Anthropology	2	30 L	O	
S2		ZL 3012	Human and Mammalian Biology	3	30 L 30 P	X	✸
		ZL 3014	Economic Zoology	3	30 L 30 P	O	✸
		ZL 3018	Animal and Human Parasites	3	30 L 30 P	X	
		ZL 3006	Molecular Biological and Immunological Applications	2	30 L	X	
S1		EN 3013	Natural Hazards and Disease Risk Management	3	30 L 30 P	O	✸
		EN 3019	Climate Change	3	30 L 30 P	O	
S2		EN 3018	Public Policy and Social Movement	2	30 L	O	
		EN 3020	Seminar	1	15 L	O	
S1		IT 3003	Advanced Programming Technologies	3	30 L 30 P	X	
		CS 3101	Rapid Application Development and Visual Programming Technologies	3	30 L 30 P	X	
S2		IT 3001	Management Information Systems	3	30 L 30 P	X	
		IT 3002	Database Systems	3	30 L 30 P	X	
S1		PH 3008	Astronomy	3	45 L	O	
S2		PH 3002	Environmental Physics	3	45 L	O	
S1		NS 3017	Applied Nuclear Science	3	30L 30P	O	
		NS 3005	Radiobiology	2	30L		
S2		NS 3006	Nuclear Techniques in Biology	2	15 L 30 P	O	
		NS 3018	Health Physics	3	30 L 30 P	O	
		NS 3019	Medical Physics	3	45 L	O	
S2		FS 3001	Internship Training	6	_	O	
		FS 3002	Service Learning	8	240 P	O	

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Note:

1. Department permission is required to follow the Special Degree courses CH 3024 and CH 3027 (marked with an asterisk).
2. In this Annex, core courses in some disciplines are elective. Students are required to offer a minimum of 6 core credits in each of two Main Subjects in their combination.
3. Courses having field components are marked with a ✸
4. Students can register for either FS 3001 OR FS 3002.

ANNEX 7 – BMB 3: Biochemistry & Molecular Biology (Direct Intake) - Level III.

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	
S1		BC 3021	Food Chemistry	2	30 L	O
		BC 3022	Metabolism I	2	30 L	X
		BC 3026	Laboratory Techniques in Biochemistry and Molecular Biology	4	120 P	X
		MB 3003	Introduction to Genomics and Proteomics	2	30 L	X
		MB 3022	Gene Expression and Regulation	3	45 L	X
		MB 3023	Recombinant DNA Technology	2	30 L	X
		BT 3053	Introduction to Bioinformatics	2	15 L 30 P	X
S2		CH 3054	Nutritional & Clinical Biochemistry	2	30 L	X
		BC 3006	Biochemistry Seminar	1	30 P	O
		BC 3023	Metabolism II	2	30 L	X
		BC 3025	Protein Structure and Function	2	30 L	X
		BC 3027	Enzymology	2	30 L	X
		MB 3005	Industrial Molecular Biotechnology	2	30 L	X
		MB 3026	Cell Signaling	1	15 L	X
		ZL 3006	Molecular Biological and Immunological Applications	2	30 L	O
S2		FS 3001	Internship Training	6	_	O
		FS 3002	Service Learning	8	240 P	O

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Note:

- Students can register for either FS 3001 OR FS 3002.

ANNEX 8 - IS 1: Industrial Statistics & Mathematical Finance - Level I

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	
S1		IS 1006	Fundamentals of Statistics	3	30 L 30 P	X
		IS 1007	Introduction to Statistical Computing	1	30 P	O
S2		IS 1008	Introduction to Probability and Distributions	3	45 L	X
		IS 1009	Introduction to Survey Design	2	15 L 30 P	O
S1		FM 1001	Financial Mathematics	2	20 L, 20 P	X
		FM 1002	Mathematical Methods for Finance I	2	30 L	X
		PM 1001	Calculus I	2	30 L	X
S2		FM 1004	Mathematical Economics	2	30 L	O
		FM 1005	Linear Algebra	2	30 L	O
S1		MS 1001	Principles of Management	1	15 L	X
		MS 1002	Linear Programming*	2	15 L 30 P	X
S2		MS 1003	Operational Research I	2	30 L	X
		MS 1004	Computing for Finance*	1	10 L 10 P	X
S1		CS 1102	Introduction to Computing	3	45 L	X
S2		CS 1101	Fundamentals of Programming	3	30 L, 30 P	X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

*MS Courses offered by the Department of Mathematics.

Note:

1. Students must offer all core courses from IS, FM, and MS disciplines during Level I and Level II.
2. Students must select at least 2 electives from each of IS and FM disciplines during Level I and Level II.

ANNEX 9 - IS 2: Industrial Statistics & Mathematical Finance - Level II

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	
S1		IS 2005	Statistical Packages	1	30 P	X
		ST 2006	Basic Statistical Inference	3	45 L	X
S2		IS 2003	Design and Analysis of Industrial Experiments	2	30 L	X
	ST 2006	ST 2009	Applied Non-Parametric Methods	2	30 L	O
		ST 2010	Introduction to Statistical Modelling	1	15 L	O
S1		FM 2001	Computational Financial Mathematics I	2	20 L 20 P	X
		FM 2004	Mathematical Methods for Finance II	2	30 L	O
		PM 2001	Calculus II	2	30 L	X
S2		FM 2002	Actuarial Mathematics I	2	30 L	X
		FM 2005	Computational Financial Mathematics II	2	25 L 10 P	O
		PM 2004	Logic and Introduction to Analysis	2	30 L	O
S1		MS 2001	Statistical Quality Control	2	30 L	X
		MS 2002	Quantitative Methods*	2	30 L	X
S2		MS 2003	Qualitative Methods*	1	15 L	X
		MS 2004	Introduction to Marketing Research	1	15 L	X
S1		CS 2001	Internet Topologies	3	30 L 30 P	X
S2		CS 2002	Fundamentals of Software Engineering	3	45 L	X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

*MS Courses offered by the Department of Mathematics.

Note:

1. Students must offer all core courses from IS, FM, and MS disciplines during Level I and Level II.

Students must select at least 2 electives from each of IS and FM disciplines during Level I and Level II

ANNEX 10 - IS 3: Industrial Statistics & Mathematical Finance - Level III

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	
S1	ST 2006	ST 3006	Regression Analysis	2	30 L	X
	ST 2006	ST 3009	Applied Time Series	2	30 L	O
	IS 1009	IS 3001	Sampling Techniques	2	30 L	X
S2	ST 2006	IS 3004	Applied Multivariate Methods	2	30 L	O
		IS 3005	Statistics in Practice I	3	90 P	X
S1		FM 3004	Numerical Methods for Finance	2	25 L, 10 P	O
		FM 3002	Actuarial Mathematics II	3	45 L	X
S2		FM 3003	Calculus III	2	30 L	O
		FM 3001	Mathematical Programming in Finance	3	30 L, 30 P	X
S1		MS 3005	Introduction to Management Accounting*	2	30 L	O
		MS 3009	Operational Research II	3	30 L 30 P	X
S2		MS 3004	Quality Management/ Project Management	2	30 L	O
		MS 3001	Introduction to Game Theory*	3	45 L	X
S1		CS 3101	Rapid Application Development and Visual Programming Technologies	3	30 L 30 P	X
S2		IT 3001	Management Information Systems	3	30 L 30 P	X
S2		FS 3001	Internship Training	6	–	O
		FS 3002	Service Learning	8	240 P	O

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals /Labs

*MS Courses offered by the Department of Mathematics.

Note: 1. Students can register for either FS 3001 OR FS 3002.

Students must select all core courses (X) from at least 2 disciplines out of the 4 disciplines available.

ANNEX 11 - S 1: SPECIAL DEGREE PROGRAMMES
Physics / Engineering Physics / Computational Physics

Level	Pre-requisite	Course Unit	Title	Credit Value	Hours	PH	EP	CP
III		PH 3001	Quantum Mechanics I	3	45 L	X	X	X
		PH 3007	Analogue and Digital Electronics II	3	45 L	X	X	
		PH 3008	Astronomy	3	45 L	O		
		PH 3030	Advanced Physics Laboratory I	6	180 P	X		
S1		PH 3032	Embedded Systems Laboratory	3	90 P		X	
		PH 3034	Digital Image Processing I	3	30 L 30 P		O	X
		PH 3052	Electromagnetic Fields I	3	45 L	X	X	X
		PH 3057	Mathematical Physics I	3	45 L	X	X	X
		CS 3101	Rapid Application Development and Visual Programming Technologies	3	30 L 30 P			O X
		CS 3008	Introduction to Data Structures and Algorithms	3	30 L 30 P		O	
		CS 3102	Advanced Computer Architecture	2	15 L 30 P			
		CS 3120	Machine Learning and Neural Computing	3	30 L 30 P			X
		PH 3002	Environmental Physics	3	45 L		O	
		PH 3004	Nuclear Physics	3	45 L	X		
		PH 3020	Computational Physics Laboratory	2	60 P			X
		PH 3021	Computational Physics Seminar	1	30 P			X
		PH 3035	Design and Machining Laboratory	3	90 P		X	
S2		PH 3051	Instrumentation Physics	3	45 L		X	
		PH 3053	Statistical Physics	3	45 L	X	X	X
		PH 3054	Classical Mechanics	3	45 L	X		X
		PH 3055	Data Acquisitions and Signal Processing	3	45 L	X	X	
		PH 3058	Circuit Analysis and Simulation	3	30 L 30 P		X	
		IT 3001	Management Information Systems	3	30 L 30 P			O
		IT 3002	Database Systems	3	30 L 30 P			X
IV		PH 4001	Solid State Physics	3	45 L	X	X	X
		PH 4002	Methods in Computational Physics	3	15 L 60 P	X	X	X
		PH 4007	Industrial Management	3	45 L		X	X
		PH 4009	Mathematical Physics II	3	45 L	X		O
		PH 4012	Advanced Optics	3	45 L	X		
		PH 4014	Introduction to Robotics	3	15 L, 60 P		X	O
		PH 4030	Advanced Physics Laboratory II	6	180 P	X		
		PH 4031	Engineering Physics Laboratory	6	180 P		X	
S1		PH 4040	Physics Project	6	180 P	X		
		PH 4041	Engineering Physics Project	6	180 P		X	
		PH 4042	Computational Physics Project	6	180 P			X
		CS 4104	Data Analytics	3	30 L 30 P			X
		CS 4105	Computer Networks II	3	30 L 30 P		O	
		CS 4106	Computer Graphics II	3	30 L 30 P			O
		CS 4110	Parallel Computing	3	30 L 30 P			X
		CS 4127	Advanced Concepts in Software Design and Development	3	30 L 30 P			O
		CS 4128	Advanced Database Management	3	30 L 30 P			O
		PH 4005	Electronic Communication Techniques	3	45 L		X	
		PH 4008	Nuclear and Particle Physics	3	45 L	X		
		PH 4010	Quantum Mechanics II	3	45 L	X		O
		PH 4011	Electromagnetic Fields II	3	45 L	X		
		PH 4013	Solid State Devices and Opt Electronics	3	45 L		X	
		PH 4015	Computational Statistical Mechanics	3	30 L 30 P	O		X
S2		EC 4001	Industrial Training (enhancement course)	2	60 P	O	O	O
		CS 4109	Distributed Systems	3	30 L 30 P			O
		CS 4111	Intelligent Systems	3	30 L 30 P			X
		CS 4117	Embedded Systems	3	30 L 30 P		O	O

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 12 - S2: SPECIAL DEGREE PROGRAMMES
Chemistry / Pharmacy / Computational Chemistry

Level	Pre-requisite	Course Unit	Title	Credit Value	Hours	CH	PHA	CC
III		CH 3001	Topics in Analytical Chemistry I	2	30 L	X	X	
		CH 3003	Industrial Chemistry	2	30 L	O		O
		CH 3004	Laboratory Management	1	15 L	X	X	
		CH 3006	Computational Chemistry	2	30 L	X		X
		CH 3008	Quality Management	1	15 L	X	X	
		CH 3021	Spectroscopy	3	45 L	X	X	X
		CH 3030	Advanced Practical Chemistry	8	240 P	X		
S1		CH 3033	Chemistry of Biomolecules	3	45 L	X	X	O
		CH 3071	Pharmaceutics I	3	45 L		X	
		CH 3075	Practical Pharmacy	8	240 P		X	
		CH 3090	Practical Computational Chemistry	8	240 P			X
		CS 3008	Introduction to Data Structures and Algorithms	3	30 L 30 P			X
		CS 3120	Machine Learning and Neural Computing	3	30 L 30 P			X
		CH 3005	Chemical Technology	2	30 L	O		O
		CH 3007	Topics in Analytical Chemistry II	1	15 L	X		X
		CH 3023	Coordination and Organometallic Chemistry	3	45 L	X		X
		CH 3024	Pharmaceutical Chemistry	2	30 L	X	X	
		CH 3027	Molecular Biology	2	30 L	X		
		CH 3029	Organic Chemistry	3	45 L	X		X
S2		CH 3031	Symmetry in Chemistry	1	15 L	X		X
		CH 3032	Computational Programming in Chemistry	3	30 L 30 P			X
		CH 3054	Nutritional and Clinical Biochemistry	2	30 L		X	
		CH 3073	Anatomy and Physiology	3	45 L		X	
		CH 3074	Pharmacology I	3	45 L		X	
		CH 3076	Microbiology in Pharmacy	2	30 L		X	
		IT 3002	Database Systems	3	30 L 30 P			X
IV		CH 4001	Research Project	8	240 P	X	X	X
		CH 4002	Seminar and Essays	3	90 P	X	X	X
		CH 4004	Optional Topics	4	60 L	X		X
		CH 4005	Advanced Organic Chemistry	3	45 L	X		
		CH 4006	Biochemistry	3	45 L	X		X
		CH 4007	Advanced Physical Chemistry	3	45 L	X		X
S1		CH 4070	Pharmaceutics II	3	45 L		X	
		CH 4071	Pharmacology II	3	45 L		X	
		CH 4078	Pharmacognosy in Pharmacy	2	30 L		X	
		CH 4073	Advanced Pharmaceutical Chemistry II	2	30 L		X	
		CH 4075	Pharmaceutical Law and Ethics	2	30 L	O	X	X
		CH 4090	Advanced Molecular Modeling	1	15 L			
		CH 4003	General Paper	3	45 L	X		X
		CH 4008	Advanced Topics in Chemistry	3	45 L	X		
		CH 4074	Quality Control, Statistics and Computer Applications	3	45 L		X	
S2		CH 4076	Pharmaceutical Management and Administration	3	45 L		X X	
		CH 4077	Pharmacy Practice	2	60 L			
		CS 4115	Computational Biology	3	30 L 30 P			X
		CS 4125	Logic Programming	3	30 L 30 P			X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 13 - S3: SPECIAL DEGREE PROGRAMMES
Mathematics / Finance, Business & Computational Mathematics / Mathematics & Statistics with Computer Science*/ Mathematical Finance

Level	Pre Requisite	Course Unit	Title	Credit Value	Type	MT	FB	MS	MF
III		AM 3004	Mathematical Modeling in Economics and Business	3	45L	X	X	O	
		AM 3050	Mathematical Methods	3	45L	X	X	X	
		FM 3002	Actuarial Mathematics II	3	45L				X
		FM 3005	Economics I for Finance and Insurance	3	45L	O	O	O	O
		PM 3050	Group Theory	4	60L	X	X		
		PM 3054	Topology I	3	45L	X	X		X
		PM 3056	Real Analysis I	3	45L	X	X	O	X
		ST 3006	Regression Analysis	2	30L	X	X	X	X
		ST 3009	Applied Time Series	2	30L			X	
S1		ST 3051	Statistical Inference I	3	45L			X	
		ST 3074	Time Series Analysis	2	30L				O
		ST 3075	Design of Experiments	2	30L			O	
		CS 3101	Rapid Application Development and Visual Programming Technologies	3	30L 30P			X	
		CS 3105	Computer Graphics 1	3	30L 30P			O	
		CS 3106	Information System Security	2	30L			O	
		CS 3102	Advanced Computer Architecture	2	15L 30P			O	
		CS 3112	Advance Web Development	3	30L 30P			O	O
		CS 3120	Machine Learning and Neural Computing	3	30L 30P			O	
		CS 3008	Introduction to Data Structure and Algorithms	3	30L 30P			X	
		AM 3007	Computer Applications in Combinatorics	3	30L 30P	O	O	O	O
		AM 3002	Computer Applications in Discrete Mathematics	3	30L 30P	O	O	O	O
		AM 3051	Numerical Analysis	3	45L	X	X	O	X
		MS 3001	Introduction to Game Theory	3	45L				X
		MS 3008	Accounting for Finance	3	45L				O
		PM 3052	Real Analysis II	3	45L	X	X	O	X
S2		PM 3053	Complex Analysis	4	60L	X	X		
		PM 3055	Topology II	3	45L	X	X		
		ST 3012	Statistical Process Control	2	30L			O	
		ST 3073	Survey and Sampling	3	45L			O	
		ST 3083	Multivariate Data Analysis	3	45L			O	O
		ST 3084	Statistical Inference II	2	30L			O	
		IT 3002	Database Systems	3	30L 30P			O	
		IT 3001	Management Information Systems	3	30L 30P			X	
IV		AM 4001	Discrete Optimization with Computer Applications	4	60L	O	O	O	
		AM 4005	Theory of Interest and Cooperate Finance	4	60L	O	O	O	
		AM 4007	Research Project	6	180P		X		
		AM 4008	Advance Optimization	4	60L	O	O	O	
		AM 4011	Research Project	6	180P			O	
		PM 4001	Commutative Algebra I and Category Theory	4	60L	X			
		PM 4003	Measure Theory	4	60L	X	O	O	O

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Level	Pre Requisite	Couse Unit	Title	Credit Value	Type	MT	FB	MS	MF
S1		PM 4005	Topological Spaces	4	60L	O			
		PM 4007	Research Project	8	240P	X			
		ST 4055	Generalized Linear Models	3	30L 30P			O	
		ST 4031	Stochastic Processes and Applications	3	45L			X	X
		ST 4011	Econometrics	2	30L			O	
		FM 4001	Applied Functional Analysis	4	60L				O
		FM 4002	Financial Mathematics Project	6	180P				O
		FM 4004	Business Accounting	3	30L,30P				O
		FM 4005	Microeconomics	2	30L				O
		MS 4004	Statement Analysis	3	30L 30P				O
		MS 4005	Professional Development in Finance and Insurance	3	30L 30P				O
		CS 4104	Data Analytics	3	30L 30P			O	
		CS 4105	Computer Network II	3	30L 30P			O	
		CS 4119	Formal Methods and Software Verification	3	30L 30P			O	
		CS 4127	Advanced Concepts in Software Design and Development	3	30L 30P			O	O
		CS 4128	Advanced Database Management	3	30L 30P			O	O
		AM 4002	Quantitative Methods	4	60L	O	O	O	
		AM 4003	Actuarial Mathematics	4	60L	O	O		
		AM 4004	Non- Linear Programming	4	60L	O	O	O	
		AM 4006	PDE's and their Applications in Financial Derivatives	4	60L	O	O		X
		AM 4012	Industrial Training	4	120P		O	O	O
		AM 4013	Case Studies in Mathematical Modelling	3	90P		O	O	
		PM 4002	Fields and Galois Theory	4	60L	X			
		PM 4004	Real Analysis	4	60L	X		O	
S2		PM 4006	Functional Analysis	4	60L	O	O		
		PM 4050	Complex Analysis	4	60L				O
		PM 4051	Topology II	3	45L				O
		FM 4003	Case Studies in FM	3	90P				X
		FM 4006	Macroeconomics	2	30L				O
		FM 4007	Economics II for Finance and Insurance	3	45L	O	O	O	O
		CS 4113	Natural Language Processing	3	30L 30P				O
		CS 4114	Natural Algorithms	3	30L 30P			O	
		CS 4125	Logic Programing	3	30L 30P			O	

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Annex 14 - S4: SPECIAL DEGREE PROGRAMMES
Statistics / Statistics with Computer Science

Level	Pre-requisite	Course Unit	Title	Credit Value	Type	ST	SCS
III		ST 3003	Marketing Research	2	30L	o	o
	AM 2004	ST 3007	Operational Research	3	45L	o	o
		ST 3051	Statistical Inference I	3	45L	x	x
		ST 3072	Applied Regression Analysis	3	45L	x	x
		ST 3074	Time Series Analysis	2	30L	x	o
		ST 3075	Design of Experiments	2	30L	x	
		ST 3076	Reliability Data Analysis	3	30L30P		o
S1		ST 3085	Computational Statistics	2	15L 30P	x	o
		CS 3101	Rapid Application Development and Visual Programming Technologies	3	30L 30P		x
		CS 3008	Introduction to Data Structures and Algorithms	3	30L 30P	o	x
		CS 3105	Computer Graphics I	3	30L 30P		o
		CS 3112	Advanced Web Development	3	30L 30P		o
		CS 3120	Machine Learning and Neural Computing	3	30L 30P		x
		PM 3056	Real Analysis 1	3	45L	o	o
	ST 2008	ST 3012	Statistical Process Control	2	30L	o	
		ST 3013	Essential Mathematics for Statistics	3	45L	x	x
		ST 3070	Special Topics	2	15L 30P	o	
		ST 3073	Surveys and Sampling	3	45L	x	
		ST 3077	Medical Statistics	3	45L	o	
S2		ST 3082	Statistical Learning I	2	60P	x	x
		ST 3083	Multivariate Data Analysis	3	45L	x	x
		ST 3084	Statistical Inference II	2	30L	x	x
		IT 3001	Management Information Systems	3	30L, 30P		o
		IT 3002	Database Systems	3	30L, 30P	o	o
		PM 3052	Real Analysis II	3	45L	o	
IV		ST 4011	Econometrics	2	30L	o	
		ST 4031	Stochastic Processes and Applications	3	45L	x	x
		ST 4051	Scientific writing	1	30P	x	x
		ST 4052	Statistical Learning II	2	60P	x	x
S1		ST 4055	Generalized Linear Models	3	30L 30P	x	x
		CS 4104	Data Analytics	3	30L, 30P	o	x
		CS 4106	Computer Graphics II	3	30L, 30P		o
		CS 4127	Advanced Concepts in Software Design & Development	3	30L, 30P	o	x
		CS 4128	Advanced Database Management	3	30L 30P		x
		ST 4012	Special Topics for ST	2	30L	o	
		ST 4013	Special Topics for ST+CS	2	30L		o
		ST 4040	Individual Project ST+CS	8	240P		x
		ST 4050	Individual Project ST	8	240P	x	
S2		ST 4053	Bayesian Statistics	2	30L	x	
		ST 4054	Linear Models	3	45L	x	
		CS 4111	Intelligent Systems	3	30L, 30P		o
		CS 4113	Natural Language Processing	3	30L 30P		o
		CS 4117	Embedded Systems	3	30L 30P		o
		CS 4125	Logic Programming	3	30L 30P	o	o
		EC 4004	Industrial Training	3	90P	o	o

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 15 - S5: SPECIAL DEGREE PROGRAMMES
Plant Science / Plant Biotechnology / Bioinformatics

Level	Pre-requisite	Course Unit	Title	Credit Value	Type	PS	PBT	BI
III		BT 3001	Plant Pathology	3	30 L 30 P	X	X	
		BT 3003	Plant Molecular Biology	2	30 L	X	X	X
		BT 3006	Plant Tissue Culture and Technology	3	30 L 30 P		X	
		BT 3009	Environment and Biodiversity Related Legislation in Sri Lanka	1	15 L	X	X	
		BT 3053	Introduction to Bioinformatics	2	15 L 30 P	X	X	X
S1		BT 3058	Bioprospecting	2	30 L	X	X	
		BT 3061	Taxonomic Field Survey	3	90 P	X		
		BT 3064	Experimental Plant Biotechnology	2	60 P		X	
		BT 3066	Plant Systematics	3	30 L 30 P	X		
		CS 3101	Rapid Application Development and Visual Programming Technologies	3	30 L 30 P			X
				3	30 L 30 P			X
		CS 3120	Machine Learning and Neural Computing	3	30 L 30 P			X
		CS 3008	Introduction to Data Structures and Algorithms	3	30 L 30 P			X
		IT 3003	Advanced Programming Techniques					
		BT 3002	Horticulture	3	30 L 30 P	X	X	
		BT 3105	Applied Microbiology	3	30 L 30 P	X	X	
		BT 3063	Techniques in Molecular Biology'	2	15 L 30 P	X	X	X
		BT 3167	Phylogenetic Analysis	1	10 L10 P	X	X	X
S2		BT 3170	Aspects of Environmental Science	2	20 L 20 P	X	X	
		BT 3071	Experimental Design and Data Analysis	2	15 L 30 P	X	X	X
		BT 3172	Special Topics in Bioinformatics	3	90 P			X
		BT 3073	Methods in Plant Breeding	2	20 L 20 P	X	X	
		ZL 3006	Molecular Biological and Immunological Applications	2	30 L			X
		IT 3002	Database Systems	3	30 L 30 P			X
		BT 3074	Mathematics for Bioinformatics	1	15 L			X
IV		BT 4105	Advanced Plant Biochemistry and Physiology	4	45 L 30 P	X	X	
		BT 4107	Trends in Plant Molecular Biology	3	45 L		X	X
		BT 4018	Soil Science	2	15 L 30 P	X		
		BT 4019	Statistical Methods in Bioinformatics	1	10 L 10 P			X
		BT 4020	Agro biotechnology	3	30 L 30 P		X	
		BT 4021	Biotechnology Industry	3	30 L 30 P		X	
S1		BT 4022	Ecology	3	30 L 30 P	X		
		BT 4036	Applications in Geographical Information System (GIS)	1	30 P	X		
		BT 4134	Biodiversity Conservation	2	20 L 20 P	X		
		BT 4035	Vegetation Description and Analysis	3	15 L 60 P	X		
		BT 4125	Post Harvest Technology	2	20 L 20 P		X	
		CS 4104	Data Analytics	3	30 L 30 P			X
		CS 4128	Advanced Database management	3	30 L 30 P			X
		MB 4003	Molecular Evolution, Modeling and Computer Based Drug Design	3	30 L 30 P			X
		BT 4026	General Paper in Plant Biology	1	30 P	X	X	
		BT 4033	Research Project in Bioinformatics	8	240 P			X
		BT 4028	Research Project in Plant Biotechnology	8	240 P		X	
		BT 4027	Research Project in Plant Science	8	240 P	X		
S2		BT 4030	Literature Review and Seminar I	2	60 P	X	X	X
		BT 4031	Assignment	3	90 P	X	X	
		BT 4032	Seminar and Viva-voce	1	30 P	X	X	X
		CS 4115	Computational Biology	3	30 L 30 P			X
		CS 4125	Logic Programming	3	30 L 30 P			X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 16 – S6: SPECIAL DEGREE PROGRAMMES
Zoology / Environment Science

Level	Pre-requisite	Course Unit	Title	Credit Value	Hours	Z	ES
III		ZL 3010	Fish Biology and Fisheries	3	30 L 30 P	X	
		ZL 3059	Molecular Biology	2	30 L	X	
S1		ZL 3066	Immunology	3	30 L 30 P	X	
		ZL 3071	Animal Kingdom I	3	30 L 30 P	X	
		ZL 3073	Animal Kingdom II	3	30 L 30 P	X	
		EN 3060	Environment resource Management	4	45 L 30 P		X
		EN 3013	Natural Hazards and Disaster Risk Management	3	30 L 30 P		X
		EN 3063	Environmental Economics and Sustainable Development	3	45 L		X
		EN 3019	Climate Change	3	30 L 30 P		X
		ZL 3018	Animal and Human Parasites	3	30 L 30 P	X	
		ZL 3069	Fundamentals of Conservation Biology and Wildlife Management	3	30 L 30 P	X	X
S2		ZL 3070	Ecotoxicology	4	45 L 30 P	X	X
		ZL 3072	Comparative Anatomy and Physiology I	3	30 L 30 P	X	
		ZL 3074	Comparative Anatomy and Physiology II	3	30 L 30 P	X	
		EN 3064	Environment and Industry	3	30 L 30 P		X
		EN 3065	Landscape Ecology	4	45 L 30 P		X
		EN 3018	Public Policy and Social Movement	2	30 L		X
		EN 3020	Seminar	1	15 L		X
IV		ZL 4052	Research Project	8	240 P	X	X
		ZL 4061	Aquaculture	3	30 L 30 P	X	
		ZL 4064	Parasitology	3	30 L 30 P	X	
S1		ZL 4062	Entomology	3	30 L 30 P	X	
		ZL 4063	Ornithology	3	30 L 30 P	X	
		EN 4021	Tools of Environment Management	3	30 L 30 P		X
		EN 4022	Environmental Education, Journalism and NGO's	3	30 L 30 P		X
		EN 4023	Environmental Policies, Legislation and Administration	2	30 L		X
		EN 4024	Environmental Issues	3	45 L		X
		ZL 4060	Development Biology	2	30 L	X	
		ZL 4065	Wildlife Management	3	30 L 30 P	X	
		ZL 4066	Project Development	1	15 L	X	X
S2		ZL 4048	Seminar	1	15 L	X	X
		ZL 4049	Guided Reading and Essay	3	45 L	X	X
		EN 4025	Nuclear Technology and Environment	3	30 L 30 P		X
		EN 4026	Instrumentation for Environment Management	3	15 L 60 P		X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 17 - S7: SPECIAL DEGREE PROGRAMMES
Immunology & Integrative Molecular Biology

Level	Pre-requisite	Course Unit	Title	Credit Value	Hours	
III		ZL 3058	Immunology	2	30 L	X
		ZL 3059	Molecular Biology	2	30 L	X
		ZL 3081	Cellular and Molecular Physiology	3	45 L	X
S1		ZL 3082	Foundations in Molecular Ecology	2	30 L	X
		ZL 3086	Population Genetics and Genomics	2	30 L	X
		ZL 3084	Practical Molecular Biology I	4	120 P	X
		ZL 3085	Advanced Applications in Immunology and Molecular Biology	2	30 L	X
		ZL 3080	Bioethics	1	15 L	X
		ZL 3087	Conservation Genetics	2	30 L	X
S2		ZL 3088	Applications and Management of Genetic Resources	1	15 L	X
		ZL 3083	Molecular Taxonomy	1	15 L	X
		ZL 3089	Immune System in Diseases	2	30 L	X
		ZL 3090	Practical Immunology I	4	120 L	X
		ZL 3091	Human Molecular Genetics	2	30 L	X
IV		ZL 4052	Research Project	8	240 P	X
		ZL 4081	Molecular Phylogeography and Evolution	2	30 L	X
		ZL 4070	Molecular Immunology	1	15 L	X
S1		ZL 4082	Epigenetics	2	30 L	X
		ZL 4083	Bioinformatics and Functional Genomics	2	30 L	X
		ZL 4084	Molecular and Immunotoxicology	1	15 L	X
		ZL 4085	Practical Molecular Biology II	4	120 L	X
		ZL 4048	Seminar	1	15 L	X
S2		ZL 4049	Guided Reading & Essay	3	45 L	X
		ZL 4087	Molecular Medicine	2	30 L	X
		ZL 4088	Practical Immunology II	4	120 P	X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 18 - S8: SPECIAL DEGREE PROGRAMMES
Nuclear Medical Science

Level	Prerequisite	Course Unit	Title	Credit Value	Hours	NMS
III		NS 3017	Applied Nuclear Science	3	30 L 30 P	X
		NS 3005	Radiobiology	3	45 L	X
S1		NS 3110	Human Anatomy	3	45 L	X
		NS 3120	Nuclear Medicine I	2	30L	X
		*	Elective	3		O
		PH 3034	Digital Image Processing	3	30 L 30 P	X
		NS 3023	Diagnostic Radiology I	3	45 L	X
		NS 3018	Health Physics	3	30 L 30 P	X
S2		NS 3011	Human Anatomy Practical	1	30 P	X
		NS 3022	Statistics for Nuclear Science	3	30 L 30 P	X
		NS 3024	Biological and Medical Ethics	1	15L	X
		BT 3172	Special Topics in Bioinformatics	3	90 P	O
IV		NS 4029	Diagnostic Radiology II	3	30 L 30 P	X
		NS 4005	Clinical Education	1	30 P	X
S1		NS 4030	Nuclear Technology and Environment	3	30 L 30 P	X
		NS 4019	Nuclear Medicine II	3	45 L	X
		NS 4031	Human Physiology	2	30 L	X
		NS 4006	Seminar and Essay	3	90 P	X
		NS 4032	Radiotherapy Physics	3	45 L	X
S2		NS 4007	Research Project	8	240 P	X
		NS 4108	Clinical Practice I	2	60 P	X
		NS 4109	Clinical Practice II	2	60 P	X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

Note: * A third year course unit from any subject approved by the Department of Nuclear Science

ANNEX 19 - S9: SPECIAL DEGREE PROGRAMMES

Biochemistry and Molecular Biology

Level	Pre-requisite	Course Unit	Title	Credit Value	Hours	
III		CH 3033	Chemistry of Biomolecules	3	45 L	O
		BC 3022	Metabolism I	2	30 L	X
S1		BC 3030	Practical Biochemistry and Molecular Biology	8	240 P	X
		MB 3022	Gene Expression and Regulation	3	45 L	X
		MB 3025	Recombinant DNA Technology and Applications	3	45 L	X
		BT 3053	Introduction to Bioinformatics	2	15 L 30 P	X
		CH 3054	Nutritional and Clinical Biochemistry	2	30 L	X
		BC 3023	Metabolism II	2	30 L	X
S2		BC 3024	Bio- Physical Chemistry	2	30 L	O
		BC 3025	Protein Structure and Function	2	30 L	X
		BC 3027	Enzymology	2	30 L	O
		MB 3024	Topics in Molecular Cell Biology	2	30 L	X
IV		BC 4001	Research Project	8	240 P	X
		BC 4002	Seminar and Essay	3	90 P	X
S1		BC 4004	Optional Topics	2	30 L	X
		MB 4001	Genomics and Proteomics	3	45 L	X
		MB 4003	Molecular Evolution, Modelling and Computer Based Drug Design	3	30 L 30 P	X
		ZL 4058	Immunology	2	30 L	X
		BC 4003	General Paper	3	45 L	X
S2		BC 4005	Advanced Topics in Biochemistry and Molecular Biology	2	30 L	X
		BC 4006	Selected Topics in Biochemistry and Molecular Biology	2	30 L	X
		MB 4004	Applications in Biotechnology	3	45 L	X

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 20 – S10: SPECIAL DEGREE PROGRAMMES
Industrial Statistics

Level	Pre-requisite	Course Unit	Title	Credit Value	Type	IS
III	IS 1009	IS 3001	Sampling Techniques	2	30L	X
		IS 3050	Statistical Inference	3	45L	X
		IS 3051	Advanced Statistical Process Control	2	30L	X
		ST 3006	Regression Analysis	2	30L	X
		ST 3074	Time Series Analysis	2	30L	O
S1		ST 3076	Reliability Data Analysis	3	30L 30P	O
		ST 3085	Computational Statistics	2	15L 30P	X
		FM 3005	Economics I for Finance and Insurance	3	45L	O
		MS 3002	Advanced Marketing Research	1	15L	X
		MS 3009	Operational Research II	3	30L 30P	O
		CS 3112	Advanced Web Development	3	30L 30P	O
		IS 3003	Special Topics I	2	15L 30P	O
		IS 3052	Advanced Topics in Experimental Design	2	30L	X
		IS 3053	Data Mining Techniques	2	15L 30P	X
S2		ST 3082	Statistical Learning I	2	60P	X
		ST 3083	Multivariate Data Analysis	3	45L	O
		MS 3004	Quality Management/Project Management	2	30L	X
		MS 3008	Accounting for Finance	3	45L	O
		IT 3002	Database Systems	3	30L 30P	O
IV		IS 4002	Advanced Statistical Modeling	3	45L	X
		IS 4003	Special Topics II	2	30L	O
		ST 4011	Econometrics	2	30L	O
		ST 4031	Stochastic Processes and Applications	3	45L	X
S1		ST 4035	Data Science	3	30L 30P	O
		ST 4051	Scientific Writing	1	30P	X
		ST 4052	Statistical Learning II	2	60P	X
		MS 4004	Statement Analysis	3	30L 30P	O
		MS 4005	Professional Development in Finance and Insurance	3	30L 30P	O
		IS 4005	Industrial Training	4	120P	X
S2		IS 4006	Individual Project	8	240P	X
		FM 4007	Economics II for Finance and Insurance	3	45L	O
		CS 4113	Natural Language Processing	3	30L 30P	O

X: Core courses ■: Compulsory courses O: Elective courses L: Lectures P: Practicals / Labs

ANNEX 21: Four Year General Degree Programme

FOUR YEAR GENERAL DEGREE PROGRAMME: IT THEME

Level III

Semester	Pre Requisite	Course Unit	Title	Credit Value	Hours	
S1		IT 3003	Advance Programming Techniques	3	30L	30P
		IT 3004	E-Commerce	2	20L	20P
		IT 3005	Data Mining	3	30L	30P
		IT 3006	IT Service Management	2	20L	20P
		MS 3006	General Management	2	20L	20P
S2		IT 3001	Management Information Systems	3	30L	30P
		IT 3002	Database Systems	3	30L	30P
		IT 3007	Data Structures & Algorithms	3	30L	30P
		MS 3007	Strategic Human Resource Management	2	20L	20P
Total Credit Value = 30*						

*Students who want to follow IT theme must select the above 23 credits. The other 7 credits must be chosen from other available 3rd year course units.

Level IV

Semester	Pre Requisite	Course Unit	Title	Credit Value	Hours	
S1		IT 4004	Advanced Database Systems	3	30L	30P
		IT 4005	Advanced Software Engineering	3	30L	30P
		IT 4006	Enterprise Applications Development	3	30L	30P
		IT 4007	Network Information Systems	3	30L	30P
		MS 4003	Strategic Decision Making	3	30L	30P
S2		FS 4004	Industrial Training	12		

Note: Students need to register for 3 credits from other available 4th year course units in semester 1

FOUR YEAR GENERAL DEGREE PROGRAMME: ELECTRONICS & IT THEME

LEVEL III

Semester	Course Unit	Title	Credit Value	Hours	
S1	PH 3007	Analogue and Digital Electronics II	3	45L	O
	PH 3036	Microcontrollers and Embedded Systems	3	90P	X
	PH 3037	Mobile Application Development	3	90P	X
	IT 3003	Advanced Programming Techniques	3	30L 30P	O
	PH 3041	Computational Mathematics	3	30L 30P	O
S2	PH 3038	Electronic Circuit Designs & Simulation	3	30L 30P	X
	PH 3039	Data Acquisition Laboratory	3	90P	O
	PH 3040	Design Patterns in Software Engineering	3	45L	O
	IT 3002	Database Systems	3	30L 30P	X
	IT 3007	Data Structures and Algorithms	3	30L 30P	O

LEVEL IV

Semester	Course Unit	Title	Credit Value	Hours	
S1	PH 4005	Electronics Communication Techniques	3	45L	O
	PH 4013	Solid State Devices and Optoelectronics	3	45L	O
	PH 4016	Power Electronics	3	45L	O
	IT 4004	Advanced Database Systems	3	30L 30P	O
	IT 4005	Advanced Software Engineering	3	30L 30P	O
	IT 4006	Enterprise Application Development	3	30L 30P	O
	PH 4007	Industrial Management	3	45L	X
S2	FS 4001	Industrial Training	12	_	X

- Pre-requisites: Level I & II Physics & Computer Science Core courses and PH 1021, PH 2021

FOUR YEAR GENERAL DEGREE PROGRAMME: APPLIED STATISTICS THEME

Semester	Pre-requisite	Course Unit	Title	Credit Value	Hours	PS	IS
III		ST 3007	Operational Research	3	45 L	O	
	ST 2010	ST 3008	Applied Statistical Models	3	30 L 30 P	X	X
		ST 3009	Applied time Series	2	30 L	X	X
S1		ST 3010	Introduction to Health Statistics	2	15 L 30 P	O	O
	IS 1009/ ST 1011	IS 3001	Sampling Techniques	2	30 L	X	X
		CS 3008	Introduction to Data Structures & Algorithms	3	30 L 30 P	X	X
			Operational Research II				
		MS 3009	Advanced programming Techniques	3	30 L 30 P		O
		IT 3003		3	30 L 30 P	X	X
		ST 3011	Statistical Programming	2	60 P	X	X
	ST 2008/ MS 2001	ST 3012	Statistical Process Control	2	30 L	O	O
		ST 3013	Essential Mathematics in Statistics	3	45 L	X	X
S2		IS 3004	Applied Multivariate Methods	2	30 L	X	X
		IS 3005	Statistics in Practice I	3	90 P	X	X
		MS 3004	Quality Management/Project Management	2	30 L	O	O
		T 3002	Database Systems	3	30 L 30 P	X	X
IV		ST 4011	Econometrics	2	30 L	X	X
		ST 4035	Data Science	3	30 L 30 P	X	X
		ST 4036	Time to Event Analysis	2	30 L	X	X
S1	ST 3010	ST 4037	Epidemiology	2	30 L	O	O
		IS 4007	Statistics in Practice II	3	90 P	X	X
		MS 4007	Risk Management	2	30 L	O	O
		MS 4008	Industrial Psychology	2	30 L	X	X
		IT 4004	Advanced Database Systems	3	30 L 30 P	X	X
		IT 4005	Advanced Software Engineering	3	30 L 30 P	O	O
S2		IS 4008	Industrial Training	12	360P	X	X

FOUR YEAR GENERAL DEGREE PROGRAMME:
BUSINESS & ENVIRONMENT THEME

Level	Pre-requisite	Course Unit	Title	Credit Value	Hours	
III		EN 3901	Introduction to Business & Environment	1	15 L	X
		EN 3902	Business & Biodiversity	2	30 L	X
		BT 3058	Bioprospecting	2	30 L	X
		EN 3904	Adapting Business for Climate Change	3	30 L 30 P	X
S1		EN 3013	Natural Hazards & Disaster Risk Management	3	30 L 30 P	X
		FS 3003	Intellectual Property Rights	1	15 L	X
		BT 3009	Environment& Biodiversity Related Legislation in Sri Lanka	1	15 L	X
		CH 3010	Environmental Chemistry	2	30 L	X
		EN 3905	Sustainable Tourism	2	30 L	X
		EN 3906	Environmental Communication	2	15 L 30 P	X
		EN 3064	Environment & Industry	3	30 L 30 P	X
S2		EN 3903	Sustainable Development & Business	2	30 L	X
		BT 3071	Experimental Design & Data Analysis	2	15L 30P	X
		EN 3907	Group Project	3	90 P	X
		EN 3908	Case Studies	1	15L	X
IV		ZL 4901	Project Development	2	20 L 20 P	X
		ZL 4902	Seminar	1	15 L	X
		EN 4021	Tools of Environment Management	3	30 L 30 P	X
S1		FS 4005	Entrepreneurship	3	30 L 30P	X
		FS 4006	Business Accounting	3	45 L	X
		FS 4007	Human Resource Management	3	45 L	X
		FS 4008	Environmental Economics	3	45 L	X
S2		EN 4908	Industrial Training	12	_	X

* EN 3901, EN 3902 and EN 3013 will be offered to the 3 year general degree students

FOUR YEAR GENERAL DEGREE PROGRAMME: HORTICULTURE AND SUSTAINABLE LANDSCAPING THEME

Level	Course Unit	Course Title	Credit Value	Hours	
III	BT 3006	Plant Tissue Culture Technology	3	30 L 30 P	X
	BT 3008	Intellectual Property Rights	1	15 L	X
	BT 3009	Environment and Biodiversity Related Legislation in Sri Lanka	1	15 L	X
S1	BT 3901	Fundamentals of Landscaping	3	30 L 30 P	X
	BT 3903	Pest and Plant Disease Management	2	15 L 30 P	X
	BT 3906	Computer Applications in Landscape Design	3	90 P	X
	EN 3013	Natural Hazards and Disaster Risk Management	3	30 L 30 P	X
S2	BT 3905	Plant Propagation	3	15 L 60 P	X
	BT 3073	Methods in Plant Breeding	2	20 L 20 P	X
	BT 3904	Commercial Horticulture and Floriculture	4	45 L 30 P	X
	BT 3907	Amenity and Therapeutic Horticulture	3	30 L 30 P	X
	BT 3902	Landscaping Assignment	2	60 P	X
IV	BT 4125	Post-harvest Technology	2	20 L 20 P	X
	BT 4908	Soil Management	2	15 L 30 P	X
	BT 4901	Landscape Maintenance and Management	2	15 L 30 P	X
S1	FS 4005	Entrepreneurship	3	30 L 30 P	X
	ZL 4901	Project Development	2	20 L 20 P	X
	FS 4001	Business Accounting	3	45 L	X
	FS 4007	Human Resource Management	3	45 L	O
	BT 4020	Agro-biotechnology	3	30 L 30 P	O
S2	BT 4902	Industrial Training	12	-	X
	BT 4903	Seminar and Report	1	30P	X

FOUR YEAR GENERAL DEGREE PROGRAMME: FINANCE AND INSURANCE THEME

Level III	Course Unit	Title	Credit Value	Type	PS	IS
S1	AM 3004	Mathematical Modeling for Economics and Business	3	45 L	O	O
	AM 3008	Corporate Finance	3	30 L 30 P	X	
	AM 3009	Mathematical Methods for Finance	3	30 L 30 P	X	X
	FM 3002	Actuarial Mathematics II	3	30 L 30 P		X
	FM 3005	Economics I for Finance and Insurance	3	45 L	X	X
	IT 3004	E- Commerce	2	20 L 20 P	O	O
	MS 3006	General Management	2	20 L 20 P	X	X
	ST 3006	Regression Analysis	2	30 L	O	O
S2	AM 3002	Computer Applications in Discrete Mathematics	3	30 L 30 P	O	O
	AM 3007	Computer Applications in Combinatories	3	30 L 30 P	O	O
	FM 3006	Insurance Market and Products	3	30 L 30 P	X	X
	FM 3007	Financial Market and Products	3	30 L 30 P	X	X
	MS 3001	Introduction to Game Theory	3	45 L	O	O
	MS 3007	Strategic Human Resource Management	2	20 L 20 P	X	X
	MS 3008	Accounting for Finance	3	45 L	O	O
Level IV						
S1	FM 4007	Economics II for Finance and Insurance	3	45 L	X	X
	FM 4008	Case Study in Finance and Insurance	3	90 P	X	X
	MS 4003	Strategic Decision Making	3	30 L 30 P	X	X
	MS 4004	Statement Analysis	3	30 L 30 P	X	X
	MS 4005	Professional Development in Finance & Insurance	3	30 L 30 P	X	X
	MS 4006	Entrepreneurship in Insurance & Finance	3	30 L 30 P	X	X
S2	FM 4009	Industrial Training	12	-	X	X

4 YEAR GENERAL DEGREE PROGRAMME: SCIENCE & MANAGEMENT THEME

Level III	Pre Req.	Course Unit	Title	Credit value	Type	Core/ Elective
S1		CH 3004	Laboratory Management	1	15L	X
		AM 3008	Corporate Finance	3	30L 30P	X
		AM 3004	Mathematical Modeling for Economics and Business	3	45L	X
		MS 3006	General Management	2	20L 20P	X
		BT 3001	Plant Pathology	3	30L 30P	O
		BT 3008	Intellectual property Rights	1	15L	O
		BT 3073	Methods in Plant breeding	2	20L20P	O
		CH 3001	Topics in Analytical Chemistry I	2	30L	O
		CH 3003	Industrial Chemistry	2	30L	O
		CH 3010	Environmental chemistry	2	30L	O
		ZL 3015	Introduction to Biological Psychology	1	15L	O
		EN 3901	Introduction to Business & Environment	1	15L	O
		EN 3902	Business & Biodiversity	2	30L	O
		EN 3903	Sustainable Development & Business	2	30L	O
		EN 3013	Natural Hazards and Disease Risk Management	3	30L 30P	O
		EN 3019	Climate Change	3	30L 30P	O
		AM 3006	Financial mathematics	3	45L	O
		AM 3005	Mathematical Methods	3	45L	O
		AM 3004	Mathematical modeling in Economics & Business	3	45L	O
		PM 3002	Complex analysis	3	45L	O
		PH3001	Quantum Mechanics 1	3	45L	O
		PH 3007	Analogue and digital electronics II	3	45L	O
		PH 3008	Astronomy	3	45L	O
S2		MS 3004	Quality Management	2	30L	X
		MS 3007	Strategic Human Resource Management	2	30L	X
		MS 3011	Business Economics I	2	30L	X
		MS 3008	Accounting for Finance	3	45L	X
		PH 3002	Environmental Physics	3	45L	O
		PH 3004	Nuclear Physics	3	45L	O
		AM 3007	Computer Application in combinatorics	3	30L 30P	O
		PM3001	Real Analysis	3	45L	O
		PM 3003	Algebra	3	45L	O
		EN 3064	Environment and Industry	3	30L 30P	O
		NS 3019	Medical Physics	3	45L	O
		CH 3007	Topics in Analytical Chemistry II	1	15L	O
		CH 3005	Chemical Technology	2	30L	O
		CH 3077	Bio analytical Chemistry 1	2	30L	O
		ZL 3014	Economic Zoology	3	30L, 30P	O
		ZL 3006	Molecular Biological and immunological Applications	2	30L	O
		MB 3029	Nano biotechnology	2	30L	O
		BT 3002	Horticulture	3	30L 30P	O
		BT 3003	Plant Molecular Biology	2	30L	O
		PH 3040	Design Patterns in Software Engineering	3	45L	O
		PH 3002	Environmental Physics	3	45L	O
		IT 3001	Management information systems	3	30L 30P	O

Level IV	Pre Req.	Course Unit	Title	Credit value	Type	Core/Elective
S1		FS 4006	Business Accounting	2	30 L	X
		MS 4003	Strategic Decision Making	3	30L 30P	X
		MS 4008	Industrial Psychology	2	30L	X
		MS 4009	Business Economics II	2	30L	X
		ST 4011	Econometrics	2	30L	X
		MB 4005	Medical Biotechnology	2	30L	O
		MB 4008	Selected Topics in Biotechnology	2	30L	O
		FS 4005	Entrepreneurship	3	45L	O
		FM 4007	Economics II for Finance and Insurance	3	45L	O
		PH 4005	Electronic Communication Techniques	3	45L	O
		PH 4007	Industrial Management	2	30L	O
		PH 4016	Power Electronics	3	45L	O
		FS 4008	Environmental Economics	2	30L	O
		MS 4007	Risk Management	2	30L	O
		CH 4091	Bio Analytical Chemistry II	2	30L	O
S2		MS 4013	Internship Training	12		X

Note:

*No guarantees are offered that all elective courses will be available to all interested students, because of possible time table clashes. It is the responsibility of students to select courses, such that they do not coincide with other courses, particularly compulsory ones.****Note:***

4 YEAR GENERAL DEGREE PROGRAMME: MOLECULAR BIOLOGY & BIOTECHNOLOGY THEME

Level	Course unit	Course Title	Credit Value	Hours	
III	BC 3021	Food Chemistry	2	30L	O
	BC 3022	Metabolism 1	2	30L	X
	BC 3026	Laboratory Techniques in Biochemistry and Molecular Biology	4	120P	X
	MB 3003	Introduction to Genomics and Proteomics	2	30L	X
S1	MB 3022	Gene Expression and Regulation	3	45L	X
	MB 3023	Recombinant DNA Technology	2	30L	X
	BT 3053	Introduction to Bioinformatics	2	15L 30P	X
	MS 3006	General Management	2	20L 20P	O
S2	BC 3023	Metabolism II	2	30L	X
	BC 3027	Enzymology	2	30L	X
	MB 3901	Molecular Cell Biology	2	30L	X
	MB 3902	Animal & Plant Biotechnology	2	30L	X
	MB 3903	Nanobiotechnology	2	30L	O
	CH 3901	Bioanalytical Chemistry I	2	30L	X
	BT 3167	Phylogenetic Analysis	1	10L 10P	O
	FS 3004	History and Philosophy of Science	1	15L	O
	MS 3007	Strategic Human Resource Management	2	20L 20P	O
IV	MB 4003	Molecular evolution, Modeling & Computer Based Drug Design	3	30L 30P	O
S1	MB 4901	Medical Biotechnology	2	30L	X
	MB 4902	Environmental Biotechnology	2	30L	X
	MB 4903	Marine Biotechnology	2	30L	X
	MB 4904	Selected Topics in Biotechnology	2	30L	X
	MB 4905	Group project/Assignment	4	120P	X
	MB 4906	Biotechnology Seminar	1	15P	X
	CH 4901	Bioanalytical Chemistry II	2	30L	O
	FS 4005	Entrepreneurship	3	30L 30P	O
	FS 4006	Business Accounting	3	45L	O
S2	MB 4907	Industrial Training/Industrial Project/Internship	12	360P	X

FOUR YEAR GENERAL DEGREE PROGRAMME: NUCLEAR TECHNOLOGY THEME

Level	Course Unit	Course Title	Credit Value	Hours	
III	NS 3017	Applied Nuclear Science	3	30L 30P	X
	NS 3901	Radiobiology	3	45L	X
	NS 3902	Nuclear Power	3	45L	X
S1	NS 3903	Environmental Radiation	3	30L 30P	X
	NS 3904	Mathematics for Nuclear Science	3	30L 30P	X
	NS 3019	Medical Physics	3	45L	X
S2	NS 3905	Radiation Protection	3	45L	X
	PH 3004	Nuclear Physics	3	45L	X
	NS 3906	Nuclear Techniques in Biology	3	30L 30P	X
	*	Elective Course	3		X
IV	NS 4901	Nuclear Electronics	3	30L 30P	X
	NS 4902	Ethics	2	30L	X
	NS 4903	Nuclear Regulations	2	30L	X
S1	NS 4904	Radiochemical Methods	3	30L 30P	X
	NS 4006	Seminar & Essay	3	90P	X
	NS 4905	Non Destructive Testing	3	30L 30P	X
	NS 4906	Nuclear Technology in Physical Science	2	30L	X
S2	NS 4907	Industrial Training	12		X

Notes: * A third year course unit from any subject approved by the Department of Nuclear Science.

Prerequisites: Level I and II Biology OR Chemistry OR Physics core courses.

ANNEX 22- Enhancement Courses

Year	Semester	Course Unit	Title	Credit Value	Hours
1	1	EC 1001	English	3	45 L
	1	EC 1015	Career and Personal Development I	1	15 L
	2	EC 1004	Information Skill Development	1	30 P
	2	EC 1016	Career Planning	1	30 P
	1, 2	See below	*Sports	1	30 P
2	1	EC 2001	Technical Writing for Academic Purposes	2	15 L, 30 P
	1	EC 2015	Career and Personal Development II	1	15 L
	2	EC 2003	Practical Applications in Electronics	1	30 P
	2	EC 2004	Photography	1	15 L
	2	EC 2020	Enterprise, Entrepreneurship and Innovations	1	15 L
	1, 2	See below	*Sports	1	30 P
3	5	EC 3015	Career and Personal Development III	2	30 L
	6	EC 3001	Advanced Communicative Skills	2	15 L, 30 P
	5, 6	See below	*Sports	1	30 P
4	7, 8	See below	*Sports		30 P

Sports

Enhancement Courses can be obtained by participating in the following sports. Please fill in the relevant codes of a sport, for a particular year, based on the following.

If a student has participated in a sport for which the student has been registered, then, credits can be claimed by filling in a sports credit form in duplicate and handing over one copy to the Dean's office, Faculty of Science, and the other to the Department of Physical Education, at least by the start of the next academic year. Final year students should hand in these forms by the last day of the second semester in the final year. Non-adherence to these deadlines will result in the automatic cancellation of the registration for that sport in that year.

Course Unit				
Sport (IC)	**First Year**	**Second Year**	**Third Year**	**Fourth Year**
Badminton	1051	2051	3051	4051
Baseball	1052	2052	3052	4052
Basketball	1053	2053	3053	4053
Carrom	1054	2054	3054	4054
Chess	1055	2055	3055	4055
Cricket	1056	2056	3056	4056
Elle	1057	2057	3057	4057
Football	1058	2058	3058	4058
Hockey	1059	2059	3059	4059
Karate	1060	2060	3060	4060
Netball	1061	2061	3061	4061
Road Race	1062	2062	3062	4062
Rowing	1063	2063	3063	4063
Rugby	1064	2064	3064	4064
Swimming	1065	2065	3065	4065
Table tennis	1066	2066	3066	4066
Taekwondo	1067	2067	3067	4067
Tennis	1068	2068	3068	4068
Track	1069	2069	3069	4069
Track Field	1070	2070	3070	4070
Volleyball	1071	2071	3071	4071
Weightlifting	1072	2072	3072	4072
Wresting	1073	2073	3073	4073

For information regarding times and venues of the above sports, please contact the Director or Coordinators at the Department of Physical Education.

Procedure for registering and obtaining sports credits

Students offering the above sports as an Enhancement Course in the Faculty of Science will be required to follow the criteria given below.

Registration: A student offering or intending to offer sports as an Enhancement Course in a particular year, would have to register on-line for the sport within the first two weeks of that year. A student intending to offer the same sport in two different years would have to register separately, for that sport in each of the two years.

Claiming sports credits: A student can only claim credits for sports for which the student has been registered at the start of a particular year.

ANNEX 23: UNIVERSITY MEDICAL SERVICES

The University Health Services have been organized to assist students of the University to lead an active and healthy life free of mental and physical ailments. These services have been extended at present and health service facilities are provided for University employees as well.

There are two Medical Centers in the University. The main and the large Center is situated at Reid Avenue next to new arts theater, while the other is at the Medical Faculty. On weekdays these Centers are open from 8.30 a.m. to 3.45 p.m. except during the lunch interval between 12.30 p.m. and 1.30 p.m. These Centers are managed by qualified medical and nursing staff for out-patient treatment. Patients requiring special treatment or who need to be hospitalized will be directed to the University Clinics at the Colombo Group of Hospitals.

Dental treatment service is available on Monday, Wednesday and Friday morning at the University of Colombo health center.

1. Medical Examinations

Medical examination forms are sent to all students along with their registration documents. Completed Medical Examination reports sent by students will be filled in the health centre. In case of any ailment comes to light in this medical report, student will be directed to appropriate specialist clinic for treatment.

2. Vaccination

On occasions when it becomes necessary the University Health centers will make arrangements for vaccination against tuberculosis, typhoid, and other disease. In case a student has any problem regarding vaccination, he/she is advised to contact the staff of the Health centre.

3. Medical Counseling

Any student who need to discuss his/her personal health problems should meet University medical officer and if further help is need from psychiatrists or psychologists, student will be directed to the relevant University clinics.

4. Laboratory testing Facilities

Laboratory Testing Facilities for all University students and staff are available in the Medical Faculty and at the Reid Avenue Health Centre.

5. Environmental Health

The University health service is responsible for the maintenance of the environmental health within the University premises. A public Health Inspector in charge of this field is in the University staff. Employees in University canteens restaurants and student hostels are also medically examined periodically to ensure that they are healthy and do not carry diseases. University canteens, hostels and buildings are periodically examined by the PHI.

6. Other Services.

i. Issuing medical certificates to staff and students when indicated.

ii. Recommendation of special medical leave for students.

iii Specialist advice and inpatient care is available on referral at the National Hospital of Sri Lanka.

iv. Special medical examination for scholarships and sports activities.

v. Routine medical examination of new recruits.

vi. Issuing Medical certificates for driving license.

vii. Medical tests for extension of services of staff.

viii. Supply of available medicines on long term for chronic illnesses (only for staff and students)

7. Regulations regarding Medical Certificates.

1. All students who are unable to appear for theory and / or practical component of examinations / lectures due to medical reasons should submit a Medical Certificate issued by the Chief Medical Officer (CMO) / University Medical Officer (UMO) of the University of Colombo or a valid Medical certificate recommended by the CMO / UMO if they seek relief.

1. Such students should make a request in writing (by telegram to the Dean of respective Faculty or SAR /Examinations) for relief indicting the reasons for such absence within 3 (three) working days from the date of absence for such examinations, lectures, or practical components.

2. Students are advised to strictly adhere to the following guidelines in this regard. Failure to follow the guidelines may result in the Medical Certificates not being accepted and the absence being treated as one without valid excuse:

(i) (a) A student who falls ill during a period of examination should report to the Chief Medical Officer (CMO) / University Medical officer (UMO) of the University of Colombo. The CMO/UMO will examine the student and issue a Medical Certificate, if necessary.

(b) Where the CMO/UMO decides to issue a Medical Certificate, he/she will be forwarding it to the Dean of the relevant Faculty and/or the SAR/Examinations. It will be done within a period of two weeks. The Student in question is advised to verify with the Dean of the relevant Faculty or the SAR/Examinations whether the Medical Certificate had been received from the CMO/UMO.

(ii) (a) A student who resides outside Colombo city limits and falls ill during a period of examination or who finds it difficult to report to the CMO/UMO due to seriousness of the illness, should get treatment preferably from the nearest Government Medical Institution, or in exceptional cases from Registered Medical Practitioners or Institutions.

(b) In such instances, he/she should follow the procedure given below with regard to submission of medical certificates:

All Medical Certificates other than those issued by the CMO/UMO with the aim of informing the Dean of the respective Faculty or the SAR/Examinations, should be forwarded to the CMO/UMO along with attached application form (when applicable) within 7 (seven) days from the last date of recommended medical leave.

(iii) (a) CMO/UMO shall have the discretion to decline to give her/his recommendations or observations on the Medical certificate submitted and received after the above period.

(b) The following categories of Medical Certificates will only be accepted by the UMO /CMO for consideration when they are submitted in terms of the above guidelines:

(i) Medical certificates issued by a Government Hospital /District Medical Officer

(ii) Medical certificate issued by a Private Medical Practitioner only in the case of leave for less than five days; provided the CMO/UMO at their discretion, in appropriate cases may consider accepting a Medical Certificate issued by a Private Practitioner where the nature and seriousness of illness and the treatment administered, in the opinion of the CMO/UMO are acceptable.

(iii) The CMO/UMO may request the following documents of further proof of the illness.

- Receipt or payment for the Medical Certificate from Government Hospital.
- Prescriptions of the medicines taken.
- Reports of the blood tests, etc.

(If the required documents are not submitted the application may be rejected)

3. The CMO/UMO shall not take any responsibility for the acceptance or rejection of Medical Certificates issued by any outside institution. It will be the responsibility of the student who has sought medical assistance from such institution.If and when necessary, the University medical officer arranges a Medical Board to consider a request for medical leave by a student.

Medical officers.

Chief Medical officer

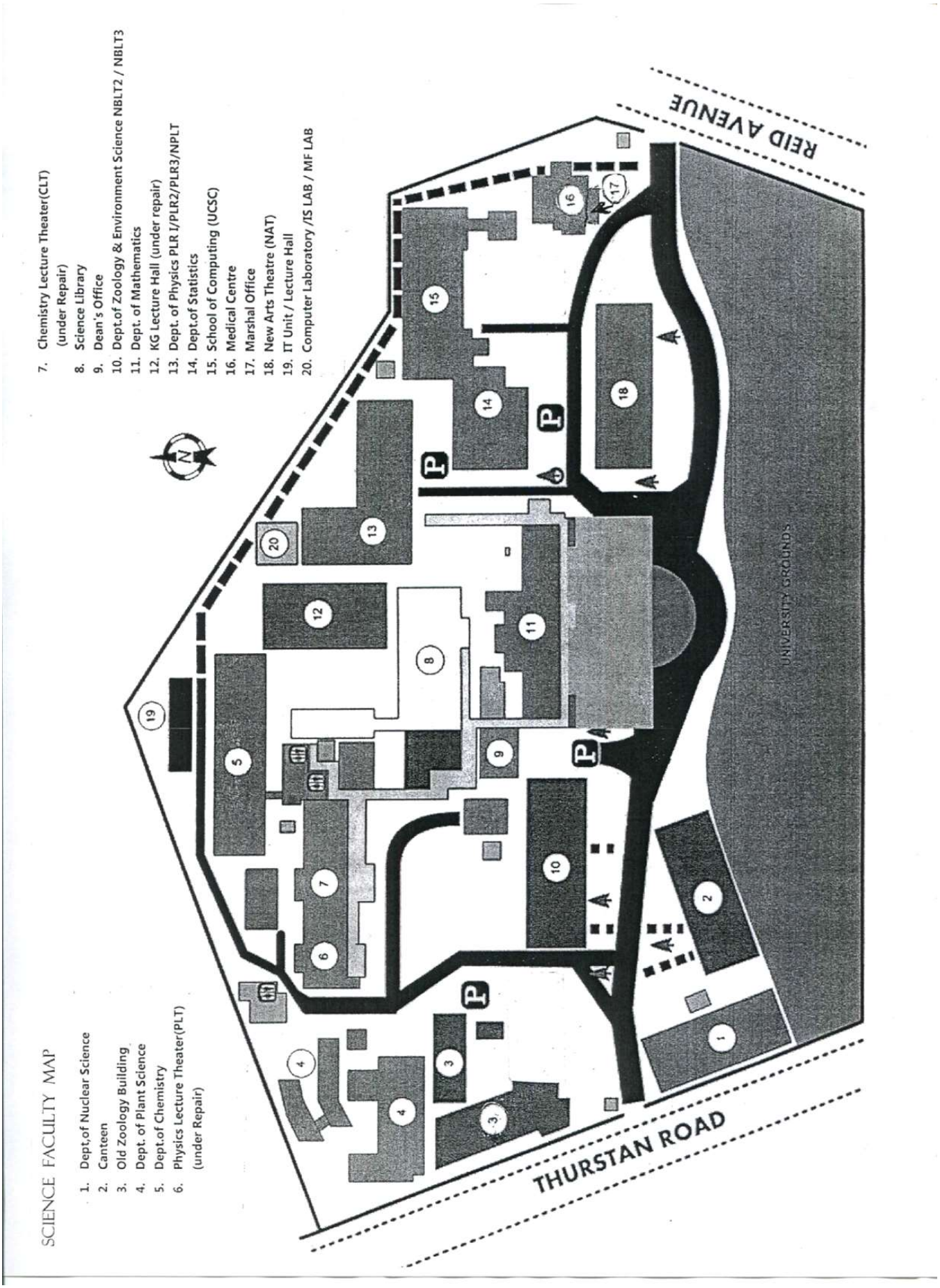
Dr. K.D.I. Wasudeva (M.B.B.S., D.F.M.)

University Medical Officers:

Dr. (Mrs) M.A.P.W.Prematilake (M.B.B.S.)

Dr. (Mrs) A.R.P.Rathnayake (M.B.B.S.)

ANNEX 24: Map of Faculty of Science, University of Colombo



THE COAT OF ARMS

The Coat of Arms of the University consists of a burning lamp with a palm leaf manuscript in front as its central motif. It is surrounded by a circle of swans carrying buds of lotuses in their beaks. In the perimeter is the traditional design called palapeti - i.e. lotus petals in a decorative motif. The circular emblem is surmounted by the figure of a lion bearing a sword in its right hand, and at the bottom is a scroll containing the University motto.

The lamp is the traditional symbol of light, illumination, enlightenment, hence of wisdom. The luster of the lamp radiates all round symbolising the spread of the light of learning. The palm leaf manuscript also symbolises knowledge - learning. A manuscript is a book of knowledge. The line of swans (also referred to as geese) depicted as carrying lotus buds in their beaks is a decorative motif in Sinhala Art, and stands for discrimination, purity and strength of character. The lotus itself is a symbol of purity in Sinhala Art.

The lotus petal motif around the circle of swans is called palapeti - a form of ornament derived directly from the lotus. It is a border moulding, consisting of lotus petals; the petals fully seen, alternating with petals three parts hidden by those on either side. The lion with the sword represents Sri Lankan identity. Hence, the Coat of Arms taken in its entirety, depicts socio-cultural concepts of religious and national origin. As a whole, in its symbolic aspect, it stands to champion wisdom and virtue.

The motto in Sanskrit script which reads as 'Buddhi Sarvatra Bharatje' means 'Wisdom shines forth everywhere', i.e. that the wise are honored everywhere. The term 'Buddhi' has a religious significance in Buddhism. It denotes Enlightenment or Perfect understanding.

(From the University Calendar 2000/2001)