HANDBOOK

Academic Year – 2016/2017

Faculty of Science
University of Colombo

DISCLAIMER

This handbook has been compiled withinformation received up to November 2016. .
It is hereby notified that this handbook is onlyfor 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 conscientiousness.

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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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 Ph.D. and M.Phil. 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 proposesd 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 through applicable 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, and 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.

THE UNIVERSITY OF COLOMBO

Chancellor

Most Rev.Dr. Oswald Gomis
Archbishop Emeritus of Colombo.

Vice Chancellor

Professor Lakshman Dissanayake
B.DevS. (Colombo), PG Diploma (Colombo), MA (Brussels), Ph.D. (Adelaide), FRSA (UK)

Deans of Faculties

Science
Professor K.R.R. Mahanama
BSc. (Colombo), M.A., M.Phil., Ph.D. (CUNY)

Medicine
Professor Jennifer Perera
MBBS, MD. (Microbiology)(Col), MBA. (Wales), Pg.D.Med.Ed. (Dundee), PgD. Women'sStu (Col)

Law
Ms.W.I. Nanayakkara
LL.B. (Hons) (Sri Lanka), M.Phil. (Colombo), Attorney-at-Law

Arts
Professor Athula Ranasinghe
B.A.DED (Colombo), M.A. (Thammasat)
Ph.D (Netherlands)

Management & Finance
Dr. R.Senathiraja
Ph.D. (India), MSc (Mgt) (SJP, Sri Lanka) BCom (Jaffna, Sri Lanka), CTHE (Col, Sri Lanka)

Education
Prof. Manjula Vithanapathirana
BSc. (Colombo),PG Diploma (Kelaniya)
MA (Kelaniya),M.Ed. (OUSL),PhD. (London)

Graduate Studies
Professor Nayani Melegoda
B.A. (Hons) (Colombo) M.A. (British Columbia, Canada) Ph.D. (Leeds, UK)

Registrar

Mr. K.A.S. Edward
B.A. (Econ.) (Peradeniya),
M.A. (Econ.) (Colombo), MBA (Keelle, UK)

Bursar

Ms. K.S.T. Swarnalatha Jayasooriya
A.C.A.

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

FACULTY OF SCIENCE

Dean, Faculty of Science

Professor K.R.R. Mahanama
B.Sc. (Colombo), M.A., M.Phil., Ph.D. (CUNY)
Telephone/ Fax 011-2503148

Senior Assistant Registrar

Ms.Vajira Hapuhinna Jayaratne
BA (Hons) (Delhi, India)
PGDip (Bus.Mgt) (Colombo)
MBA (Colombo)
Telephone/ Fax 011-2586868

Senior Assistant Bursar

Ms. M.A.P.P. Chandradasa
B'Com (Special)
University of Kelaniya
Telephone/ Fax 011-2500474

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/

Heads of Departments

Chemistry
Professor R.D. Wijesekera
B.Sc. (Colombo), Ph.D. (ANU)

Mathematics
Dr. T.U. Hewage
B.Sc. (Colombo), M.A., Ph.D. (Bowling Green)

Nuclear Science
Professor S.S.B.D. P. Mahawatte
B.Sc. (Colombo), M.Sc. (Colombo),
M.Sc. (Birmingham)

Physics
Professor D.U.J. Sonnadara
B.Sc. (Colombo), M.S., Ph.D. (Pittsburgh)

Plant Sciences
Dr. Sudheera M. W. Ranwala
B.Sc. (Colombo), Ph.D. (Aberdeen)

Statistics
Dr. M.D.T.Attygalle
B.Sc. (Colombo), Dip-App.Stat. (Colombo),
M.Sc. (Warwick), Ph.D. (Lancaster)

Zoology & Environment Sciences
Professor W.B. Yapa
B.Sc. (Kelaniya), M.Phil (Colombo), Ph.D. (Munich)

ACADEMIC STAFF OF THE FACULTY

Department of Chemistry

Senior Professor

Deraniyagala, S.A.
B.Sc. (Colombo), Ph.D. (Dalhousie)
Bio Organic Chemistry

De Costa, M.D.P.
B.Sc. (Colombo), Ph.D. (Dalhousie)
Photochemistry

Mahanama, K.R.R.
B.Sc.(Colombo), M.A., M.Phil, Ph.D.(CUNY)
Environmental Analytical Chemistry

Professor

De Silva, K.M.N.
B.Sc. (Colombo), Ph.D. (Cantab)
Nanotechnology & Theoretical Chemistry

Wijesekera, R.D.
B.Sc. (Colombo), Ph.D. (ANU)
Bio Inorganic Chemistry

Abeytunga, D.T.U.
B.Sc. (Colombo), Ph.D. (Arizona)
Natural Products & Organic Synthesis

Dissanayake, D.P.
B.Sc., M.Phil (Peradeniya), Ph.D. (Texas A & M)
Surface Science & Catalysis

Dassanayaka, R.S.
B.Sc. (Peradeniya), Ph.D. (Hong Kong)
Biochemistry & Molecular Biology

Senior Lecturer Grade I

Guneratne, R.D.
B.Sc. (Colombo), M.Sc., Ph.D. (Cornell)
Synthetic Organic Chemistry

Weerasinghe, M.S.S.
B.Sc. (Colombo), Ph.D. (Maine)
Statistical Thermodynamics & Computational Chemistry

Chandrasekharan, N.V.
B.Sc., M.Sc., Ph.D. (Colombo)
Biochemistry & Molecular Biology

De Silva, W.R.M.
B.Sc. (Colombo), Ph.D. (Cantab)
Organometallic & Nanotechnology

Wijayarathna, C.D.
B.Sc. (Colombo), M.Eng, Dr.Eng. (Tokyo)
Molecular Biology& Biotechnology

Hettiarachchi, G.H.C.M.
B.Sc. (Colombo), Ph.D. (New Delhi)
Biochemistry & Molecular Biology

Senior Lecturer Grade II

Perera, L.H.R.
B.Sc. (Colombo), Ph.D. (OSU)
Electrochemistry, Analytical Chemistry

Kaumal, M.N.
B.Sc. (Colombo), Ph.D. (MS State)
Analytical, Electrochemistry & Instrumentation

Perera, B.G.K.
B.Sc. (Colombo), M.Sc & Ph.D. (UW Seattle)
Chemical Biology & Organic Synthesis

Tillekaratne, K.G.D.A.D.
B.Sc. (Colombo), Ph.D. (UIC)
Physical, Surface Science & Computational

De Silva, H.I.C.
B.Sc. (Colombo), Ph.D. (MS State)
Synthetic Organic & Natural Products Chemistry

Vithanarachchi, S.M.
B.Sc. (Colombo), Ph.D (WSU)
Inorganic, Bioinorganic and Analytical Chemistry

Probationary Lecturer

Weerasekara, W.M.V.K.
B.Sc. (Colombo)

Department of Mathematics

Senior Lecturer Grade I

Karunatillake, A.D.W.
M.Sc., Ph.D. (Moscow)
Field Theory & Related Questions in Algebra

Jayewardene, D.R.
B.Sc. (Colombo), Ph.D. (Carnegie-Mellon)
Category Theory

Wijeratne, C.J.
B.Sc. (Colombo), M.Sc. (Urbana-Champaign),
Ph.D. (Simon Fraser)
Minimax Theory

Hameem, M.H.K.M.
B.Sc. (Colombo), M.Sc. (Melb.)
CIMA (Passed Finalist), MNIA (Australia)
Operator Theory

Hewage, T.
B.Sc. (Colombo), M.A., Ph.D. (Bowling Green)
Mathematical Economics

Wijerathna, J.K.
B.Sc. (Colombo)
M.Sc. (Kaiserslautern), Ph.D. (Colombo)
Numerical Methods for Partial Differential Equations & Mathematical Modeling, Quantitative Finance

Boralugoda, S.K.
B.Sc. (Sri J' Pura), M.Sc., Ph.D. (Alberta)
Non-smooth Analysis and Optimization

Ramasinghe, W.
B.Sc. (Colombo), M.Sc., Ph.D. (Ohio State)
Functional Analysis

Perera, S.S.N.
B.Sc. (Colombo), Dip (ICTP/Trieste)
M.Sc. (ICTP/SISSA-Trieste), Ph.D. (Colombo)
Mathematical Modeling, Optimal Control & Optimization

Senior Lecturer Grade II

Samaratunga, R.T.
B.Sc. (Colombo), M.Sc., Ph.D. (Simon Fraser)
Sequence Spaces & Summability

Jayawardena, C.J.A.
B.Sc. (Colombo), M.Sc. (Ohio State),
M.Sc., Ph.D. (Memphis State)
Graph Theory, Network Theory

Edussuriya, L.C.
B.Sc. (Colombo), M.Sc. (Kaiserslautern)
Control Theory, Differential Equations (*PDE's & ODE's*)

Mendis, M.J.L.
B.Sc. (Colombo), M.Sc. (Punjab), M. Phil.
(Colombo), Ph.D. (Monash)
Category Theory

Ratnayake, J.K.
B.Sc (Colombo)
M.A, Ph.D (Indiana University)
Algebra

Dharmasena, D.B.
B.Sc. (Colombo)
Ph.D. (Syracuse)
Analysis and Geometry in Several Complex Variables

Lecturer

Samarasekera, B.L.
B.Sc. (Colombo)
M.Phil. (Colombo)

Probationary Lecturer

Gallage, P.D.D.
B.Sc. (Colombo), M.Sc. (Seoul National),
M.Phil. (Colombo)

Mahasinghe, M.K.A.C.
B.Sc. (Colombo)

Eranga, S.K.P.
B.Sc. (Colombo)

Perera, K.D.M.
B.Sc. (Colombo)

Karunathunge, G.N.
B.Sc. (Colombo)

Wanasinghe, N.N.P.
B.Sc. (Colombo)

Suranimalee, M.H.M.J.
B.Sc. (Colombo)

Department of Nuclear Science

Associate Professor

Mahawatte, S.S.B.D.P.
B.Sc. (Colombo), M.Sc. (Colombo),
M.Sc. (Birmingham)
Applied Radiation Physics

Senior Lecturer Grade II

Lamabadusuriya, M.R.
B.Sc. (Colombo) M.Sc. (New South Wales)
M.Sc. (Kansas State) Ph.D. (Washinton State)
Radio Chemistry

Jeyasugiththan, J
B.Sc. (Jaffna) M.Sc(Peradeniya) Ph.D.(Cape Town)
Medical Physics

Probationary Lecturer

Wickramasinghe, W.A.J.S.
B.Sc (Colombo)

Department of Physics

Senior Professor

Sonnadara, D.U.J.
B.Sc. (Colombo), M.S., Ph.D. (Pittsburgh)
High Energy Physics (*Experimental*)

Jayanetti, J.K.D.S.
B.Sc. (Colombo), Ph.D. (CUNY)
Condensed Matter Physics (Experimental)

Professor

Jayaratne, K.P.S.C.
B.Sc. (Colombo), Ph.D. (Colombo)
Atmospheric Physics & Lightning Physics

Associate Professor

Gamalath, K.A.I.L.W.
B.Sc. (Colombo), Ph.D. (NSW)
Solid State Physics (*Theoretical*)

Rosa, S.R.D.
B.Sc. (Colombo), M.S., Ph.D. (Pittsburgh)
Nuclear & Particle Physics, Physics Education

Daya, D.D.N.B.
B.Sc. (Colombo), Ph.D. (Colombo)
Fast Heavy Ion Induced Sputtering

Senior Lecturer Grade I

Jayananda, M.K.
B.Sc. (Colombo), Ph.D. (Pittsburgh)
High Energy Physics (*Experimental*)

Wijayaratna, W.M.K.P.
B.Sc. (Colombo), Ph.D. (Missouri-Rolla)
Atomic & Molecular Physics (*Experimental*)

Coorey, R.V.
B.Sc. (Colombo), Ph.D. (Colombo)
Ion and Photon Induced Mass Spectrometry

Fernando, I.M.K.
B.Sc. (Colombo), Ph.D. (Colombo)
Lightning Physics

Wansapura, J.P.
B.Sc (Colombo) Ph.D. (Cincinnati)
Medical Physics

Senior Lecturer Grade II

Edirisinghe, C.M.
B.Sc. (Colombo), Ph.D. (Colombo)
Transient Analysis & Surge Protection

Gunewardene, M.S.
B.Sc. (Colombo), Ph.D. (Maine)
Biophysics

Jayasundara, J.M.D.R.
B.Sc (Peradeniya), M.S., Ph.D (Houston)
Material Science & Nanotechnology

Jayaweera, H.H.E.
B.Sc. (Colombo), Ph.D. (Colombo)
Optical Instrumentation

Probationary Lecturer

Monika Madhavi, W.A.
B.Sc. (Colombo)

Department of Plant Sciences

Senior Professor

Wijesundera, R.L.C.
B.Sc. (Colombo), Ph.D. (Bristol)
Plant Pathology & Mycology

Hirimburegama, S.S.M.K.K.
B.Sc. (Colombo), M.Phil (Peradeniya),
Ph.D. (K.U.Leuven)
Plant Physiology & Plant Biotechnology

Professor

Silva, T.D.
B.Sc. (Colombo), Ph.D. (Reading).
Genetics & Plant Breeding

Tirimanne, T.L.S.
B.Sc. (Peradeniya), Ph.D. (Iowa State)
Plant Physiology & Molecular Biology

Senior Lecturer Grade I

Jayasekera, G.A.U.
B.Sc. (Colombo), M.Sc., Ph.D. (Calgary)
Plant Physiology & Plant Molecular Biology

Ranwala, S.M.W.
B.Sc. (Colombo), Ph.D. (Aberdeen)
Plant Ecology& Biodiversity Conservation

Kathriarachchi, H.S.
B.Sc., M.Phil (Peradeniya), Ph.D. (Vienna)
Plant Systematics

Nanayakkara, C.M.
B.Sc. (Colombo), M.Sc. (Kelaniya),
Ph.D. (Aberdeen)
Microbiology

Saputhanthri, P.S.
B.Sc. (Colombo) Ph.D. (Bath)
Plant Biochemistry

Senior Lecturer Grade II

Hirimburegama, W.K.
B.Sc. (Peradeniya), Ph.D. (Peradeniya)
Microbiology

Caldera, H.I.U.
B.Sc. (Colombo), Ph.D. (Colombo)
Environment Science

Ariyawansa, K.G.S.U.
B.Sc. (Colombo), M.Sc. (Colombo) Ph.D. (Massey)

Probationary Lecturer

Dissanayake, I.A.J.K.
B.Sc. (Colombo), M.Sc. (Monash)
(On study leave)

Perera, S.A.T.A
B.Sc. (Peredeniya)

Mayakaduwa, D.M.R.G
B.Sc. (Colombo)

Department of Statistics

Professor

Sooriyarachchi, M.R.
B.Sc., PG. Dip-Stat. (Colombo),
M.Sc., Ph.D. (Reading)
Medical Statistics

Associate Professor

Wickremasinghe, W.N.
B.Sc. (Jaffna), PG. Dip-Stat. (Colombo),
M.Sc. (IowaState), Ph.D. (KansasState)
Linear Models, Experimental Design,
Multivariate Methods

Senior Lecturer Grade I

Attygalle, M.D.T.
B.Sc. (Colombo), Dip-App.Stat. (Colombo),
M.Sc. (Warwick), Ph.D. (Lancaster)
Statistical Modeling & Diagnostics
Data Visualization

Ramanayake, K.P.A.
B.Sc. (Colombo),
M.Sc. (George Mason), Ph.D. (Bowling Green)
Change-Point Analysis, Disclosure Avoidance

Tilakaratne, C.D.
B.Sc. (Colombo), M.Sc. (Colombo),
MIT (by Research; Ballarat) Ph.D. (Ballarat),
Financial Data Mining

Abeygunawardana, R.A.B.
B.Sc. (Colombo), M.Sc. (Colombo),
M.Sc. (National University of Singapore),
Statistical Quality Control & Industrial Statistics

Senior Lecturer Grade II

Magalla, C.H.
B.Sc. (Colombo), Ph.D. (Kansas State),
Linear and Nonlinear modelling,
Multivariate Statistics

Tissera, J.H.D.S.P.
B.Sc. (Colombo), M.Sc. (Keele)
Ph.D. (Latrobe)

Bandara, E.R.A.D.
B.Sc. (Colombo), M.Phil. (Colombo)

Jayatillake, R.V.
B.Sc. (Colombo), BIT (Colombo),
M.Sc., PhD (Old Dominion)

Viswakula, S.D.
B.Sc (Colombo), M.Sc (UTEP)
PhD (Old Dominion)

Lecturer

Dharmarathne, H.A.S.G.
B.Sc. (Sri Jayewardenepura), M.Sc. (Latrobe)

Lakraj, G.P.
B.Sc. (Colombo), Ph.D. (Texas Tech)

Wijesekera, W.M.L.K.N.
B.Sc. (Colombo), MFE (Colombo)

Probationary Lecturer

Sunethra, A.A.
B.Sc. (Colombo)

Deshani, K.A.D.
B.Sc. (Colombo)

Dilini, W.M.N.
B.Sc. (Colombo), MFE (Colombo)

Munasinghe, A.R.R.
B.Sc. (Colombo), MFE(Colombo), MSc (Imperial)
ACMA

Jayamanne, I.T
B.Sc. (Colombo), MFE (Colombo)

Karunarathna, G.H.S
B.Sc. (Colombo)

Department of Zoology & Environment Sciences

Professor

Premawansa, W.S.
B.Sc. (Kelaniya), Ph.D. (Colombo)
Immuno-Parasitology, Molecular Biology

Udagama, P.V.
B.Sc., M.Sc., Ph.D. (Colombo)
Immuno-Parasitology

De Silva, D.N.
B.Sc. (Colombo), M.Sc. (Rutgers)
Fish Biology & Ecology

Weerakoon, H.D.K.G.A.
B.Sc. (Colombo), M.Sc., Ph.D. (Illinois)
Conservation Biology

Yapa, W.B.
B.Sc. (Kelaniya), M.Phil. (Colombo), Ph.D. (Munich)
Behaviour & Animal Communication

Wickramasinghe, D.D.
B.Sc., M.Sc., Ph.D. (Colombo)
Environmental Science and Biodiversity Conservation

Senior Lecturer Grade I

Pallewatta, P.K.T.N.S.
B.Sc. (Colombo), Ph.D. (London),
DIC (Imperial College)
Entomology

Dayawansa, P.N
B.Sc. (Colombo), Ph.D. (Aberdeen)
Behavioural Ecology

Wijesinghe, M.R.
B.Sc. (Colombo), Ph.D. (Cantab)
Conservation Biology

Lokupitiya, E.Y.K.
B.Sc. (Colombo), Ph.D. (Colorado State)
Environment Science, Climate change

Dangalle, C.D.
B.Sc. (Colombo), Ph.D. (Colombo)
Entomology

Senior Lecturer Grade II

Galhena, G.
B.Sc. (Colombo), M.Sc. (Leeds) Ph.D. (Colombo)
Molecular Genetics

Perera, I.C.
B.Sc. (Colombo), Ph.D. (Louisiana State)
Molecular Biology

Seneviratne, S.S.
B.Sc. (Colombo), Ph.D. (Memorial)
Evolutionary Biology

Science Library

Senior Assistant Librarian

Somaratna Ms. H.M.D.S.D.
B.Sc. (Colombo), PGDip (Buss.Mgt.)
MLIS (Colombo)

DIRECTOR OF STUDIES

The Director of Studies is responsible for the Faculty of Science undergraduate programmes, and 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 Director of Studies.

Prof. D.N. de Silva
B.Sc. (Colombo), M.Sc. (Rutgers)
Fish Biology & Ecology

ACADEMIC ADVISORS

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

COORDINATORS

Enhancement course advisors

Dr. M.R. Wijesinghe (Zoology & Env.Sci.) (Chairperson)
Dr. P. Saputhantri (Plant Science)
Dr. C. Hettiarachchi (Chemistry)
Mr. R.A.B. Abeygunawardena (Statistics)

Sinhala & Tamil Language Coordinators

Dr. H.I.U. Caldera (Plant Sciences)
Dr. B.G.K.Perera (Chemistry)

Internship Programme/ Service Learning

Personality & Career Development Course Units
Prof. D.D. Wickramasinghe (Zoology & Env.Sci.)
Dr. C. Hettiarachchi (Chemistry)
Co- Directors, Career Guidance Unit

Molecular Biology & Biochemistry Programme

Prof. 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

Senior Assistant Librarian
Ms. H.M.D.S.D. Somaratna
B.Sc. (Colombo), PGDip. (Buss.Mgt)
MLIS (Colombo)

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 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 AND WELFARE SERVICE

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. A.T.M Mahees

Science Faculty Student Counsellor
Mr. E.R.A.D. Bandara (Statistics)

Student Counsellors
Dr. S.S.N. Perera (Mathematics)
Dr. P.S. Saputhanthri (Plant Sciences)
Dr. M.N. Kaumal (Chemistry)
Dr. J.M.D.R. Jayasundera (Physics)
Dr. L.H.R. Perera (Chemistry)
Dr. B.S.S. Senavirathne (Zoology & Env.Sci.)
Dr. G.Galhena (Zoology & Env.Sci.)
Dr.H.H.E. Jayaweera (Physics)
Mr. R.A.B.Abeygunawardena (Statistics)
Ms. W.A.J.S.Wickramasinghe (Nuclear Science)

Deputy Registrar/Student and Staff Affairs
Mr. T. Prabaharan

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 Photocopies 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**)

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) Hostel
Dr. (Mrs) P.G.R.S.K.Senarath
(Edu.Psychology)
No.11, Hewa Mawatha,Colombo 7

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 the 22 sport facilities available at the department.

Inter-Faculty, Freshers' 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 in 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

Badminton	Men
Badminton	Women
Baseball	Men
Basketball	Men
Basketball	Women
Carrom	Men
Carrom	Women
Chess	Men
Chess	Women
Cricket	Men
Elle	Men
Elle	Women
Football	Men
Hockey	Men
Hockey	Women
Karate	Men
Karate	Women
Netball	Women
Road Race	Men
Rowing	Men
Rowing	Women
Rugby Football	Men
Swimming	Men
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

Contact Nos. Office – 0112 502405

Intercom –8646 / 8647

e-mail –physicaleducationcmb@gmail.com

STUDENT SOCIETIES

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

1. **Astronomical Society**
   (Department of Physics)
2. **Base for Enthusiasts of Environment Science and Zoology (BEEZ)**
   (Department of Zoology & Env.Sci.)
3. **Botanical Society**
   (Department of Plant Sciences)
4. **Chemical Society**
   (Department of Chemistry)
5. **Epsilon-Delta Society,**
   (Department of Mathematics)
6. **Gaveshakayo**
   (Department of Physics)
7. **Physics Society**
   (Department of Physics)
8. **Stat Circle**
   (Department of Statistics)
9. **Science Society**

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

There are two Medical centres 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.

Co- Directors:

Prof. D.D.Wickramasinghe

Dr. G.H.C.M. Hettiarachchi

INFORMATION AND COMMUNICATION TECHNOLOGY SERVICES

Using of computers in academic activities has now become an inevitable factor. 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 for 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 by 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

Prof. 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.

1. DEPARTMENTS

1.1. THE DEPARTMENT OF CHEMISTRY

1.1.1. Introduction

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.

1.1.2. Academic Staff

The Department of Chemistry has 20 fulltime Senior Faculty Members, 1 Probationary Lecturer and 30 Temporary Assistant Lecturers and Demonstrators.

1.1.3. Academic Programmes

1.1.3.1. 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 Biotechnology.

Special Degree Programmes:

The department conducts the following special degree programmes:

Chemistry
Biochemistry & Molecular Biology
Pharmacy
Computational Chemistry

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

1.1.3.2. Postgraduate Programmes

M.Sc./Postgraduate Diploma Programmes

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

i. 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.

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

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

M.Phil. / Ph.D. Degree Programmes

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.

1.1.4. 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.

1.1.5. 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.

1.2. THE DEPARTMENT OF MATHEMATICS

1.2.1. Introduction

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 its take over 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 organize its services and activities to realize the full potential of the mathematical ability of its students and staff.

1.2.2. Academic Staff

The Department of Mathematics has 16 fulltime Senior Faculty Members, 7 Probationary Lecturers and 13 Temporary Assistant Lecturers and Tutors.

1.2.3. Academic Programmes

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.

The Department at present offers four special degree programmes, *viz.*,

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

It also offers a Special Degree in Mathematical Finance 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.

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

Mathematics and the M.Sc./ Postgraduate Diploma in Mathematics Education. The Department also conducts the Diploma programme in Corporate Finance.

1.2.4. **Research & Development Center for Mathematical Modelling.**

The department has recently established a center for research and development in Mathematical Modelling. This Center conducts research in areas of interest to the Public/Corporate Sector which enhances the academic and Public-Private Partnership and leads to M.Phil/Ph.D. degrees.

1.2.5. **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.

1.3. THE DEPARTMENT OF NUCLEAR SCIENCE

1.3.1. Introduction

The Department of Nuclear Science, previously the Radioisotope Centre (RIC) was established in 1961 on the recommendation made by a preliminary assistance mission of the International Atomic Energy Agency. It was designed as a self supporting centre with laboratory, library, and training facilities. In 1982, the Radioisotope Centre was upgraded to the status of a sub department. In 2003, the RIC obtained the Departmental Status and was renamed as Department of Nuclear Science.

1.3.2. Objectives

The main aims of establishing the Centre were to provide training requirements and services in atomic energy activities, to provide advice required by other institutions and to carry out and assist in research and development using nuclear technology. The University of Colombo was chosen as the most appropriate site as the Centre would have to collaborate with many other research institutions in the country. With the establishment of the Department priority was given to undergraduate teaching and research.

1.3.3. Activities

From the time of establishment in 1961 the RIC has been conducting short courses in areas such as Radiochemistry, Radiobiology and Nuclear Instrumentation to undergraduates reading for special degrees and graduate students in the University of Colombo. Some of the courses were extended to other universities by 1972. The RIC also conducted short courses from 1965 to science teachers and to officers of Department of Agriculture, Government Analyst and Irrigation Department. With the increase in the use of nuclear techniques the RIC assisted Institutes in making measurements and also provided a maintenance and repair service for nuclear instrumentation. With the establishment of the Atomic Energy Authority (AEA) in 1969 (renamed the Atomic Energy Board (AEB) in 2014) the RIC continued to assist the AEA/AEB in radiation protection, industrial radiography and maintenance of nuclear instruments.

1.3.4. Academic Staff

The Department of Nuclear Science has 03 fulltime Senior Faculty Members, 01 Probationary Lecturers and 03 Temporary Assistant Lecturers /Demonstrators.

1.3.5. Teaching and Training

Teaching undergraduates for special degrees in Chemistry, Botany and Zoology commenced in 1963. Thereafter from 1983 onwards new course units have been introduced for undergraduates reading for the General Degree as well.

A series of lectures in Isotope Hydrology was also offered to students reading for special degree in Geography, Faculty of Arts, and University of Colombo.

The Department being the only resource centre with trained competent staff of its kind, teach Radiobiology and instrumentation for students reading for special degrees in Zoology and Human Biology of University of Sri Jayawardenapura and B.Sc in Radiography at University of Peradeniya.

1.3.6. Special Degree in Nuclear Medical Science

This is a new course offered by the Department. The main objective of the course is to provide knowledge and practical skills in Nuclear Medicine which is a medical specialty that uses radioactive chemical compounds for diagnostic and therapeutic purposes.

1.3.7. Postgraduate Programmes

M.Sc. in Nuclear Science - M.Sc. Course in Nuclear Science was first set up in 1982 with the sponsorship of the AEA of Sri Lanka. The main aim of this course was to train adequate number of scientists to meet the expanding needs in the fields of research and industrial applications of nuclear techniques in Sri Lanka.

M.Sc. in Medical Physics - Medical Physics is a branch of physics applied to medicine. Applications of physics in medicine covers a wide range among which use of radioisotopes and X-rays in cancer treatment, imaging (CT, MRI, SPECT, PET) and functional studies of organs using sophisticated data processing systems. The first M.Sc. course in Medical Physics was commenced in November 2013 with 20 students.

1.3.8. Diploma in Radiation Protection

In September 2006 the Department commenced the Diploma course in Radiation Protection. The training given by this course is designed to prepare researchers and radiation workers with the necessary skills to work with radiation and radioisotopes with a minimum of radiation exposure to themselves and other workers in their work places.

1.3.9. Research and Services

Main areas of research carried out by the academic staff of the Department are related to Environmental Radioactivity, Medical Physics and Applications of Nuclear Techniques in Elemental Analysis. The Department also provides nuclear equipment repair services and routine nuclear measurement and monitoring services.

1.4. THE DEPARTMENT OF PHYSICS

1.4.1. Introduction

The Department of Physics of the University of Colombo is the oldest and one of the most prestigious physics departments in the university system of Sri Lanka. It was established in 1921 under the then University College affiliated to the University of London. Later it became the Department of Physics of the former University of Ceylon when it was established in 1942. While focusing on undergraduate teaching, with a blend of carefully developed theory and practical courses, the department has also earned a high reputation for its popular postgraduate and external courses, training programmes and professional services extended to both the public and private sectors.

The department has established two units - Centre for Instrument Development (CID) and Physics Education Unit - for providing services to the local industry and community and for conducting research relevant to the development of the country. The facilities of the department include four general physics laboratories, one electronics laboratory and a fully equipped mechanical workshop with a glass blowing unit.

Throughout the past decades it has played a pioneering role in the training of physicists and in the development of physics education and research in the country. Today it continues to be at the forefront in such endeavors. A large number of physics graduates, produced by the department, hold high positions in both academic and professional institutes throughout the world.

1.4.2. Academic Staff

The Department of Physics has 16 fulltime Senior Faculty Members, 1 Probationary Lecturer, and 19 Temporary Assistant Lecturers and Demonstrators.

1.4.3. Undergraduate Programmes

The department offers courses in Physics for first, second and third year general degree programmes, where the total number of students at any given period is over 400. The department also conducts dedicated special degree programmes in

- Physics
- Engineering Physics, and
- Computational Physics.

These programmes have been designed to provide the student with a sound, up-to-date knowledge of the subject and to develop analytical and presentation skills. The student is thereby well equipped to continue his/her education at post-graduate level or be gainfully employed. Every academic year, 30 students are selected on a competitive basis, to follow the special degree programmes.

Since 2016 the Department is offereing a new 4 year general degree program in IT & Electronics with a student intake of 20. The program is aimed at developing core practical skills in the subject area that will prepare students to take up carreers in the industry.

1.4.4. Postgraduate Programmes

M.Sc./Postgraduate Diploma Programs

The Department offeres two M.Sc. degree programmes designed to suit the current needs of the country. The programmes are,

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

M.Phil./Ph.D. Programs

Currently more than 40 students are enrolled in research degrees offered by the department of Physics in different areas of Physics. The department also facilitates international joint research through collaborative projects and jont degree programs.

1.4.5. Research groups

The department facilitates several research groups working on various aspects of Physics and Technology. The research group's work in collaboration with foreign and local universities / institutions, with funds received internationally and locally. The financial support of the International Science Programmes and research collaboration with the Uppsala University, Sweden has been particularly beneficial and has enabled the department to produce significant outputs during the last couple of decades. This has placed the department at the forefront in the global scientific arena. The groups in the department are currently engaged in the following research areas.

Atmospheric and Lightning Physics
Astronomy and Astrophysics
Condensed Matter Physics
Computational Physics
Electronics and Applied Robotics
Medical Physics
Instrumentation Physics

1.4.6. Extension Programmes

The department continues to contribute to the national development by dissemination of knowledge through extension programmes. Most of these programmes are conducted by the Centre for Instrument Development, Physics Education Unit, and the Atmospheric and Lightning Research Group. Some of the programmes conducted on a regular basis are;

Training course on Microcontroller Programming and its Applications

Workshop in Electronics for A/L Teachers

Technical Workshop in Electronics

Workshop on Free and Open Source Software for

Scientific Researchers.

1.4.7. 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.

1.5. THE DEPARTMENT OF PLANT SCIENCES

1.5.1. Introduction

The Department of Plant Sciences of the University of Colombo is a well-established unit in the Faculty of Science and enjoys a reputation of maintaining high academic standards in the discipline. Formerly known as the Department of Botany, the name was changed to "Plant Sciences" in order to reflect more clearly the subject areas that it offers. While covering areas that come within the traditional boundaries of the subject "Botany", the department has taken a conscious effort to include in its teaching programmes, courses that cover the newest developments in the field of Plant Sciences.

Teaching and research in the department are amply supported by, teaching and research laboratories, 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.

1.5.2. Academic Staff

The Department of Plant Sciences has 12 fulltime Senior Faculty Members, 03 Probationary Lecturers, and 03 Temporary Assistant Lecturers and 13 Demonstrators.

1.5.3. Academic Programmes

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 along 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 aspects of bio diversity conservation, environmental science, taxonomy, ecology, and many other aspects of Plant Sciences.

The Special Degree in Plant Biotechnology provides an opportunity for students to learn useful applications in a modern technology-based industry.

The Special Degree in Bioinformatics provides training in analysis and management of biological data using information technology.

1.5.4. Postgraduate Programmes

The department at present conducts two M.Sc. degree programmes (2 year) with a strong research component in the second year.

- Plant Cell and Tissue Culture
- Agricultural Microbiology

In addition, students work on postgraduate degrees (M.Phil./Ph.D.) by research, on different disciplines relted to Plant Sciences.

1.5.5. Research Programmes

Research projects conducted in the Department have strong links with research centres / government institutes and private companies of the country. Currently there are more than 15 postgraduate students reading for research degrees (M.Phil./Ph.D.) working in the department, under the able supervision of senior academic staff.

1.5.6. Services Offered

Herbarium - The herbarium in the Department of Plant Sciences houses about 1500 plant specimens of higher and lower plant families.

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

1.5.7. Diploma Courses / Extension Programmes

The Department at present conducts the following Diplomas & Certificate courses:

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

The Diploma in Biodiversity Management is a multi disciplinary 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 of many application of 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.

1.6. THE DEPARTMENT OF STATISTICS

1.6.1. Introduction

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.

1.6.2. Academic Staff

The Department of Statistics has 14 fulltime Senior Faculty Members, 06 Probationary Lecturers, 05 Temporary Assistant Lecturers and 07 Instructors.

1.6.3. Academic Programmes

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.

Focusing on the demand by the industry for graduates with a sound knowledge of Statstics, together with computing, management and numerical skills, the DST will offer 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.

1.6.4. **Research**

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.

1.6.5. **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 big data analysis methods.
It will also facilitate collaboration between academics and industry, both foreign and local, through research, enhancement programs and consultancy projects. Further it will provide opportunities to undergraduates and postgraduates to pursue careers as data scientists who are currently in high demand locally and internationally.

1.6.6. **Services Offered**

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.
- training courses in statistical computer packages, such as SPSS, MINITAB, R,SAS.
- 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 offereing services to the outside community through collaborative projects and consultancies, the Department also offer their services to university internal community free of charge.

1.6.7. **Stat Circle**

The 'Stat Circle' was formed by the students of the University of Colombo. The aims of the Circle are to enhance the statistical knowledge of the students and the outside community and to communicate and exchange ideas with other societies, universities and the industry.

1.7. THE DEPARTMENT OF ZOOLOGY & ENVIRONMENT SCIENCES

1.7.1. Introduction

The Department of Zoology & Environment Sciences has been in existence from the inception of the University of Colombo and provides a comprehensive programme to students entering the Faculty of Science. The Department makes every effort to give students a sound subject knowledge in Zoology, Environmental Science and Molecular Biology & Immunology as well as provide opportunities to develop and improve their communication and other generic skills that would make them employable. In keeping with the major curriculum revision in 2003 and several others including one in 2012, which has 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 and assessment methods.

1.7.2. Academic Staff

The Department of Zoology & Environment Sciences has 14 fulltime Senior Faculty Members, 11 Temporary Assistant Lecturers and Demonstrators.

1.7.3. Academic Programmes

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 of Zoology and Environment Science in the first and second years and introducing the multidisciplinary nature and applied aspects within the scope of Zoology and Environment Science in the third year.

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 of Zoology, Environmental Sciences and Immunology & Molecular Biology.

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 scientisits from government and private sector organisations as well as academics from other universities.

The Special Degree in Immunology and Integrative Molecular Biology which is the newest addition to the special streams of the department, aims to provide knowledge and skills in the latest topics and applications of this subject area.

Postgraduate Programmes

The Department also offers a M.Sc. programme in Environmental Science and two new postgraduate diploma programmes in Ecotoxicology & Pollution Management, and Climate Change & Environment Management. The teaching staff of these programmse include members of the department

and many leading professionals/experts in various fields of environment science including climate change, ecotoxicology, disaster risk reduction, and biodiversity and natural resource management, who add value to this programme due to their professional experience in their relevant field.

The Department also 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.

1.7.4. **Research Programmes**

The Department excels in its research capabilities providing research opportunities in diverse fields such as Mammalian Reproduction, Bio-activity of herbs and tea, Biology of Sri Lankan Elephants and Bats, Wildlife Ecology, Eco-tourism, Ornithology, Marine Ecology, Evolutionary Biology, Limnology, Environmental pollution, Immunology & Molecular Biology of malaria and of other human and animal diseases, Conservation Biology, Entomology, and Aquatic Biology under the guidance of its academic staff members. Co-supervisors of research students may be from other universities and research institutions, where at times international scientists are also involved though international collaborations. Much of this research work is published in both local and international journals. The postgraduate research programme of the department also 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.

1.7.5. **Services Offered**

The faculty and department provide academic guidance and counseling through Student Counsellors (two of whom are members of the Department), an Academic Advisor and Head of Department. Students are encouraged to meet any member of the staff to discuss their problems and issues. Guidance is also available through the course coordinators who are appointed for each course and are responsible for the smooth conduct of each course.

2. THE DEGREE STRUCTURE

2.1. 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 (B.Sc.) 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

2.2. 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 within six academic years and supplicated by the student

2.3. Title of the degrees

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

2.4. Medium of instruction

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

2.5. General Information

2.5.1. 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 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

The year plan is scheduled so that minimum disturbance occurs due to various festivals and holidays.

2.5.2. 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
Environment 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

2.5.3. Academic Programme

2.5.3.1. 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.

2.5.3.2. 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 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 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.

2.5.3.3. Enhancement (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 section 5.3 and Annex 21. 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 under-graduate study programmes (EC 1015 and EC2015). Enhancement courses on Career Planning (EC1016) 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

2.5.3.4. Biological Sciences / 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.

2.5.3.5. 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*

2.5.3.6. 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 (4th) subject for all the combinations. Only three of the four specified subjects are compulsory for a subject combination.

3. DEGREE PROGRAMMES

The faculty offers three B.Sc. 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 B.Sc. general degree programme. Students who excel in the first two years then have the opportunity of enrolling in one of the B.Sc. special degree programmes specified in page 30. 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 (Section 3.1.2).

3.1. General degree programme

3.1.1. 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 subject modules.

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 (see section 2.5.3).

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 programmes 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.

Details of the course units offered under the available combinations are given in the Annexures 1 – 10.

3.1.2. Requirements for the Four-year General Degree programme

In the four-year general degree programme (see section 8 for details), students are expected to follow course units at Levels I and II of their relevant programmes first, according to the instructions provided under Section 3.1.1. 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.**

3.2. Special Degree Programmes

3.2.1. 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 under Section 3.1.1. 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 (see Section 3.2.2). More details of the special degrees are given under section 4.7.

Student intake, eligibility and selection criteria together with departmental requirements for selection for each special degree course are given in Section 3.2.2. **Details of the course units offered during the Level III and IV for each of the special degree programmes are given in Annexes S1 – S10.** The list of special degree programmes available in the faculty is given below.

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

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

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

3.2.2. 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, BT 1011, CH 2014 and AM 1008.

Selection Criteria: Total weighted mark 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 Criteria: 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 1001 and CS 2002, and also for AM 1008 for those who are not offering AM core courses at Levels I and II.

Selection Criteria: 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 Criteria: 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 Criteria: 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 Criteria: 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 for PH 1021 and PH 2021 and GPA of 2.70 for AM core courses.

Selection Criteria: 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 Criteria: 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 and GPA of 3.00 for MS core courses offered by the Mathematics department.

Selection Criteria: Total weighted mark obtained for FM 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 Criteria: 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 Criteria: The highest weighted aggregate mark obtained for core courses of either BT, CH, or ZL, OR the weighted aggregate mark obtained for PH core courses and ST 1006.

Statistics

Student Intake: 15

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

Selection Criteria: Totalweighted 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 Criteria: 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 Criteria: Total weighted mark obtained for BT core courses

Plant Sciences

Student Intake: 08

Eligibility: GPA of 3.00 for BT core course units

Selection Criteria: 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 1001, CS 1002, CS 2001 and CS 2002 and at least a C grade for AM 1008.

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

4. 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 (see the list on page 8) 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.**

4.1. Mode of Registration

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

4.2. 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 combinations or drop compulsory units**. Changes are allowed subjected to the condition that they maintain the prescribed number of main subjects and compulsory 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.

4.3. 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 (See Section 2.5.3 & Annexure 21).

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 the Section 2.5.3), totalling 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**.

4.4. 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.

4.5. Registration for course units- 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 program 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 program worth 6 academic credits in the 6th semester of their study. More information regarding this programme is given in Section 9.0**.**

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 period 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 (See section 8.0).

4.5.1. Minimum Achievement Level: General Degree – Level III

A student should either

(a) Obtain **C grades or better aggregating to a minimum of 15 academic credits** in Level III to move on to the Level IV,

or

(b) Have met the criteria listed in Section 7.1 in order to be eligible for the award of the degree of Bachelor of Science (General - 3 Years).

4.5.2 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.

4.6. Registration for course units 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.

Further information regarding these programmes is given in Section 8.0.

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 B.Sc**.** four-year general degree**.**

4.6.1. Minimum Achievement Level: General Degree - Level IV

A student should have met the criteria listed in Section 7.2 in order to be eligible for the award of the degree of Bachelor of Science (General - 4 Years).

4.7. Registration for course units - 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 (Level I and II – see Section 2.5.3.). 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.

4.7.1. 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) After Level IV, a student should have met the criteria listed in Section 7.3 in order to be eligible for the award of the degree of Bachelor of Science (Special).

5. 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.

5.1. 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.

5.2. 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.

5.3. 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.**

6. 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.

6.1. 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, and 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 major 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.

6.2. 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 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.

6.3. 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.

6.4. 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.

6.5. 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 22 for details.

6.6. Duration of 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 programme.

7. DEGREE AWARDING CRITERIA

7.1. 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

(i) 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,

(ii) 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 **totalling no more than 6 credits**,

(iii) obtained grades of F in **no more than** 6 credits,

(iv) obtained a grade of S (Satisfactory) or better in Enhancement Course Units totalling a minimum of 4 credits, **and**

(v) obtained a minimum Grade Point Average of 2.00,

(vi) complete the relevant requirements within a period of **six** academic years.

7.1.1. Award of Honours

7.1.1.1. First Class

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 80** academic credits,

(ii) obtained a minimum GPA of **3.60**

and

(iii) completed the relevant requirements within a period of **three consecutive** academic years.

7.1.1.2. Second Class (Upper Division)

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 75** academic credits,

(ii) obtained a minimum GPA of **3.30**

and

(iii) completed the relevant requirements within a period of **three consecutive** academic years.

7.1.1.3. Second Class (Lower Division)

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 75** academic credits,

(ii) obtained a minimum GPA of **3.00**

and

(iii) completed the relevant requirements within a period of **three consecutive** academic years.

7.2. 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

(i) 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,

(ii) 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 **totalling no more than 8 credits,**

(iii) obtained grades of F in **no more than** 8 credits,

(iv) obtained a grade of S (Satisfactory) or better in Enhancement Course Units totalling a minimum of 4 credits, **and**

(v) fulfilled any other requirements approved by the Faculty Board for a given four year General degree, *e.g.*, professional requirements,

(vi) obtained a minimum Grade Point Average of 2.00,

(vii) completed the relevant requirements within a period of **six** academic years.

7.2.1. Award of Honours

7.2.1.1. First Class

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 105** academic credits,

(ii) obtained a minimum GPA of **3.60**

and

(iii) completed the relevant requirements within a period of **four consecutive** academic years.

7.2.1.2. Second Class (Upper Division)

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 100** academic credits,

(ii) obtained a minimum GPA of **3.30**

and

(iii) completed the relevant requirements within a period of **four consecutive** academic years.

7.2.1.3. Second Class (Lower Division)

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 100** academic credits,

(ii) obtained a minimum GPA of **3.00**

and

(iii) completed the relevant requirements within a period of **four consecutive** academic years.

7.3. 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

(i) 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,

(ii) 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 **totalling no more than 8 credits**,

(iii) obtained grades of F in **no more than** 8 credits,

(iv) obtained a grade of S (Satisfactory) or better in Enhancement Course Units totalling a minimum of 4 credits, **and**

(v) fulfilled any other requirements approved by the Faculty Board for a given four year Special degree, *e.g.*, professional requirements,

(vi) obtained a minimum Grade Point Average of 2.00,

(vii) completed the relevant requirements within a period of **six** academic years.

7.3.1. Award of Honours

7.3.1.1. First Class

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 105** academic credits,

(ii) obtained a minimum GPA of **3.60**

and

(iii) completed the relevant requirements within a period of **four consecutive** academic years.

7.3.1.2. Second Class (Upper Division)

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 100** academic credits,

(ii) obtained a minimum GPA of **3.30**

and

(iii) completed the relevant requirements within a period of **four consecutive** academic years.

7.3.1.3. Second Class (Lower Division)

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

(i) obtained Grades **not lower than C** in Academic Course Units aggregating to **at least 100** academic credits,

(ii) obtained a minimum GPA of **3.00**

and

(iii) completed the relevant requirements within a period of **four consecutive** academic years.

7.3.2. 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 – Pharmaceuties II
(ii) CH 4071 – Pharmacology II
(iii) CH 4075 – Pharmaceutical Law and Ethics

7.4. 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.

7.5. 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.

8. FOUR-YEAR GENERAL DEGREE PROGRAMME

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 the 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 oriented around a particular **theme**, and an industrial training. 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 criteria if places are limited.

Eligibility:	A GPA of 2.50 at the end of the Level II for **all** the courses followed
Selection Criteria	Total weighted mark obtained for all the Levels 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 our 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 20

IT Theme

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

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

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

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 comparision 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 are fields that 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

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 clientèle. The courses are designed to include student centred 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

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

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 be gained with the principles in their specific sequence/track (Environmental science, Chemistry, Physics, or other fields) and acquire the ability to apply them to solving problems, 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.

Biotechnology Theme

The Department of Chemistry will be offering a four-year General Degree programme on the theme Biotechnology.This is currently under development and will be available for students to enroll at the end of the second year. The list of courses will be made available as soon as it is finalised and approved.

9. 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 behaviours 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 mould and fortify their professional, higher educational, career and life aspirations through a well-crafted series of events and programmes.

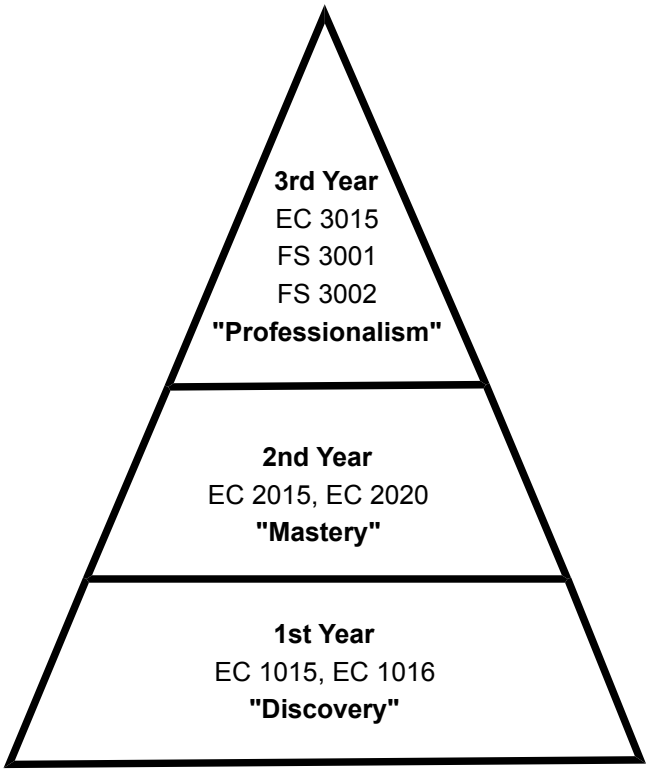
Objectives:

- 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 andPersonal Development I
- EC 1016- Career Planning

Level II – "Mastery"

The second year involves the infusion of skills rewuired 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 Sari 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 owrld of work.

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

9.1. Eligiblity Criteria of Academic Courses

9.1.1. 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.

9.1.2. Service Learning (FS 3002)

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

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.

9.2. Career Guidance Committee

We are a dedicated group of volunteer academic staff members who work closely with students who are interested in exploring opportunities and developing themselves.

With the unstinted support of the Association of the Human Resources Professionals, Sri Lanka and with our established links with the corporate and state sector establishments, enthusiastic alumni and well-wishers, opportunities to gain experience are plentiful and continuously growing.

Co-Chairperson:

Prof. Deepthi Wickramasinghe (Zoology & Env.Sci)

Dr. Chamari Hettiarachchi (Chemistry)

Secretary: Dr. Gayani Galhena
(Zoology & Env.Sci)

Subcommittee Chairpersons

EC 1015: Dr. Hiran Jayaweera (Physics)

Dr. Chandrika Nanayakkara (Plant Sciences)

EC 1016: Dr. Pradeepika Saputhanthri (Plant Sciences)

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

EC 2015: Dr. Gayani Galhena (Zoology & Env.Sci)

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)

Dr. Hasini Perera (Chemistry)

FS 3002: Prof. Deepthi Wickramasinghe (Zoology & Env.Sci)

Dr. Sameera Viswakula (Statistics)

Career Guidance Unit Office

Address: Career Guidance Unit Office, Ground Floor, Department of Zoology & Environment Sciences, Faculty of Science, University of Colombo.

Tele: 011 344 3176

Website: science.cmb.ac.lk/cgu/

Email: careerdevelopment.sci.uoc@gmail.com

10. 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.

10.1. Gold Medals, Prizes and Awards given at the Convocation

10.1.1. 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.

10.1.2. 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.

10.1.3. 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.

10.1.4. Dr. C.A. Hewavitharana Memorial Prize for Physics

In 1951, Mrs. C.A. Hewavitharana gifted the University to endow two prizes, one in Sanskrit and one in 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.

10.1.5. Prof. B.L.T. de Silva Memorial Award in Plant Sciences

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

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

10.1.6. 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.

10.1.7. 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.

10.1.8. Mailvaganam Memorial Award in Physics

The Award was established in 1987 by Mr. H.D.S.A. Gunawardena (a student of Prof. A.W. Mailvaganam), in memory of Prof. 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.

10.1.9. Sir Nigel Ball Award for Plant Sciences

This award was established in memory of Sir Nigel Ball, M.A., Sc.D. (Dub.) by Prof. 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.

10.1.10. Professor P.C Sarbadhikari Award for Plant Sciences

This award was established in memory of Professor P.C.Sarbadhikari by Professor B.A. Abeywickrema. Prof. 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.

10.1.11. 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.

10.1.12. 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 of Divulapitiya.

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

10.1.13. 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.

10.1.14. 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.

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

Mr. Dhammika and the late Dr. Maya Gunasekera 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.

10.1.16. 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.

10.1.17. Professor R.S. Ramakrishna Gold Medal for Inorganic Chemistry

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

10.1.18. Professor Pearlyn Pereira Memorial Gold Medal for Physical Chemistry

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

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

10.1.19. 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

10.1.20. 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.

10.1.21. 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, at least having a GPA of 3.25.

10.1.22. 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.

10.1.23. 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.

10.1.24. 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.

10.1.25. 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 show the highest competence in the research project in Physics with an "A"grade.

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

Prof. 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 and above in the Special degree programme in Statistics with Computer Science.

10.1.27. 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.

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

This award was established in 2004 by Emeritus Prof. 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

10.1.29. 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.

10.1.30. 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 & above and a First Class in the Engineering Physics Special Degree programme.

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

This award will be made one for 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.

10.1.32. 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.

10.2. Scholarships

Prizes and Scholarships that are awarded during the study period

10.2.1. 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.

10.2.2. 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.

10.2.3. 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 based on the performance in the first year examination in Science.

10.2.4. 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.

10.2.5. 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.

10.2.6. 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 in the third year of Plant Sciences in the first two years examinations. Reading for a Special Degree programme offered by the Department of Plant Sciences, for the best performance. .

10.2.7. 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,

10.2.8. 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.

10.2.9. 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

10.2.10. 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.

10.2.11. 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-WesternProvince and is based on the performance in Physics and Mathematics in the first year examination.

10.2.12. 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.

10.2.13. 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.

10.2.14. 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.

10.2.15. 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.

10.2.16. **Prof. HD Gunawardhana Scholarship**

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

The Scholarship shall be 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.

10.2.17. **Dr. Sujatha Hewage Scholarship**

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

The Scholarship shall be 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.

10.2.18 **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.

11. POSTGRADUATE PROGRAMMES

The faculty conducts several programmes leading to a M.Sc. degree. The M.Sc. programmes available in the faculty are listed below.

More details about postgraduate programmes can be obtained from the relevant department of study or from the Director, Postgraduate Studies.

Director of Studies
(Postgraduate)

Professor D.U.J. Sonnadara
B.Sc. (Colombo), M.S., Ph.D. (Pittsburgh)

- **Department of Chemistry**

  Analytical Chemistry

  Applied Organic Chemistry

  Chemistry Education

- **Department of Mathematics**

  Financial Mathematics

  Mathematics Education

- **Department of Nuclear Science**

  Nuclear Science

  Medical Physics

- **Department of Physics**

  Physics Education

  Applied Electronics

- **Department of Plant Sciences**

  Plant Cell and Tissue Culture

  Agricultural Microbiology

- **Department of Statistics**

  Applied Statistics

  Actuarial Science

- **Department of Zoology & Environment Sciences**

  Environment Sciences

  The Department of Zoology & Environment Sciences also offers a Postgraduate Diploma in Ecotoxicology & Pollution Management and Climate Change & Environment Management.

The faculty also has many research programmes leading to M.Phil and Ph.D. degrees.

12. **ANNEXES**

ANNEX 1 - PS 1: Physical Science, Level I

	Pre-requisite	Course Unit	Title	Credit Value	Hours	Combinations 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	2	30 L	X		X		X		
		ST 1008	Probability & Distributions	2	30 L		X		X		X	
		ST 1009	Exploratory Data Analysis	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 Combinatorics	2	30 L			X		X	X	
S2		PM 1002	Algebra	2	30 L			X		X	X	
S1		CS 1002	Introduction to Computing	3	45 L	X	X	X	X	X	X	
S2		CS 1001	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

	Pre-requisite	Course Unit	Title	Credit Value	Hours	Combinations 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.

	Pre-requisite	Course Unit	Title	Credit Value	Hours	Combinations 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 3001	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	
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	

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

	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 1014	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 1002	Introduction to Computing	3	45 L	■	
S2		CS 1001*	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 and Bioinformatics, students must offer CS 1001.

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

	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 Organisation	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 ■: 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 both CS 2001 and CS 2002.
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.

ANNEX 6 – BS 3: Biological Science, Level III

	Pre-requisite	Course Unit	Title	Credit Value	Hours		
S1		BT 3001	Plant Pathology	3	30 L 30 P	X	
	BT 1013	BT 3006	Plant Tissue Culture Technology	3	30 L 30 P	X	☼
		BT 3073	Methods in Plant Breeding	2	20 L 20 P	O	
S2		BT 3002	Horticulture	3	30 L 30 P	X	☼
		BT 3003	Plant Molecular Biology	2	15 L	O	
		BT 3005	Advanced Microbiology	3	30 L 30 P	X	☼
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 3001	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	30 L 30 P	45 L	O	
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	

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 and Molecular Biology (Direct Intake) - Level III.

	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 Signalling	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

Note:

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

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

	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 1002	Introduction to Computing	3	45 L	X
S2		CS 1001	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

	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	IS 2009	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.
2. 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

	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/ ST 1011, ST 2006	IS 3001	Sampling Techniques	2	30 L	X
S2	ST 2006	IS 3004	Applied Multivariate Methods	2	15 L, 30 P	O
		IS 3005	Statistics in Practice I	3	90 P	X
S1		AM 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
		AM 3001	Mathematical Programming in Finance	3	30 L, 30 P	X
S1		FM 3008	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 3001	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 3001	Visual Programming Technologies	3	30 L 30 P			O
		CS 3008	Introduction to Data Structures and Algorithms	3	30 L 30 P			X
		CS 3102	Computer Architecture	2	15 L 30 P		O	
		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
S2		PH 3035	Design and Machining Laboratory	3	90 P		X	
		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 & Concurrent Programming	3	30 L 30 P			X
		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 Opto 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 4103	Database III	3	30 L 30 P			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
		CS 4127	Advanced Concepts in Software Design and Development	3	30 L 30 P			O

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
		CH 3031	Symmetry in Chemistry	1	15 L	X		X
S2		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 4072	Pharmacognosy	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	
		CH 4076	Pharmaceutical Management and Administration	3	45 L		X	
S2		CH 4077	Pharmacy Practice	2	60 L		X	
		CS 4115	Computational Biology	3	30 L 30 P			X
		CS 4125	Logic Programming	3	30 L 30 P			X

ANNEX 13 - S3: SPECIAL DEGREE PROGRAMMES

Mathematics / Finance, Business & Computational Mathematics /

Mathematics & Statistics with Computer Science*/ Mathematical Finance

Year	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	E	
		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	
S I		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 3001	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
S II		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	E
		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
S I		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
		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	Advance Concepts in Software Design and Development	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	
		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	
S II		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 4007	Economics II for Finance and Insurance	3	45L	O	O	O	O
		CS 4103	Database III	3	30L 30P			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	
		CS 4127	Advanced Concepts in Software Design and Development	3	30L 30P			O	O

*Level III students should offer at least 10 credits from AM / PM courses. Level IV students should take at least 12 credits from each of AM/PM and CS, and a minimum of 7 credits from ST courses. Maximum credits per level is 33.

Annex 14 - S4 : SPECIAL DEGREE PROGRAMS

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	45L		o
SI		ST 3085	Computational Statistics	2	15L 30P	x	o
		CS 3001	Visual Programming Technologies	3	30L 30P		x
		CS 3008	Introduction to Data Structures and Algorithm	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	2	30L	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	
SII		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
SI		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	
SII		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

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 3006	Plant Tissue Culture and Technology	3	30 L 30 P		X	
		BT 3053	Introduction to Bioinformatics	2	15 L 30 P	X	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		
S1		BT 3073	Methods in Plant Breeding	2	20 L 20 P	X	X	
		CS 3001	Visual Programming Technologies	3	30 L 30 P			X
		CS 3105	Computer Graphics I	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	3	30 L 30 P			X
		BT 3002	Horticulture	3	30 L 30 P	X	X	
		BT 3003	Plant Molecular Biology	2	30 L	X	X	X
		BT 3005	Advanced Microbiology	3	30 L 30 P	X	X	
		BT 3058	Bioprospecting	2	30 L	X	X	
S2		BT 3063	Techniques in Molecular Biology'	2	15 L 30 P	X	X	
		BT 3067	Phylogenetic Analysis	1	15 L	X	X	
		BT 3070	Aspects of Environmental Science	3	30 L 30 P	X	X	
		BT 3071	Experimental Design and Data Analysis	2	15 L 30 P	X	X	X
		BT 3072	Special Topics in Bioinformatics	2	60 P			X
		ZL 3006	Molecular Biological and Immunological Applications	2	30 L			X
		IT 3002	Database Systems	3	30 L 30 P			
IV		BT 4005	Plant Biochemistry	4	45 L 30 P	X	X	
		BT 4007	Advanced Plant Molecular Biology	3	45 L		X	X
	BT 1014	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 4034	Biodiversity Conservation	3	30 L 30 P	X		
		BT 4035	Vegetation Description and Analysis	3	15 L 60 P	X		
		BT 4025	Post Harvest Technology	2	15 L 30 P		X	
		CS 4104	Data Analytics	3	30 L 30 P			X
		CS 4128	Advance Database management	3	30 L 30 P			X
		MB 4003	Molecular Evolution, Modelling 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
		EC 4005	Industrial Training(enhancement course)	2	60 P	O	O	
		CS 4115	Computational Biology	3	30 L 30 P			X
		CS 4125	Logic Programming	3	30 L 30 P			X
		CS 4128	Advance Database Management	3	30 L 30 P			X

ANNEX 16 – S6: SPECIAL DEGREE PROGRAMS

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

ANNEX 17 - S7: SPECIAL DEGREE PROGRAMS

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

ANNEX 18 - S8: SPECIAL DEGREE PROGRAMS

Nuclear Medical Science

	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 3072	Special Topics in Bioinformatics	2	60 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
		NS 4007	Research Project	8	240 P	x
S2		NS 4108	Clinical Practice I	2	60 P	x
		NS 4109	Clinical Practice II	2	60 P	x

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

ANNEX 19- S9: SPECIAL DEGREE PROGRAMS

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

ANNEX 20 – S10: SPECIAL DEGREE PROGRAMS

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 3008	Applied Statistical Models	3	30L 30P	x
		ST 3074	Time Series Analysis	2	30L	o
SI		ST 3076	Reliability Data Analysis	3	45L	o
		ST 3085	Computational Statistics	2	30L	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
SII		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
SI		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
SII		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

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 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 DEGREE PROGRAM – APPLIED STATISTICS THEME

Level III

	Pre-requisite	Course Unit	Title	Credit Value	Hours	PS	IS
S1		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
		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
		MS 3009	Operational Research II	3	30 L 30 P		O
		IT 3003	Advanced programming Techniques	3	30 L 30 P	X	X
S2		ST 3011	Statistical Programming	2	60 P	X	X
	ST 2008	ST 3012	Statistical Process Control	2	30 L	O	O
		ST 3013	Essential Mathematics in Statistics	3	45 L	X	X
		IS 3004	Applied Multivariate Methods	2	15 L 30 P	X	X
		IS 3005	Statistics in Practice I	3	90 P	X	X
		MS 3004	Quality Management/Project Management	2	30 L	O	O
		IT 3002	Database Systems	3	30 L 30 P	X	X

Level IV

	Pre-requisite	Course Unit	Title	Credit Value	Hours	PS	IS
S1		ST 4011	Econometrics	2	30 L	X	X
		ST 4035	Data Science	3	15 L 60 P	X	X
		ST 4036	Time to Event Analysis	2	30 L	X	X
	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	Advance 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	–	X	X

FOUR YEAR GENERAL DEGREE PROGRAM – BUSINESS & ENVIRONMENT THEME

Level	Pre-requisite	Course Unit	Title	Credit Value	Hours	
III		ZL 3901	Introduction to Business & Environment	1	15 L	X
S1		ZL 3902	Business & Biodiversity	2	30 L	X
		ZL 3903	Sustainable Development & Business	2	30 L	X
		ZL 3904	Adapting Business for Climate Change	3	30 L 30 P	X
		EN 3013	Natural Hazards & Disaster Risk Management	3	30 L 30 P	X
		BT 3008	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
S2		ZL 3905	Sustainable Tourism	2	30 L	X
		ZL 3906	Environmental Communication	2	15 L 30 P	X
		ZL 3064	Environment & Industry	3	30 L 30 P	X
		BT 3058	Bioprospecting	2	30 L	X
		BT 3071	Experimental Design & Data Analysis	2	15L 30P	X
		ZL 3907	Group Project	3	90 P	X
		ZL 3908	Case Studies	1	15L	X
IV		ZL 4901	Project Development	2	20 L 20 P	X
S1		ZL 4902	Seminar	1	15 L	X
		EN 4021	Tools of Environment Management	3	30 L 30 P	X
		FS 4005	Entreprenureship	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		ZL 4908	Industrial Training	12	_	X

* ZL 3901, ZL 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 3073	Methods in Plant Breeding	2	20L, 20P	X
	BT 3008	Intellectual Property Rights	1	15L	X
	BT 3009	Environment and Biodiversity Related Legislation in Sri Lanka	1	15 L	X
S1	BT 3901	Fundamentals of Landscape Design	2	15L, 30P	X
	EN 3013	Natural Hazards and Disaster Risk Management	3	30L, 30P	X
	BT 3903	Pest and Plant Disease Management	2	15L, 30P	X
	BT3905	Plant Propagation	3	30L 30P	X
S2	BT 3904	Commercial horticulture and floriculture	4	45L, 30P	X
	BT 3906	Computer Applications in Landscape Design	3	90P	X
	BT 3907	Amenity and Restorative Horticulture	3	30L, 30P	X
	BT 3902	Landscape Design	3	90P	X
	BT 3006	Plant Tissue Culture Technology	3	30L, 30P	X
IV	BT 4025	Post-harvest Technology	2	20L 20P	X
	BT 4908	Soil Management	2	15L 30L	X
	BT 4901	Landscape Maintenance and Management	2	15L, 30P	X
S1	FS 4005	Entrepreneurship	3	30L 30P	X
	ZL 4901	Project Development	2	20L 20P	X
	FS 4001	Business Accounting	3	45L	X
	FS 4007	Human Resource Management	3	45L	X
S2	BT 4902	Industrial Training	12		X
	BT 4903	Seminar	1	15L	X

4 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
	ST3006	Regression Analysis	2	30 L	O	O
S2	AM3002	Computer Applications in Discrete Mathematics	3	30 L 30 P	O	O
	AM3007	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	CourseUnit	Title	Credit Value	Type	PS	IS
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
S2	FM 4009	Industrial Training	12	–	X	X

4 YEAR GENERAL DEGREE PROGRAMME: SCIENCE & MANAGEMENT 4G THEME

Year	Pre Req.	Course Unit	Title	Credit value	Type	Core/Elective
3rd						
SI		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
		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 3901	Introduction to Business & Environment	1	15L	o
		ZL 3902	Business & Biodiversity	2	30L	o
		AM 3006	Financial mathematics	3	45L	o
		AM 3004	Mathematical modeling in Economics & Business	3	45L	o
		PH 3007	Analogue and digital electronics II	3	45L	o
SII		MS 3004	Project management/ 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
		EN 3064	Environment and Industry	3	30L 30P	o
		CH 3007	Topics in Analytical Chemistry II	1	15L	o
		CH 3005	Chemical Technology	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
4th						
SI		FS 4006	Business Accounting	2	30 L	X
		MS 4003	Strategic Decision Making	3	45L	X
		MS 4008	Industrial Psychology	2	30L	X
		FM 4005	Microeconomics	2	30L	X
		FM 4006	Macroeconomics	2	30L	X
		MS 4009	Business Economics II	2	30L	X
		MS 4011	Marketing	2	30L	X
		MS 4012	Business Statistics	1	15L	X
		CH 4100	Food Science & Technology	2	30L	o
		CH 4105	Forensic Toxicology	2	30L	o
		FS 4005	Entrepreneurship	3	45L	o
		FM 4007	Economics II for Finance and Insurance	3	45L	o

SII		MS 4013	Industrial Training	12		X

ANNEX 22- Enhancement Courses

Year	Semester	Course Unit	Title	Credit Value	Hours
1	1	EC 1001	English	3	45 L
	1	EC 1002	Introduction to Tamil Language	3	45 L
	1	EC 1003	Introduction to Sinhala Language	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	Title	Level	Semester	No. of Credits
EC 1051	Badminton	1	1	1
EC 1052	Baseball	1	1	1
EC 1053	Basketball	1	1	1
EC 1054	Carom	1	1	1
EC 1055	Chess	1	1	1
EC 1056	Cricket	1	1	1
EC 1057	Elle	1	1	1
EC 1058	Football	1	1	1
EC 1059	Hockey	1	1	1
EC 1060	Karate	1	1	1
EC 1061	Netball	1	1	1
EC 1062	Road Race	1	1	1
EC 1063	Rowing	1	1	1
EC 1064	Rugby	1	1	1
EC 1065	Swimming	1	1	1
EC 1066	Table Tennis	1	1	1
EC 1067	Taekwondo	1	1	1
EC 1068	Tennis	1	1	1
EC 1069	Track	1	1	1
EC 1070	Track Field	1	1	1
EC 1071	Volleyball	1	1	1
EC 1072	Weightlifting	1	1	1
EC 1073	Wrestling	1	1	1
EC 2051	Badminton	2	1	1
EC 2052	Baseball	2	1	1
EC 2053	Basketball	2	1	1
EC 2054	Carom	2	1	1
EC 2055	Chess	2	1	1
EC 2056	Cricket	2	1	1
EC 2057	Elle	2	1	1
EC 2058	Football	2	1	1
EC 2059	Hockey	2	1	1
EC 2060	Karate	2	1	1
EC 2061	Netball	2	1	1
EC 2062	Road Race	2	1	1
EC 2063	Rowing	2	1	1
EC 2064	Rugby	2	1	1
EC 2065	Swimming	2	1	1
EC 2066	Table Tennis	2	1	1
EC 2067	Taekwondo	2	1	1
EC 2068	Tennis	2	1	1

EC 2069	Track	2	1	1
EC 2070	Track Field	2	1	1
EC 2071	Volleyball	2	1	1
EC 2072	Weightlifting	2	1	1
EC 2073	Wrestling	2	1	1
EC 3051	Badminton	3	1	1
EC 3052	Baseball	3	1	1
EC 3053	Basketball	3	1	1
EC 3054	Carom	3	1	1
EC 3055	Chess	3	1	1
EC 3056	Cricket	3	1	1
EC 3057	Elle	3	1	1
EC 3058	Football	3	1	1
EC 3059	Hockey	3	1	1
EC 3060	Karate	3	1	1
EC 3061	Netball	3	1	1
EC 3062	Road Race	3	1	1
EC 3063	Rowing	3	1	1
EC 3064	Rugby	3	1	1
EC 3065	Swimming	3	1	1
EC 3066	Table Tennis	3	1	1
EC 3067	Taekwondo	3	1	1
EC 3068	Tennis	3	1	1
EC 3069	Track	3	1	1
EC 3070	Track Field	3	1	1
EC 3071	Volleyball	3	1	1
EC 3072	Weightlifting	3	1	1
EC 3073	Wrestling	3	1	1
EC 4051	Badminton	4	1	1
EC 4052	Baseball	4	1	1
EC 4053	Basketball	4	1	1
EC 4054	Carom	4	1	1
EC 4055	Chess	4	1	1
EC 4056	Cricket	4	1	1
EC 4057	Elle	4	1	1
EC 4058	Football	4	1	1
EC 4059	Hockey	4	1	1
EC 4060	Karate	4	1	1
EC 4061	Netball	4	1	1
EC 4062	Road Race	4	1	1
EC 4063	Rowing	4	1	1
EC 4064	Rugby	4	1	1
EC 4065	Swimming	4	1	1

EC 4066	Table Tennis	4	1	1
EC 4067	Taekwondo	4	1	1
EC 4068	Tennis	4	1	1
EC 4069	Track	4	1	1
EC 4070	Track Field	4	1	1
EC 4071	Volleyball	4	1	1
EC 4072	Weightlifting	4	1	1
EC 4073	Wrestling	4	1	1

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.

2. 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.

3. 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)

4. 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.

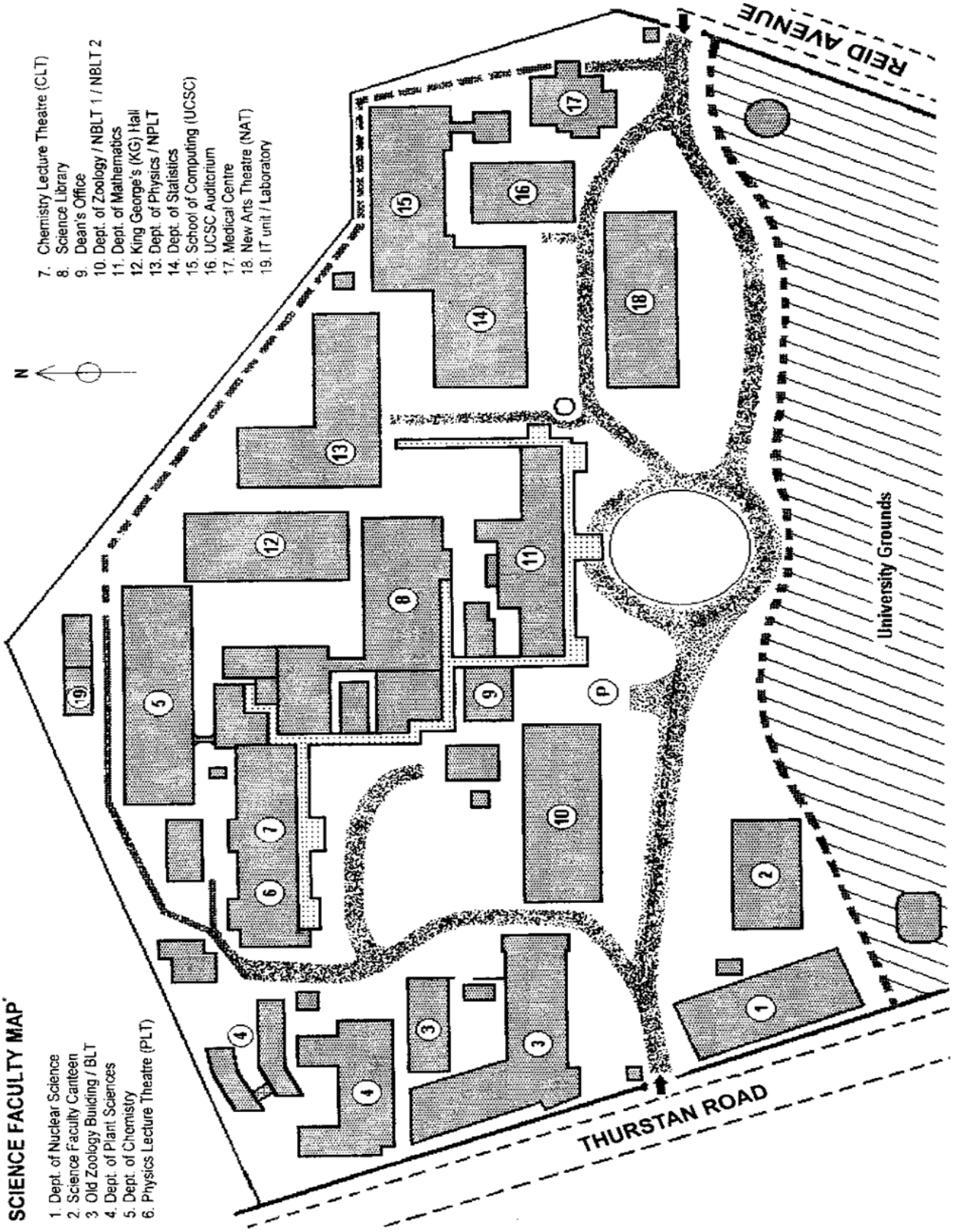
Chief Medical officer Dr. K.D.I.Wasudeva (M.B.B.S., D.F.M.)

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 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)