



University of Ruhuna

**Faculty of Fisheries and Marine
Sciences & Technology**

Student Handbook 2017

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Vision and Mission Statements of the University

Vision

Be the prime intellectual thrust of the nation

Mission

Advance knowledge and skills through teaching, research and services to serve the society

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University of Ruhuna

1.1 Introduction

University of Ruhuna was established on 1st September 1978, as Ruhuna University College by a Special Presidential Decree. Currently, University of Ruhuna constitutes with nine faculties, namely Agriculture, Engineering, Fisheries and Marine Sciences & Technology, Humanities and Social Sciences, Management & Finance, Medicine, Science, Technology and Graduate Studies.

Faculties of Humanities and Social Sciences, Fisheries and Marine Sciences & Technology, Management & Finance, Science and Graduate Studies are located at the main University premises at Wallamadama (Matara). Faculties of Agriculture, Engineering and Medicine are located in Mapalana (Kamburupitiya), Hapugala (Galle) and Karapitiya (Galle) respectively. The Faculty of Technology is temporarily located at the Wellamadama premises until the facilities are completed. The central administration unit of the University is also located at the Wallamadama University complex.

The University offers Bachelor, Master and PhD degrees in their respective disciplines. In addition, Diploma and Certificate courses are conducted in various disciplines.

At the first recruitment of the University of Ruhuna for the Bachelors' degree programmes in 1978, a total of 272 students were enrolled and by year 2015 it has been increased to 7244 students, across seven faculties (Table 1.1), recording its fast growth during the past four decades.

Table 1.1 Distribution of students among the seven faculties (2015).

Name of the Faculty	No. of Students
Agriculture	830
Engineering	924
Fisheries and Marine Sciences & Technology	148
Humanities and Social Sciences	1685
Management and Finance	1502
Medicine	1265
Science	890
Total student population of the University	7244

1.2 Location of the University

University of Ruhuna main campus is located 4 Km away from Matara along the Colombo Hambantota (A2) main road. Matara (Sinhala: මතර Tamil: மாத்துறை) (originally Mahathota) is a city on the southern coast of Sri Lanka, 160 km away from Colombo. Matara historically belongs to the area called Ruhuna, one of the three kingdoms in Sri Lanka. First Indians who arrived to the island country according to the Mahawansa settled in the area, along the banks of Nilwala River.

Traveling from Colombo to Matara can be made either by train or buses. There are only a limited number of trains but buses are available every half an hour through the normal route or expressway. The journey through normal route takes about four hours from Colombo while

one and half hours through expressway. Matara is the last railway station where the railway lines end and the last exit of the expressway in the South.

1.3 Officers of the University

Chancellor	<i>Venerable Rajakeeya Panditha Pallaththara Sumanajothi Nayaka Thero</i>
Vice- Chancellor	<i>Professor Gamini Senanayaka B.Sc., Agri. (Pera.), PhD (Copenhagen)</i>
Deputy Vice Chancellor	<i>Dr. A.M.N Alagiyawanna B.Sc. (Eng Hons) (Moratuwa), MEng (AIT), DEng (Nagaoka), C.Eng, MIE (SL)</i>
Dean, Faculty of Agriculture	<i>Professor KL Wasantha Kumara BSc Agric., MSc., PhD</i>
Dean, Faculty of Engineering	<i>Dr. P.D. Chandana Perera B.Sc. Eng, PhD Eng, C.Eng, MIE (SL)</i>
Dean, Faculty of Fisheries and Marine Sciences & Technology	<i>Dr. R.A. Maithreepala B.Sc. (Ruhuna), M.Phil (Ruhuna), PhD (Taiwan)</i>
Dean, Faculty of Humanities and Social Sciences	<i>Professor S. Wawwage BA (Pera), M.Phil (Ruhuna)</i>
Dean, Faculty of Management and Finance	<i>Dr. T.S.L.W. Gunawardana PhD (Bodo , Norway), MSc (Agder, Norway), BBA(Ruhuna, SL)</i>
Dean, Faculty of Medicine	<i>Professor Sarath Lekamwasam MBBS, MD, FRCP, FCCP, PhD</i>
Dean, Faculty of Technology	<i>Professor W. D. G. Dharmarathna B.Sc. (Pera), MSc, PhD (Tufts, USA)</i>
Dean, Faculty of Science	<i>Professor. P.A. Jayantha B.Sc. (<u>Kelaniya</u>, Sri Lanka), M.Sc. (<u>J'Pura</u>, SL), Ph.D. (<u>QUT</u>, Australia).</i>
Registrar	<i>Mrs. P.S. Kalugama BA (J'pura), MA (London), MBA (Ruh)</i>
Librarian	<i>Mr. Ananda Karunarathna B.Dev.Studies (Statistics) (Colombo, S.L.), Dip. Lib. & Inf. Science(Kelaniya, S.L.), M.Sc.(Kelaniya, S.L)</i>
Bursar (Acting)	<i>Mr. A.M.A Siriwardhana B.Sc. (J'pura), ICASL (Inter Mediate)</i>

1.4 Contact Information of the University

1.4.1 Postal Addresses

Main administration block of the University is located in Wellamadama. Also, Faculties Fisheries & Marine Sciences & Technology, Humanities & Social Sciences, Management & Finance, Science, Graduate Studies are located in the Wellamadama.

University of Ruhuna,
Wellamadama, Matara, 81000,
Sri Lanka

Addresses of the other four campuses are as follows;

Faculty of Agriculture
University of Ruhuna
Mapalana, Kamburupitiya,
81100, Sri Lanka.

Faculty of Engineering
University of Ruhuna
Hapugala, Galle,
80000, Sri Lanka.

Faculty of Medicine
University of Ruhuna
Karapitiya, Galle.
80000, Sri Lanka.

Faculty of Technology

University of Ruhuna
Karagoda-Uyangoda,
Kamburupitiya
81100, Sri Lanka.

1.4.2 Telephone and Fax Numbers of the University

	Telephone	Fax
Wellamadama Complex	+94(0)412222681-2 +94(0)412227001-4	+94(0)412222683
Faculty of Agriculture	+94(0)41229220	+94(0)412292384
Faculty of Engineering	+94(0)912245765	+94(0)912245762
Faculty of Fisheries and Marine Science & Technology	+94(0)412227026	+94(0)412227026
Faculty of Humanities and Social Sciences	+94(0)412227010	+94(0)412227010
Faculty of Management & Finance	+94(0)412227015	+94(0)412227015
Faculty of Medicine	+94(0)912234730	+94(0)912222314
Faculty of Science	+94(0)412222701	+94(0)412222701

1.4.3 Electronic Mail/Web

The university can be reached by electronic mail from anywhere in the world. The mail domain is *ruh.ac.lk*. The e-mail addresses of the academic staff and other officers are available in the University Web site: <http://www.ruh.ac.lk>.

1.4.4 Internal Telephone Numbers

Vice Chancellor	2000
Office	2101
Deputy Vice Chancellor	2001
Office	2137
Registrar	2110
Office	2109
Dean, Faculty of Fisheries and Marine Sciences & Technology	5101
Senior Assistant Registrar	5102
Dean, Faculty of Science	4101
Assistant Registrar	4102
Dean, Faculty of Humanities and Social Sciences	3101
Assistant Registrar	3102
Dean, Faculty of Management & Finance	3901
Assistant Registrar	3902
Dean, Faculty of Technology	4501
Assistant Registrar	4502
Dean, Faculty of Graduate Studies	2147
Assistant Registrar	2160
Librarian	2210
Bursar	2150
Senior Assistant Bursar (Finance)	2108
Assistant Bursar (Finance)	2103
Assistant Bursar (Supplies)	2115
Deputy Registrar (General Administration)	2120
Deputy Registrar (Examinations)	2130
Assistant Registrar (Student Affairs)	2135
Senior Assistant Registrar (Academic Establishment)	2144
Senior Assistant Registrar (Non-Academic Establishment)	2140
Engineer	2145
Director, Physical Education	2223
Medical Officer	2121
Carrier Guidance Unit	2132
Chief Security Officer	2126
Office	2127

Faculty of Fisheries and Marine Sciences & Technology

2.1 Introduction

The Faculty of Fisheries and Marine Sciences & Technology houses three departments, i.e, Department of Fisheries and Aquaculture, Department of Limnology and Water Technology and Department of Oceanography & Marine Geology. The Faculty offers primarily undergraduate courses for the Bachelor of Science (BSc) in Fisheries and Marine Sciences, and in Marine and Freshwater Sciences) special (honours) degrees of four year duration.

Vision of the Faculty is to be the center of excellence in fisheries science, marine science and water technology education and research in Sri Lanka to produce scholars to help the country's economic development through sustainable utilization of inland and marine aquatic resources.

Mission of the Faculty of Fisheries and Marine Sciences & Technology is to produce outstanding, internationally accredited graduates in the fields of fisheries, aquaculture, limnology, water technology, oceanography and marine geology. Our graduates are innovative, analytical, adaptable with abilities of lifelong learning and research, dedicated to community service and are capable of building international collaborations to contribute the advancement of scholarship and the enrichment of education, socioeconomics, and environment of the community with special reference to aquatic resources.

2.2 Staff of the Dean's Office

Dean

Dr. R.A. Maithreepala

maithree@fish.ruh.ac.lk

+94(0)41 2227026

Ext. 5101

Senior Assistant Registrar

Ms. D.M.H.C. Dasanayake

harindikad@Yahoo.com

+94(0)41 2227026

Ext. 5102

Academic Regulations and Procedures

3.1 Admission Requirements

All applicants for the Bachelor Degree programmes in the Faculty of Fisheries and Marine Sciences & Technology must satisfy the general university admission requirements as laid down by the University Grants Commission, Sri Lanka. University Grants Commission does the selection based on the performance of students in the General Certificate of Education (Advanced Level) Examination.

Applicants with equivalent qualifications gained from foreign universities and transfer students referred by the University Grants Commission for admission to this Faculty shall be admitted only with the consent of the Faculty Board.

3.2 Registration

Students admitted to the Faculty are registered as full time students and he/she is required to maintain his/her registration during the total period of study in the Faculty. A student shall pay any fee prescribed by the University for registration during the period of study.

3.3 Subject Combinations and Registration for Course Units

Registration for course units is compulsory. Students shall be registered for Course Units conducted by the Faculty two weeks before the end of previous semester. The Faculty has its own Management Information System (MIS) at <<http://paravi.ruh.ac.lk/fofmstmis>>. Every student shall be registered for Course Units online by logging in to the MIS with the User Name and Password provided by the Faculty. Only the registered students are allowed to sit for the end semester examination.

Any change of registered Course Unit or withdrawal of registration from a Course Unit shall be made within two weeks from the commencement of the academic programme.

When the number of applicants for a particular course unit exceeds the available capacity, students will be chosen under a selection procedure specified by the respective Department.

All information regarding above matter is available at the office of the Dean, and the students are requested to contact the Assistant Registrar of the Faculty for further information.

3.4 Academic Calendar

The official academic calendar of dates approved by the Faculty Board is announced prior to the commencement of each academic year. Undergraduate courses will be conducted at 4 Levels, namely Level 1, Level 2, Level 3 and Level 4. In four academic years the contents of subject matter in courses get progressively advanced as the levels go higher.

One academic year consists of two semesters as Semester I and Semester II. The full Degree Programme will be of eight semesters. The Faculty will notify commencement of the academic

years and semesters, with prior approval from the Faculty Board. A typical academic year shall be as in Table 3.1

Table 3.1 General academic calendar of the Faculty

First Semester	Weeks	Second Semester	Weeks
First half	8	First half	8
Mid semester break	1	Mid semester break	1
Second half	7	Second half	7
Study leave	2	Study leave	2
Examination	4	Examination	4
Vacation	2	Vacation	6
Total	24	Total	28

3.5 Subjects offered by the Faculty

During the first two years, in the common core courses a student shall take 60 credits prescribed by the Faculty. After the Level II, undergraduates who have been registered for the BSc in Fisheries and Marine Sciences Degree programme shall apply for the area of specialization either in Fisheries, Limnology, Oceanography & Marine Geology and Aquaculture. Undergraduates who have been registered for the BSc in Marine and Freshwater Sciences shall apply for the area of specialization either in Water Sciences & Technology or Oceanography & Marine Geology.

Each student shall select *Course Units* from the above subject areas and have to follow the common and compulsory courses such as FDN and FSC. Industrial &/or Field Training (FSH4220, AQU 4220, LIM 4220, OCG 4220) is a non-credit Course Unit.

3.6 Course Units

A Course Unit is a selectively organized section of a subject. Course Units are of two types, namely, *Core Course Units* and *Optional Course Units*. Core Course Units consist of basic and essential subject matter. Optional Course Units contain specific areas, which would provide a diverse knowledge on a particular subject. Theory Course Units consists of lectures, assignments and tutorials. Practical Course Units are either laboratory based or field based studies of a particular subject. Combined Course Units consist of both theory and practical components. In addition, there are Course Units consisting of project work or training programme.

Foundation courses (FDN) include 'English' and 'Information literacy and Library skills'. FDN courses are offered as a foundation for the Bachelor of Science in Fisheries and Marine Sciences, and Marine and Freshwater Sciences Degree programmes.

3.6.1 Credit Value of a Course Unit

The abstract value assigned to a Course Unit on the basis of contact hours per week is called a credit. Usually, one credit is equivalent to 15 hours of lectures and/or tutorials or 30 - 45 hours of laboratory work, field classes etc. per semester. Course Units of one credit, two credits and three credits are available. For example, the contents of a three credit course unit will be approximately three times that of a course unit of one credit. A credit is a time based quantitative measure used to determine the contribution of a particular Course Unit (Table 3.2).

Table 3.2 Credit values and time allocation of different Course Units.

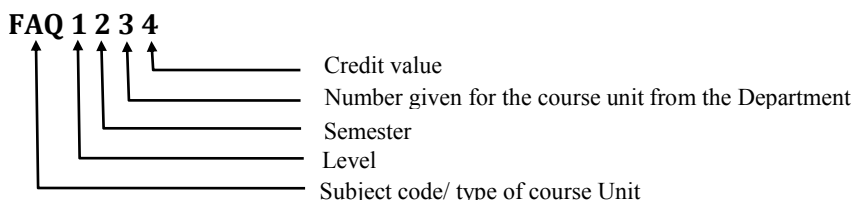
Description	Credit Value
Theory Course Units	
E.g. 15 hour Course Unit	01
30 hour Course Unit	02
45 hour Course Unit	03
Practical Course Units	
45 hour Course Units	01
Combined Course Units	
E.g. 30 theory hours + 45 practical hours	03
15 theory hours and 45 practical hours	02

3.6.2 Selection of Course Units

The Degree Programmes shall consist of Core Course Units (CCU) and the Optional Course Units (OCU) pertaining to each Degree programme. Each undergraduate should obtain 60 of Credits from all course units offered by all three departments during Levels I & II, including Credits from common compulsory course units, where it is applicable.

3.6.3 Identification of Course Units

An alphanumeric code is used to identify a course unit. The code consists of four digits prefixed by a set of three letters denoting the subject/type of course Unit as described by the example given below:



3.7 Foundation Course Units (FDN)

FDN 1121

Computer Literacy I (Theory, 10hrs; Practical 15hrs)

Basic Concepts of Software and Hardware: Windows Operating Systems (Windows XP); Word Processing (MS-Word); Presentation Tools (MS-PowerPoint); Spreadsheet Application (MS-Excel); Database Management Systems- I (MS-Access); Computer Programming Fundamentals (C-Language)

FDN1221

Computer Literacy II (Theory, 10hrs; Practical 15hrs)

Database Management Systems- I (MS-Access)

FDN2121

Computer Literacy III (Theory, 10hrs; Practical 15hrs)

Computer Programming Fundamentals (C-Language)

FDN 2221

Computer Literacy IV (Theory, 10hrs; Practical 15hrs)

Introduction to Programming, Programming Environment, Graph Plots, Procedures and Functions, Control Statements, Manipulating Text, GUI Interface, Model Building.

FDN1111

Preliminary English I (Theory, 15 hrs)

Reading: Reading comprehension skills, reading notices, vocabulary building. Writing: capitalization, punctuation, guided writing, writing invitations, simple dictation, understanding announcements, answering questions to listening passages (teacher's voice and recorded voice), understanding the story of a film. Speaking: Introductions and greetings, spontaneous speech, prepared speech. Grammar: Simple sentences, the simple present, prepositions of time, prepositions of place, the passive voice, adjectives and adverbs, articles and nouns.

FDN 1211

Preliminary English II (Theory, 15hrs)

Reading: Coherence & Cohesion, inference. Writing: Coherence, conveying personal messages in a formal letter, note and email. Listening: Dialogues, main and supporting ideas in lectures. Speaking: Informal group discussions. Grammar: Countable & uncountable nouns, determiners, singular/plural, tenses, prepositions.

FDN 2111

Intermediate English I (Theory, 15hrs)

Reading; Practice reading of a variety of moderately complex narrative/ biographical/ descriptive prose/ short newspaper articles. Writing; Paragraph writing, explaining information in a simple table, flow chart or diagram. Listening: Dialogues, main and supporting ideas in lectures. Speaking: Classroom debates, informal group discussions, formal speeches. Grammar: Relative clauses, comparison, superlatives.

FDN 2211

Intermediate English II (Theory, 15hrs)

Reading: Practice in complex reading passages, both general and academic. Writing: summarizing skills, writing C.V.s and applications. Listening: filling in blanks in songs, note-taking skills and familiarization with native voice. Grammar: Conditionals, reported speech, questions, the -ing form.

FDN 3111

Advanced English I (Theory, 15hrs)

Reading: Practice reading texts, both general and academic. Writing: Essay writing, report-writing. Listening: Practice advanced listening texts. Speaking: Preparing an academic presentation. Grammar: The infinitive, word order

FDN 3211**Advanced English II (Theory, 15hrs)**

Reading: Reading selected texts from scientific journals. Writing: Advanced practice in paraphrasing and summarizing, mechanics of writing an undergraduate research thesis. Writing references and rules pertaining. Speaking: Delivering a presentation

FDN 1131**Snorkeling and Life saving (Theory, 9 hrs; Practical 18hrs)**

Basic skills of snorkelling, diving and lifesaving, snorkelling gears, diving gears, diving hazards, snorkelling and diving ethics, underwater photography, maintenance of snorkelling and diving gear, and underwater photographic equipment.

FDN 1142**Biomathematics (Theory, 30hrs)**

Basic Algebra (including Complex Numbers), Logarithms, Trigonometric functions, Limits, Differentiation of a Product, Quotient and a function of a function, Maxima and Minima, Partial Differentiation, Total Differentiation, Homogeneous Functions and Euler's Theorem on Homogeneous functions, Integration by parts, Exact Differential equations, Definite Integral, Vectors, Determinants, Matrices, Introduction to Group Theory, Statistics for Chemistry (permutations, Configurations and Microstates, Molecular Assemblies, The importance of, $W = \frac{W!}{n!}$, The Boltzmann Distribution.)

FDN 3122**Information Literacy & Library Skills (Theory, 24hrs; Practical 18hrs)**

Introduction to libraries, knowledge on various types of collections, facilities and services offered by a library, tools used to organize the library resources, general rules and regulations of the library, print resources and non-print information resources, primary and secondary information resources, searching techniques, retrieval of print and electronic resources, evaluating information for credibility currency and content.

Management Information System (MIS) of the Faculty of Fisheries and Marine Sciences & Technology

The FOFMSTMIS is meant to assist management of the Information System of the Faculty of Fisheries and Marine Sciences & Technology. Its present version has been designed after a careful assessment of the requirements of the users of the system. The users are students, Dean, Senior Assistant Registrar, Heads of Departments, Lecturers, Academic Supportive staff and Non-academic staff.

Users of the FOFMSTMIS can perform various different tasks. Every user is assigned a user name and a password to log—in to the system. However, for security reasons all user accounts are created by the Dean of the Faculty of Fisheries and Marine Sciences & Technology. Students must change the given temporary password at the first time they login to the system.

All students must use FOFMSTMIS to register for course units and examinations. There are many facilities for students in FOFMSTMIS, such as viewing own course units they have been registered, attendance of classes, eligibility for examinations, results and notices etc. Changes in course unit registrations are allowed within the specified time limit at the beginning of the semester. All students must complete and update their personal information page.

4.1 Registration for Course Units

The students will be informed to register for course units before the beginning of a new semester. The date and time duration for registration will be announced by the Dean's office. After the deadline students are not allowed to change course units they registered. Students who did not register for course units during the given period are not allowed to register for examination of those course units. However, they can register for the examination in the following year as a repeat students. It is responsibility of the student to register for course units on time.

4.2 Registration process

1. Start Registration: The relevant time periods will be announced by the Deans Office for students to register/ drop course units.
2. Close the Registration: The system will be closed for students after the given time period and student will not be allowed to register through the FOFMSTMIS after the closing dates.
3. Change of Registration: After the closing date of registration, students are allowed to modify course units registered through the Dean's office within a given period, generally two weeks from the beginning of the Semester.
4. Conformation: Registration for course units will be confirmed by the Dean's office and the confirmation of each course unit can be seen in the system. This confirmation indicates that the registration is successful. If any course unit is not

confirmed, the students are advised to contact AR/ Fisheries and Marine Sciences & Technology at the Deans office.

4.3 Attendance

Students' attendance for course units they registered can be viewed. It contains daily attendance, number of medical submissions and current attendance percentage for the course units. A student must maintain an 80% attendance for classes in order to be eligible to sit for the examination of a course unit.

4.4 Registration for Examinations

All students are advised to register for examinations before the deadline as the dates are announced by the Deans office. Students can register for examinations of registered course units only. A student who registered to repeat an examination should submit the relevant paying voucher to the Deans Office to obtain the conformation.

After the registration for examinations is completed the eligibility for each course unit, which depends on the percentage of attendance (80%), will be displayed in the system. It is the responsibility of the student to register for examinations.

4.5 Result of Examinations

The released results of course units will be posted on the system. The students can view the results of a given course unit or all results of past examinations after login to their accounts.

4.6 Notices

The notices relevant to students will be posted on FOFMSTMIS. It is responsibility of students to see the notices.

- Web Address for the FOFMSTMIS : [http:// paravi.ruh.ac.lk/fofmstmis](http://paravi.ruh.ac.lk/fofmstmis)

Department of Fisheries and Aquaculture

5.1 Introduction

Department of Fisheries & Aquaculture is one of the three Departments within the Faculty of Fisheries and Marine Sciences & Technology, which conducts the courses related to all fields of Fisheries and Aquaculture for undergraduates who register for the BSc in Fisheries and Marine Sciences Degree programme and the BSc in Marine and Freshwater Sciences Degree programme. The course modules have been designed targeting the needs of the country and considering the demands of the relevant industries. Facilities within the Department are utilised to develop soft skills of the students, and the students are provided with opportunities to get the hands on experience in the field, national research stations, and at aquaculture and fishery related industries. This is done through well organised field excursions, out door and laboratory practical classes, and industrial training, which are integrated components of most of the course modules. In addition to the undergraduate teaching, academics of the Department are involved in various nationally and internationally important activities such as research, consultancies, secondary and tertiary curriculum development in collaboration with National Institute of Higher Education, community training and awareness programmes, etc. The current research areas handled by the staff are in the fields of Biodiversity of fish in different aquatic systems; Biology, ecology, distribution and population dynamics of fish; Feeding and nutrition of fish; Culture of fin-fish and shell-fish relevant to ornamental and food fish industry, Impact of climate change on reproductive performance of fish; Breeding success of carps in natural lakes, Ichthyoplankton in marine coastal waters, Community-based fisheries management of coastal fisheries, and Marine ornamental fisheries and Value addition to fish and fishery products in ornamental and food-fish industry. In addition to the above, academic staff has been instrumental in helping the graduates pass out from the faculty to find prestigious opportunities for postgraduate studies at foreign universities and in local universities.

5.2 Academic Staff of the Department of Fisheries and Aquaculture

Head

Dr. K.H.M. Ashoka Deepananda

B.Sc. (Hons in Zoology) (Ruhuna, SL), M.Sc. (Bremen, Germany), PhD (Kelaniya, SL)

Fish Parasitology, Coastal and Marine Ecology, Aquaculture, Fisheries Biology and Management

Professor

Senior Professor (Miss) P. Ruchira T. Cumararatunga

Senior Professor in Fisheries Biology & Professor of Fisheries Biology (Chair)

B.Sc. (Hons in Zoology) (Kelaniya, SL), PhD (Aston in B'ham, UK), FNASSL

Reproductive biology and physiology of ornamental and food-fish; Environmental & endocrinal control of reproduction in fish; Histology of Fish; Food, feeding biology and ecology of fish; Captivity breeding of endemic ornamental fish; Biology, distribution & migration of Asian Anguillid eels; Coastal and marine ecology with special reference to

biodiversity of lagoons and coastal marine ecosystems, Sea weed farming, and Fish Postharvest technology.

Senior Lecturer

Dr. (Miss) K. R. Gamage

B.Sc. (Ruhuna, SL), MPhil (Ruhuna, SL), PhD (James Cook, Australia)

Fish nutrition, Fish reproductive endocrinology and reproductive biology, Aquaculture (food/ornamental fish culture), Aquaculture water quality management.

Lecturer

Dr. (Mrs.) S.S. Herath

B.Sc. (Hons in Fisheries Biology) (Ruhuna, SL), M.Sc. (AIT, Thailand), PhD (Tokyo University of Marine Science and Technology, Japan)

Aquaculture and Aquatic Resource Management, Fish Nutrition & Nutrigenomics, Fish Genetics and Selective breeding techniques

Lecturers (Probationary)

Mrs. R.D.N. Wijesinghe

B.Sc. (Hons in Fisheries & Marine Sciences) (Ruhuna, SL), M.Sc. (Ghent, Belgium)

Aquaculture, Rural Project Management, Fisheries Management, and Ecology of aquaculture ponds

Mrs. J.M.S.N. Rathnapala

B.Sc. (Hons in Fisheries and Marine Sciences) (Ruhuna, SL), M.Sc. (Ghent, Belgium)

Aquaculture, Virology, Immunology, and Microbial community management

Mrs. H.M.E.J. Heenkenda (On study leave)

B.Sc. (Hons in Fisheries and Marine Sciences) (Ruhuna, SL); Reading for a MSc (University of Florida, USA)

Marine ichthyoplankton, Shell-fish aquaculture

5.3 Courses offered by the Department of Fisheries and Aquaculture

Department offers the following courses for undergraduates who are registering for BSc in Fisheries and Marine Sciences and BSc in Marine and Freshwater Sciences Degree Programmes.

5.3.1 Courses for Level 1 Semester I

FAQ1113

Evolution and Biology of fin fish (Theory, 35 hrs; Practical, 30 hrs)

Origin, evolution, biology, morphology, morphometry and taxonomy of fin fish. Morphometric characters and morphological features of finfish; Use of identification keys; Evolutionary characters, Anatomy of bony and cartilaginous fish.

FAQ1122

Evolution and Biology of shellfish (Theory, 18 hrs; Practical, 18 hrs)

Origin, evolution, biology, morphology, morphometry and taxonomy of cultured shell fish (shrimps, crabs, lobsters, molluscs, echinodermites).

Morphometric characters and morphological features of shellfish; Use of identification keys; Evolutionary characters, Anatomy of shellfish.

FAQ1131

Cell Biology (Theory, 13 hrs; Practical, 06 hrs)

Biology of cells of higher organisms: Structure & functions of cellular organelles, cell growth, mitotic & meiotic division and oncogenic transformation; RNA synthesis and protein synthesis, active transport methods through cell membranes, the extracellular matrix, and cell movements; chromatin receptors, cell signalling and the cytoskeleton.

5.3.2 Courses for Level 1 Semester II

FAQ1213

Cytology, Histology and Embryology of fish (Theory, 38 hrs; Practical, 24 hours)

Biology of cells of higher organisms: Structure & functions of cellular organelles, cell growth, mitotic & meiotic division and oncogenic transformation, Histology of skin, Alimentary canal, Gonads, Liver, Thyroid, Kidney, Muscles, Bones, Gills, Brain and Neuron system etc., Embryology and life history of oviparous, ovoviviparous and viviparous fish.

Use of different microscopic techniques for histology (fixing, embedding, microtomy & staining); Histological studies on fish tissues; Identification of different embryonic developmental patterns and stages of life cycles of fin-fish & shell fish

FAQ1222

Fundamentals of Fish Genetics (Theory, 21 hrs; Practical, 21 hrs)

Basic principles of genetics applicable to fisheries and aquaculture. Laboratory exercises on fish genetics.

5.3.3 Courses for Level 2 Semester I

FAQ2113

Fish Physiology (Theory, 45 hrs)

Physiological and biochemical aspects related to sense organs, Functions of Endocrine organs and hormones; Digestion, Metabolism, Excretion and osmoregulation, Respiration, Reproduction, Swimming & activity of muscles and basic Immunology.

FAQ2121

Laboratory Studies related to fish physiology (Practical, 45 hrs)

Laboratory exercises on fish physiology; Analysis of digestive enzymes, swimming modes of fish; Effects of environmental factors on respiration and tolerance limits, Fish haematology; and reproductive physiology of fish; Laboratory exercise on fish behaviour.

5.3.4 Courses for Level 2 Semester II

FAQ2213

Fish Population Dynamics (Theory, 38 hrs; Practical, 15 hrs)

Fish stocks and stock identification; Length-Weight relationships; Length frequency analysis; Fish growth models, growth parameters and parameter estimation; Recruitment and

selection; Mortality; Fish yield predictive models; Laboratory studies on length weight relationships; Length frequency and analysis of growth models; fish stock assessment. Use of computer soft-ware for fish population estimates.

5.3.5 Courses for Level 3 Semester I

FAQ3112

Basic-economics for Aquaculture and Fisheries (Theory, 24 hrs; Practical, 18 hrs)

Introduction to economics; Micro and Macroeconomics; Resource, Environmental, Agricultural, Fisheries & Aquaculture economics; Bio-economic modelling; Production economics; Demand and supply of fish and fishery products; Farm management, planning and operation; Marketing of fish and fishery products;

FAQ3121

Behaviour of Fish (Theory, 14 hrs; Practical, 3 hrs)

Introduction to animal behaviour; Principles of animal behaviour; Behavioural patterns with respect to feeding, reproduction, parental care, territory, navigation, migration, etc.

FAQ 3132

Microbiology for Aquaculture & Fisheries (Theory, 24 hrs; Practical, 18 hrs)

Basic microbiological techniques; Microbial community analysis, Gut microbial community of fish, Application of microbiology in aquaculture, fisheries and fish processing; r-k selection, probiotics, prebiotics, bio floc technology, quorum sensing, Management of microbial community towards functionality.

FSH3113

Capture Fisheries (Theory, 38 hrs; Practical, 21 hrs)

Capture Fisheries of the world; Capture Fisheries of Sri Lanka – Marine, Brackish water and Freshwater fisheries; Global classification of fishing areas; Impacts of fish consumption and fishing fleet on fisheries; Role of women in fisheries; Role of Fisheries Management Organisations; Ecosystems approach to fisheries; Bycatch; Marine, coastal and freshwater protected areas.

FSH3121

Fishing Gear and Craft Technology (Theory, 14 hrs; Practical, 06 hrs)

Factors important in designing fishing gear, Different fishing methods and gear types, Primitive and modern techniques, Accessories used in fishing gear to improve efficiency; Designing and construction of fishing vessels, Vessel types and accessories. Laboratory studies on models of fishing gears and vessels.

FSH3131

Fisheries Oceanography (Theory, 12 hrs; Practical, 09 hrs)

Effect of physicochemical and biological parameters of oceans on the biology, behaviour and distribution of economically important fish species, and on fishing; i.e. Impact of physico-chemical and biological parameters on operation of fishing gear and crafts and availability of economically important fish species. Possible impacts of climate change on global fishery industry.

AQU3112**Aquaculture I-Introduction (Theory, 24 hrs; Practical, 18 hrs)**

History & present status, Scope and role of aquaculture, Different type of aquaculture systems, Species selection, Site selection, Environmental demands; Pond construction

AQU3123**Aquaculture II-Feeds & Nutrition (Theory, 30 hrs; Practical, 45 hrs)**

Major Nutrients, Nutrient requirements of fish, Artificial feed formulation, preparation and evaluation, Feeding strategies, Nutritional pathology; Culture of live feed

AQU3132**Methods for Aquaculture I (for Tropical fin-fish species) (Theory, 23 hrs; Practical, 21 hrs)**

Methods of culture for Tilapia, Indian carps, Chinese carps, and ornamental fish

5.3.6 Courses for Level 3 Semester II**FAQ3213****Fish Pathology and Parasitology (Theory, 36 hrs; Practical, 27 hrs)**

Principles of fish health & environmental conditions, Symptoms & diagnosis of diseases, prevention, protection and appropriate treatment procedures. Ecosystems approach in control of fish diseases.

FAQ3222**Advanced Molecular Genetics applicable to fisheries and aquaculture (Theory, 24 hrs; Practical, 18 hrs)**

Molecular genetics for identification of fish stocks, migratory circuits and distribution of fish; Genetic aspects of stock improvement; Genetics for fish farmers for selective breeding, sex manipulation, chromosome manipulation, hybridisation and cloning; Bacterial Genetics; Gene Interaction; Genetic Screens; Gene Isolation; Cloning techniques; Reverse Genetics; Targeted expression; Genomics and Comparative Genomics; Chromosomal changes; Genes and Cancer; Stem cells.

FAQ3231**Advanced histological techniques (Practical, 30 hrs)**

Use of different histological techniques for sectioning and staining, Preparation of samples for plastic embedding, cryostat microtomy and electron microscopy. Single, double and triple staining techniques; transmission and scanning electron microtomy.

FAQ3241**Scientific writing, presentation and research ethics (Theory, 15 hrs)**

Introduction to Scholarly Information Sources. Introduction to copyright laws. Introduction to plagiarism and plagiarism prevention techniques. Citation styles and compiling reference lists. Effective presentation skills and communication channels, Ethics for scientific writing.

FAQ3251**Statistics for Aquatic Sciences (Theory, 15 hrs; Practical, 30 hrs)**

Application of statistical methods and tools for research in Aquatic sciences

AQU3212

Aquaculture III: Propagation (Theory, 25 hrs; Practical, 15 hrs)

Husbandry of aquaculture brood stock, Reproductive cycles of cultured aquatic animals, Brood stock management, Spawning induction, Larval rearing in finfish and shellfish

AQU3222

Methods for Aquaculture II (for Tropical shellfish & other organisms)

(Theory, 24 hrs; Practical, 18 hrs)

Shrimp and Prawn farming, Mollusc farming, Crab and lobster farming & fattening, Crocodile farming, Frog culture, Sea weed culture, freshwater ornamental plant propagation and tissue culture, coral transplanting and live-rock culture

AQU3232

Aquaculture Management (Theory, 25 hrs; Practical, 15 hrs)

Water quality management in fish ponds, Aeration, BOD and COD, Use of chemicals in aquaculture, Aquatic weed management, Predators in aquaculture, Green technology for aquaculture; Fish handling and transport, Aquaculture equipment, Application of nano technology and advanced biotechnology to improve nutritional status and for disease control

5.3.7 Courses for Level 4 Semester I

FSH4112

Fish Post Harvest Technology and Quality Assurance of Fishery Products (Theory, 23 hrs; Practical, 21 hrs)

Fish curing and processing techniques, Processing plant lay-out; Product profile; Raw & cooked products, By-products; Food technology, Food microbiology; Quality control & assurance; HACCP (Hazard analysis & critical control point) for food safety management, Biological/pathogenic hazards (Algal toxins, Bacterial, Viral and Parasitic infestation), Chemical & physical hazards, Processing narration.

FSH4122

Fish transporting devices, curing & processing plants & packaging (Theory, 23 hrs; Practical, 21 hrs)

Effect of physicochemical parameters of processing and transport media (temperature, salinity, conductivity, etc.) on fish and fishery products, Designing of fish transporting devices to maintain quality of fish; Designing, operation and maintenance of fish curing & processing plants; Packaging for fish and processed fish products.

FSH4132

Fisheries Management (Theory, 24 hrs; Practical, 18 hrs)

Management of renewable and non-renewable natural resources, Fisheries management and planning objectives, strategies and methods, Fishery regulations

AQU4111

Immunology (Theory, 12 hrs; Practical, 09 hrs)

History, Immune organs of fish, Innate immunity system of fish; cellular sensing and humoral sensing method, cellular and humoral effectors, Adaptive immunity system of fish; Antigen and antibody specificity, Antigen presenting and recognition, Antigen processing and

development of effector cells, T cell and B cell mediated immunity response of fish, Crustacean immunity; haematopoiesis and haemocytes, The proPO system, Coagulation

AQU4121

Aquaculture Technology – Equipment & machinery (Theory, 12 hrs; Practical, 09 hrs)

Technology for intensive farming, Designing of fish grading, Fish handling and transport devices to reduce losses during aquaculture, Use of renewable energy and low cost technology in operation of aquaculture equipment and machinery.

5.3.8 Courses for Level 4 Semester II

FSH4218

Research Project, Thesis Writing and Viva-voce

Research project related to Fisheries

FSH4220

Industrial or field training

Three months industrial training carried out at Fishery related industries

AQU4218

Research Project, Thesis Writing and Viva-voce

Research project related to Aquaculture

AQU4220

Industrial or field training

Three months industrial training carried out at Aquaculture related industries

5.4 BSc in Fisheries and Marine Sciences Honours Degree Program

This degree programme is conducted by the Department of Fisheries and Aquaculture in collaboration with Department of Limnology and Water technology, and Department of Oceanography and Marine Geology. On completion of the course modules included in the Levels I and II of the degree programme, students shall select either specialization in Fisheries or Aquaculture. Of the course modules offered by the Department of Fisheries and Aquaculture, course units bearing the code FAQ are compulsory for all students following the BSc in Fisheries & Marine Sciences Degree program. Course units bearing the code AQU are compulsory for those who specialise in Aquaculture and they may be considered as optional for others. Similarly, course units bearing the code FSH units are compulsory for those who specialise in Fisheries and they may be considered as optional for others. All the courses other than those listed as optional are compulsory for both specialisation programmes.

Abbreviations used in describing course modules and units:

C = Compulsory, OP = Optional, ND = Non Degree,

OCG = Courses offered by Department of Oceanography and Marine Geology,

LIM = Courses offered by the Department of Limnology and Water Technology,

CHM = Courses offered by the Department of Limnology and Water Technology,

FDN = Foundation Courses

5.4.1 Course modules for Level I and II

Students, following the BSc in Fisheries and Marine Sciences degree program shall take the course modules during Level I and II of his/ her study as stipulated below.

Course Modules for BSc in Fisheries and Marine Sciences Level I and Level II

Level	Semester	Module No	Module Name	Status	Credits	Theory (Hrs)	Practical (Hrs)
Level I	Semester I	FAQ 1113	Evolution & Biology of Fin-fish	C	3	35	30
		FAQ 1122	Evolution & Biology of Shell-fish	C	2	18	18
		LIM 1112	Introduction to Limnology	C	2	24	18
		LIM 1122	Freshwater Fauna	C	2	24	18
		OCG 1111	Introduction to Oceanography	C	1	15	00
		OCG 1121	Earth History, Origin & Evolution of Life	C	1	15	00
		OCG 1141	Mathematics I	OP	1	15	00
		OCG 1132	Earth Material	OP	2	24	18
		FDN 1142	Biomathematics	C	2	30	00
		CHM 1111	Principles in Chemistry	C	1	15	00
		CHM 1122	Analytical Chemistry - 1	C	2	20	30
		FDN 1111	Preliminary English - I	ND	1	15	00
		FDN 1121	Computer Literacy - I	ND	1	10	15
	FDN 1131	Snorkelling & Lifesaving	OP	1	12	09	
	Semester II	CHM 1212	Inorganic Chemistry	C	2	24	18
		FAQ 1213	Cytology, Histology & Embryology of fish	C	3	38	24
		FAQ 1222	Fundamentals of Genetics	C	2	21	21
		LIM 1212	Physical and Chemical Limnology	C	2	24	18
		LIM 1222	Freshwater Flora	C	2	24	18
		OCG 1222	Marine Biology – Invertebrate Fauna	C	2	24	18
OCG 1232		Marine Biology – Vertebrate Fauna	C	2	24	18	
OCG 1242		Introduction to Geospatial Analysis	C	2	24	18	
FDN 1211		Preliminary English - II	ND	1	15	0	
FDN 1221	Computer Literacy -II	ND	1	10	15		
Level II	Semester I	FAQ 2113	Fish Physiology	C	3	45	0
		FAQ 2121	Laboratory Studies Related to Fish Physiology	C	1	0	45
		LIM 2111	Physics of Water	C	1	15	00
		LIM 2123	Theoretical Ecology and Ecological Modelling	OP	3	37	24
		LIM 2141	Biodiversity and Evaluation Strategies	C	1	12	09
		CHM 2111	Analytical Chemistry-II	C	1	12	9
		CHM 2122	Organic Chemistry	C	2	24	18
		OCG 2111	Tectonics and Ocean Basins	OP	1	15	0
		OCG 2122	Marine Biology –Flora	C	2	24	18
		OCG 2133	Biological Oceanography	C	3	30	45
		FDN 2111	Intermediate English -I	ND	1	15	0
	FDN 2121	Computer Literacy III	ND	1	10	15	
	Semester II	FAQ 2213	Fish Population Dynamics	C	3	38	15
		LIM 2212	Limnology of Wetlands, Lagoons and Estuaries	C	2	24	18
		LIM 2222	Aquatic Toxicology and Human Health Risk	OP	2	24	18
		CHM 2212	Physical Chemistry I	C	2	26	12
		OCG 2212	Statistics for experimental analysis I	C	2	24	18
OCG 2222		Geomorphology & morphometric analysis	OP	2	24	18	
OCG 2233	Chemical Oceanography	C	3	30	45		

	OCG 2243	Physical Oceanography	C	3	30	45
	FDN 2211	Intermediate English -II	ND	1	15	0
	FDN 2221	Computer Literacy IV	ND	1	12	15

Note: Those who want to be specialized in Oceanography and Marine Geology shall take

OCG 1132, OCG 1141, OCG 2111 & OCG 2222 course modules

5.4.2 Course modules for Level III and IV

Students shall take the course modules offered during Level III and IV by the faculty as per his/ her specialization area.

Course Modules for BSc in Fisheries and Marine Sciences Specialized in Fisheries

Level	Semester	Module No	Module Name	Status	Credits	Theory (hrs)	Practical (hrs)
Level III	Semester I	FAQ 3112	Basic Economics for Fisheries & Aquaculture	C	2	24	18
		FAQ 3121	Behaviour of Fish	C	1	14	03
		FAQ 3132	Microbiology for Aquaculture and Fisheries	C	2	24	18
		FSH 3113	Capture Fisheries	C	3	38	21
		FSH 3121	Fishing Gear & Craft Technology	C	1	13	09
		FSH 3131	Fisheries Oceanography	C	1	12	09
		AQU 3112	Aquaculture 1- Introduction	C	2	24	18
		AQU 3123	Aquaculture 11 – Feeds & Nutrition	OP	3	30	45
		AQU 3132	Methods for Aquaculture I (for Tropical fin-fish Species)	OP	2	23	21
		FDN 3111	Advanced English I	ND	1	15	0
		FDN 3122	Information Literacy on Library Skills	ND	2	24	18
		OCG 3142	Remote Sensing and GNSS	C	2	24	18
		OCG 3132	Hydrography and Navigation	OP	2	24	18
		LIM 3132	Aquatic Pollution	C	2	24	18
		LIM 3161	Quality Assessments of Aquatic Systems	OP	1	12	9
		CHM 3112	Advanced Aquatic Chemistry	C	2	30	0
		CHM 3122	Physical Chemistry -II	OP	2	24	18
		OCG 31A1	Introduction to Socio-economics	OP	1	12	9
	OCG 31B1	Marine Mammalian Biology	OP	1	15	0	
	OCG 31C2	Marine and Coastal Ecosystems	OP	2	24	18	
	Semester II	FAQ 3213	Fish Pathology & Parasitology	C	3	36	27
		FAQ 3222	Advanced Molecular Genetics applicable to Fisheries & Aquaculture	C	2	24	18
		FAQ 3231	Advanced Histological Techniques	OP	1	0	30
		FAQ 3252	Statistics for Aquatic Sciences	C	2	15	30
		FAQ 3241	Scientific writing, presentation and research ethics	C	1	15	0
		AQU 3212	Aquaculture III: Propagation	OP	2	25	15
		AQU 3222	Methods for Aquaculture II (for tropical shellfish & other organisms)	OP	2	24	18
	AQU 3232	Aquaculture Management	OP	2	25	15	

Level IV	Semester I	OCG 3251	Law of the Sea	C	1	15	0
		OCG 3261	Indian Ocean and Bengal Fan	OP	1	15	0
		OCG 3241	Introduction to Meteorology	C	1	12	9
		OCG 32A1	Coral Ecology	OP	1	12	9
		OCG 32B1	Satellite Oceanography	OP	1	12	9
		LIM 3213	Principles and Applications of Hydrology	OP	3	38	21
		LIM 3231	Hydrogeology	OP	1	15	0
		CHM 3211	Radio Chemistry	OP	1	15	0
		FDN 3211	Advanced English -II	ND	1	15	0
	Semester I	FSH 4112	Fish Post Harvest Technology and Quality Assurance of Fishery Products	C	2	23	21
		FSH 4122	Fish Transporting Devices, Curing & Processing Plants & Packaging	C	2	23	21
		FSH 4132	Fisheries Management and acts	C	2	24	18
		AQU 4111	Immunology	OP	1	12	09
		CHM 4112	Biochemistry	OP	2	24	18
		CHM 4121	Green Chemistry	OP	1	15	0
		CHM 4132	Natural Product Chemistry	OP	2	24	18
		OCG 4141	Climate Change and Oceans	C	1	15	0
		OCG 4162	Advanced Physical Oceanography	OP	2	24	18
		OCG 4132	Integrated Coastal Management	OP	2	24	18
Semester II	OCG 4191	Coastal Hazards and Mitigation	OP	1	15	0	
	OCG 4172	Marine Biodiversity Conservation and Management	C	2	24	18	
	LIM 4161	Environmental Impact Assessments	C	1	15	0	
	LIM 4191	Nano Technology	OP	1	15	0	
	FSH 4218	Research Project, Thesis Writing and Viva-voce	C	8			
	FSH 4220	Industrial or Field Training	C	0			

Course Modules for BSc in Fisheries and Marine Sciences Specialized in Aquaculture

Level	Semester	Module No	Module Name	Status	Credits	Theory (Hrs)	Practical (Hrs)
Level III	Semester I	FAQ 3112	Basic Economics for Fisheries & Aquaculture	C	2	24	18
		FAQ 3121	Behaviour of Fish	C	1	14	03
		FAQ 3132	Microbiology for aquaculture and Fisheries	C	2	24	18
		AQU 3112	Aquaculture I- Introduction	C	2	24	18
		AQU 3123	Aquaculture II – Feeds & Nutrition	C	3	30	45
		AQU 3132	Methods for Aquaculture I (for tropical fin-fish species)	C	2	23	21
		FSH 3113	Capture Fisheries	OP	3	38	21
		FSH 3121	Fishing Gear & Craft Technology	OP	1	13	09
		FDN 3122	Information Literacy on Library Skills	ND	2	24	18
		FSH 3131	Fisheries Oceanography	OP	1	12	09

Level IV	Semester I	OCG 31A1	Introduction to Socio-economics	OP	1	12	9
		OCG 3132	Hydrography & Navigation	OP	2	24	18
		OCG 3142	Remote Sensing and GNSS	C	2	24	18
		OCG 31C2	Marine and Coastal Ecosystems	OP	2	24	18
		LIM 3121	Geochemistry	OP	1	15	0
		LIM 3132	Aquatic Pollution	C	2	24	18
		LIM 3142	Water treatment technology	OP	2	24	18
		LIM 3152	Wastewater treatment technology	OP	2	24	18
		LIM 3161	Quality Assessment of Aquatic Systems	C	1	12	9
		CHM 3112	Advanced Aquatic Chemistry	C	2	30	0
		CHM 3122	Physical Chemistry -II	OP	2	24	18
		FDN 3111	Advance English - I	ND	1	15	0
		Semester II	FAQ 3213	Fish Pathology & Parasitology	C	3	36
	FAQ 3222		Advanced Molecular Genetics applicable for Fisheries and aquaculture	C	2	24	18
	FAQ 3231		Advanced histological techniques	OP	1	0	30
	FAQ 3241		Scientific writing, presentation and research ethics	C	1	15	0
	FAQ 3252		Statistics for Aquatic Sciences	C	2	15	30
	AQU 3212		Aquaculture III: Propagation	C	2	25	15
	AQU 3222		Methods for Aquaculture II (For tropical shell fish & other organisms)	C	2	24	18
	AQU 3232		Aquaculture Management	C	2	25	15
	OCG 3251		Law of the Sea	OP	1	15	0
	OCG 3241		Introduction to Meteorology	OP	1	12	9
	OCG 32A1		Coral Ecology	OP	1	12	9
	LIM 3213		Principles and Applications of Hydrology	OP	3	38	21
	CHM 3211		Radio Chemistry	OP	1	15	0
	FDN 3211	Advanced English -II	ND	1	15	0	
	Semester I	AQU 4111	Immunology	C	1	12	09
		AQU 4121	Aquaculture Technology - Equipment & Machinery	C	1	12	09
		FSH 4112	Fish Post Harvest Technology and Quality Assurance of Fishery products	OP	2	23	21
		FSH 4122	Fish transporting devises, curing & processing plants & packaging	OP	2	23	21
		FSH 4132	Fisheries Management and acts	OP	2	24	18
		CHM 4112	Biochemistry	C	2	24	18
		CHM 4132	Natural Product Chemistry	OP	2	24	18
OCG 4141		Climate Change and Oceans	OP	1	15	0	
OCG 4172		Marine Biodiversity Conservation and Management	OP	2	24	18	
OCG 4132		Integrated Coastal Management	OP	2	24	18	
OCG 4182		Wetland management	OP	2	24	18	
OCG 4191		Coastal Hazards and Mitigation	OP	1	15	0	
CHM 4121		Green Chemistry	OP	1	15	0	
LIM 4112		Irrigation	OP	2	24	18	
LIM 4122		Water resource management	OP	2	24	18	
LIM 4151		Water governance and policy	OP	1	15	0	
LIM 4161		Environmental Impact Assessment	C	1	15	0	
LIM 4171	Surveying and Levelling	C	1	10	15		
LIM 4191	Nanotechnology	OP	1	15	0		

	Semester II	AQU 4218	Research Project, Thesis Writing and Viva-voce	C	8		
		AQU 4220	Industrial or Field Training	C	0		

Course Modules for BSc in Fisheries and Marine Sciences Specialized in Limnology

Level	Semester	Module No	Module Name	Status	Credits	Theory (hrs)	Practical (hrs)
III	I	FAQ 3121	Behaviour of Fish	OP	1	14	03
		FSH 3121	Fishing Gear & Craft Technology	OP	1	13	09
		AQU 3112	Aquaculture 1- Introduction	OP	2	24	18
		AQU 3123	Aquaculture 11 - Feed & Nutrition	OP	3	30	45
		FAQ 3112	Basic Economics for Fisheries & Aquaculture	OP	2	24	18
		FSH 3113	Capture Fisheries	OP	3	38	21
		FSH 3131	Fisheries Oceanography	OP	1	12	09
		FDN 3111	Advanced English I	ND	1	15	0
		OCG 3142	Remote Sensing and GNSS	C	2	24	18
		OCG 3132	Hydrography and Navigation	OP	2	24	18
		LIM 3132	Aquatic Pollution	C	2	24	18
		LIM 3161	Quality Assessments of Aquatic Systems	C	1	12	09
		CHM 3112	Advanced Aquatic Chemistry	C	2	30	0
		CHM 3122	Physical Chemistry -II	OP	2	24	18
		OCG 31D2	Palaeontology and Micropaleontology	OP	2	24	18
		OCG 31A1	Introduction to Socio-economics	OP	1	12	09
		OCG 31B1	Marine Mammalian Biology	OP	1	15	0
		OCG 31C2	Marine and Coastal Ecosystems	OP	2	24	18
		AQU 3132	Methods for Aquaculture I (for Tropical fin-fish Species)	OP	2	23	21
		LIM 3121	Geochemistry	C	1	15	0
		FDN 3122	Information Literacy on Library Skills	ND	2	24	18
		LIM3112	Hydraulics	C	2	24	18
		LIM3142	Water Treatment Technology	C	2	24	18
		LIM3152	Wastewater Treatment Technology	C	2	24	18
		OCG3152	Statistics for Experimental Analysis II	C	2	21	27
		OCG3162	Sedimentology	OP	2	24	18
		OCG3112	Mineralogy	OP	2	24	18
		OCG3181	Marine Chemistry	OP	1	15	0
		OCG3191	Earth system Physics	OP	1	15	0
		AQU 3232	Aquaculture Management	OP	2	25	15
		AQU 3222	Methods for Aquaculture II (for tropical shellfish & other organisms)	OP	2	24	18
		FAQ 3213	Fish Pathology & Parasitology	C	3	36	27
FAQ 3231	Advanced Histological Techniques	OP	1	0	30		
OCG 3251	Law of the Sea	OP	1	15	0		

	OCG 3261	Indian Ocean and Bengal Fan	OP	1	15	0
	OCG 3241	Introduction to Meteorology	C	1	12	09
	OCG 32A1	Coral Ecology	OP	1	12	09
	OCG 32B1	Satellite Oceanography	OP	1	12	09
	LIM 3213	Principles and Applications of Hydrology	C	3	38	21
	LIM 3231	Hydrogeology	C	1	15	0
	CHM 3211	Radio Chemistry	C	1	15	0
	FND 3211	Advanced English -II	ND	1	15	0
	FAQ 3222	Advanced Molecular Genetics applicable for Fisheries & Aquaculture	OP	2	24	18
	LIM3222	Hydrologic Control Structures and Reservoirs	C	2	24	18
	LIM3241	Scientific Communication and Research Ethics	C	1	15	0
	LIM3252	Groundwater Exploration and Extraction	C	2	24	18
	CHM 4132	Natural Product Chemistry	C	2	24	18
	FSH 4132	Fisheries Management and acts	OP	2	24	18
	OCG 4141	Climate Change and Oceans	OP	1	15	0
	OCG 4132	Integrated Coastal Management	OP	2	24	24
	CHM 4121	Green Chemistry	C	1	15	0
	LIM 4161	Environmental Impact Assessments	C	1	15	0
	LIM 4191	Nano Technology	OP	1	15	0
	LIM 4171	Surveying and Levelling	C	1	10	15
	LIM4112	Irrigation	C	2	24	18
	LIM4122	Water Resource Management	C	2	24	18
	LIM4131	Water Economics	C	1	15	0
	LIM4142	Pipe-bourn Water Distribution	OP	2	26	12
	LIM4151	Water Governance and Policy	C	1	15	0
	LIM4182	Disaster Analysis and Management	C	2	20	30
	LIM4218	Research Project, Thesis Writing and Viva-voce	C	8		
	LIM4220	Industrial and Field training	C	0		

Course Modules for BSc in Fisheries and Marine Sciences Specialized in Oceanography and Marine Geology

Level	Semester	Module No	Module Name	Status	Credits	Theory (hrs)	Practical (hrs)
III	I	FAQ 3121	Behaviour of Fish	OP	1	14	03
		FSH 3121	Fishing Gear & Craft Technology	OP	1	13	09
		FAQ 3112	Basic Economics for Fisheries & Aquaculture	OP	2	24	18
		FSH 3113	Capture Fisheries	OP	3	38	21
		FSH 3131	Fisheries Oceanography	C	1	12	09
		FND 3111	Advanced English I	ND	1	15	0
		OCG 3142	Remote Sensing and GNSS	C	2	24	18
		OCG 3132	Hydrography and Navigation	OP	2	24	18
		LIM 3161	Quality Assessments of Aquatic Systems	OP	1	12	09

CHM 3112	Advanced Aquatic Chemistry	OP	2	30	0
CHM 3122	Physical Chemistry -II	OP	2	24	18
OCG 31D2	Palaeontology and Micropaleontology	OP	2	24	18
OCG 31A1	Introduction to Socio-economics	OP	1	12	09
OCG 31B1	Marine Mammalian Biology	OP	1	15	0
OCG 31C2	Marine and Coastal Ecosystems	OP	2	24	18
LIM 3121	Geochemistry	OP	1	15	0
FDN 3122	Information Literacy on Library Skills	ND	2	24	18
LIM3152	Wastewater Treatment Technology	OP	2	24	18
OCG3152	Statistics for Experimental Analysis II	C	2	21	27
OCG3162	Sedimentology	C	2	24	18
OCG3112	Mineralogy	C	2	24	18
OCG3122	Geophysics for Marine Science	C	2	24	18
OCG3181	Marine Chemistry	OP	1	15	0
OCG3191	Earth system Physics	OP	1	15	0
OCG 3251	Law of the Sea	OP	1	15	0
OCG 3261	Indian Ocean and Bengal Fan	C	1	15	0
OCG 3241	Introduction to Meteorology	C	1	12	09
OCG 32A1	Coral Ecology	OP	1	12	09
OCG 32B1	Satellite Oceanography	OP	1	12	09
LIM 3231	Hydrogeology	OP	1	15	0
CHM 3211	Radio Chemistry	C	1	15	0
FDN 3211	Advanced English -II	ND	1	15	0
FAQ 3222	Advanced Molecular Genetics applicable for Fisheries & Aquaculture	OP	2	24	18
LIM3241	Scientific Communication and Research Ethics	C	1	15	0
OCG 3212	Petrology	OP	2	24	18
OCG 3232	Coastal processes and Morphology	OP	2	24	18
OCG3272	Paleoceanography and Paleoclimatology	OP	2	20	30
OCG3281	Marine Archaeology	OP	1	12	9
OCG3292	Ocean Modelling	OP	2	15	45
FSH 4132	Fisheries Management and acts	OP	2	24	18
OCG 4141	Climate Change and Oceans	C	1	15	0
OCG 4162	Advanced Physical Oceanography	OP	2	24	18
OCG 4132	Integrated Coastal Management	C	2	24	24
OCG 4191	Coastal Hazards and Mitigation	OP	1	15	0
OCG 4172	Marine Biodiversity Conservation and Management	OP	2	24	18
CHM 4121	Green Chemistry	OP	1	15	0
LIM 4161	Environmental Impact Assessments	C	1	15	0
OCG4121	Coastal & Marine Non-living resources	C	1	15	0
OCG 4151	Biogeochemistry	OP	1	15	0
OCG 4182*	Wetland Management	OP	2	24	18
OCG 41A1	Ocean Tourism	OP	1	15	0
OCG41C1	Special Topics in Oceanography	ND	1	15	0
OCG4218	Research Project, Thesis Writing and Viva-voce	C	8		
OCG4220	Industrial or Field Training	C	0		

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Summery and status of the course modules for students specialized in Fisheries and Aquaculture

Level	Semester	Module No	Module Name	Credits	Theory (hrs)	Practical (hrs)	Fisheries	Aquaculture	Limnology	Oceanography & Marine Geology
III	I	FAQ 3121	Behaviour of Fish	1	14	03	C	C	OP	OP
		FSH 3121	Fishing Gear & Craft Technology	1	13	09	C	OP	OP	OP
		AQU 3112	Aquaculture 1- Introduction	2	24	18	C	C	OP	-
		AQU 3123	Aquaculture 11 – Feed & Nutrition	3	30	45	OP	C	OP	-
		FAQ 3112	Basic Economics for Fisheries & Aquaculture	2	24	18	C	C	OP	OP
		FSH 3113	Capture Fisheries	3	38	21	C	OP	OP	OP
		FSH 3131	Fisheries Oceanography	1	12	09	C	OP	OP	C
		FND 3111	Advanced English I	1	15	0	ND	ND	ND	ND
		OCG 3142	Remote Sensing and GNSS	2	24	18	C	C	C	C
		OCG 3132	Hydrography and Navigation	2	24	18	OP	OP	OP	OP
		LIM 3132	Aquatic Pollution	2	24	18	C	C	C	-
		LIM 3161	Quality Assessments of Aquatic Systems	1	12	09	OP	C	C	OP
		CHM 3112	Advanced Aquatic Chemistry	2	30	0	C	C	C	OP
		CHM 3122	Physical Chemistry -II	2	24	18	OP	OP	OP	OP
		OCG 31D2	Palaeontology and Micropaleontology	2	24	18	-	-	OP	OP
		OCG 31A1	Introduction to Socio-economics	1	12	09	OP	OP	OP	OP
		OCG 31B1	Marine Mammalian Biology	1	15	0	OP	-	OP	OP
		OCG 31C2	Marine and Coastal Ecosystems	2	24	18	OP	OP	OP	OP
		AQU 3132	Methods for Aquaculture I (for Tropical fin-fish Species)	2	23	21	OP	C	OP	-
		FAQ 3132	Microbiology for Aquaculture and Fisheries	2	24	18	C	C	-	-
		LIM 3121	Geochemistry	1	15	0	-	OP	C	OP
		FND 3122	Information Literacy on Library Skills	2	24	18	ND	ND	ND	ND
		LIM3112	Hydraulics	2	24	18			C	-
		LIM3142	Water Treatment Technology	2	24	18	-	OP	C	-
		LIM3152	Wastewater Treatment Technology	2	24	18		OP	C	OP
		OCG3152	Statistics for Experimental Analysis II	2	21	27			C	C
		OCG3162	Sedimentology	2	24	18			OP	C
		OCG3112	Mineralogy	2	24	18			OP	C
		OCG3122	Geophysics for Marine Science	2	24	18				C
		OCG3181	Marine Chemistry	1	15	0			OP	OP
		OCG3191	Earth system Physics	1	15	0			OP	OP
			II	AQU 3212	Aquaculture III: Propagation	2	25	15	OP	C
FAQ 3252	Statistics for Aquatic Sciences			2	15	30	C	C	-	-
AQU 3232	Aquaculture Management			2	25	15	OP	C	OP	-

		AQU 3222	Methods for Aquaculture II (for tropical shellfish & other organisms)	2	24	18	OP	C	OP	-
		FAQ 3213	Fish Pathology & Parasitology	3	36	27	C	C	C	-
		FAQ 3231	Advanced Histological Techniques	1	0	30	OP	OP	OP	-
		OCG 3251	Law of the Sea	1	15	0	C	OP	OP	OP
		OCG 3261	Indian Ocean and Bengal Fan	1	15	0	OP	-	OP	C
		OCG 3241	Introduction to Meteorology	1	12	09	C	OP	C	C
		OCG 32A1	Coral Ecology	1	12	09	OP	OP	OP	OP
		OCG 32B1	Satellite Oceanography	1	12	09	OP	-	OP	OP
		FAQ 3241	Scientific writing, presentation and research ethics	1	15	0	C	C		
		LIM 3213	Principles and Applications of Hydrology	3	38	21	OP	OP	C	-
		LIM 3231	Hydrogeology	1	15	0	OP	-	C	OP
		CHM 3211	Radio Chemistry	1	15	0	OP	OP	C	C
		FDN 3211	Advanced English -II	1	15	0	ND	ND	ND	ND
		FAQ 3222	Advanced Molecular Genetics applicable for Fisheries & Aquaculture	2	24	18	C	C	OP	OP
		LIM3222	Hydrologic Control Structures and Reservoirs	2	24	18			C	-
		LIM3241	Scientific Communication and Research Ethics	1	15	0			C	C
		LIM3252	Groundwater Exploration and Extraction	2	24	18			C	-
		OCG 3212	Petrology	2	24	18				OP
		OCG 3232	Coastal processes and Morphology	2	24	18				OP
		OCG3272	Paleoceanography and Paleoclimatology	2	20	30				OP
		OCG3281	Marine Archaeology	1	12	9				OP
		OCG3292	Ocean Modelling	2	15	45				OP
IV	I	CHM 4112	Biochemistry	2	24	18	OP	C		
		AQU 4111	Immunology	1	12	09	OP	C		
		CHM 4132	Natural Product Chemistry	2	24	18	OP	OP	C	
		FSH 4132	Fisheries Management and acts	2	24	18	C	OP	OP	OP
		FSH 4112	Fish Post Harvest Technology and Quality Assurance of Fishery Products	2	23	21	C	OP		
		FSH 4122	Fish Transporting Devises, Curing & Processing Plants & Packaging	2	23	21	C	OP		
		OCG 4141	Climate Change and Oceans	1	15	0	C	OP	OP	C
		OCG 4162	Advanced Physical Oceanography	2	24	18	OP	-		OP
		OCG 4132	Integrated Coastal Management	2	24	24	OP	OP	OP	C
		OCG 4191	Coastal Hazards and Mitigation	1	15	0	OP	OP		OP
		OCG 4172	Marine Biodiversity Conservation and Management	2	24	18	C	OP		OP
		CHM 4121	Green Chemistry	1	15	0	OP	OP	C	OP
		LIM 4161	Environmental Impact Assessments	1	15	0	C	C	C	C
		LIM 4191	Nano Technology	1	15	0	OP	OP	OP	
		AQU 4121	Aquaculture Technology - Equipment & Machinery	1	12	09	-	C		
		LIM 4171	Surveying and Levelling	1	10	15	-	C	C	
		LIM4112	Irrigation	2	24	18		OP	C	
		LIM4122	Water Resource Management	2	24	18		OP	C	

		LIM4131	Water Economics	1	15	0			C	
		LIM4142	Pipe-bourn Water Distribution	2	26	12			OP	
		LIM4151	Water Governance and Policy	1	15	0		OP	C	
		LIM4182	Disaster Analysis and Management	2	20	30			C	
		OCG4121	Coastal & Marine Non-living resources	1	15	0				C
		OCG 4151	Biogeochemistry	1	15	0				OP
		OCG 4182*	Wetland Management	2	24	18		OP		OP
		OCG 41A1	Ocean Tourism	1	15	0				OP
		OCG41C1	Special Topics in Oceanography	1	15	0				ND
	II	FSH 4218	Research Project, Thesis Writing and Viva-voce	8				C		
		FSH 4220	Industrial or Field Training	0				C		
		AQU 4218	Research Project, Thesis Writing and Viva-voce	8				C		
		AQU 4220	Industrial or Field Training	0				C		
		LIM4218	Research Project, Thesis Writing and Viva-voce	8					C	
		LIM4220	Industrial and Field training	0					C	
		OCG4218	Research Project, Thesis Writing and Viva-voce	8						C
		OCG4220	Industrial or Field Training	0						C

Department of Limnology And Water Technology

6.1 Introduction

Department of Limnology and Water Technology is one of the three departments in the Faculty that conducts graduate & undergraduate courses and research in the fields of aquatic chemistry, aquatic ecology, aquatic biology, hydrology and environmental analysis of inland waters. Department of Limnology and Water Technology has infrastructure facilities to accommodate 50 undergraduates, and research facilities for post graduate students who seek post graduate degrees such as MPhil and PhD in Limnology and related fields. The fields of studies extend over 25 000 inland water bodies and 103 river basins, lagoons, estuaries as well as ground water in the island. The academic staff involve in providing assistance and advice to national development programmes undertaken by the Ministries of Fisheries and Aquatic Resources, Science and Technology, Forestry and Environment, etc.

6.2 Academic Staff of the Department of Limnology and Water Technology

Head

Dr. H. B. Asanthi

B.Sc. (Honors) (Ruhuna), PhD (Montpellier, France)

Aquatic Toxicology, Metal speciation, Ecology and Biodiversity, Environmental risk assessments.

Professor

Professor Tilak P. D. Gamage

B.Sc. (Ruhuna), MPhil (Ruhuna), Dip. Int. Env. Law (UNITAR), PhD (Saitama, Japan)

Aquatic ecological engineering, Hydrological analysis, Water and wastewater technology, Environmental Impact Assessments (EIA), Limnological analysis.

Senior Lecturers

Dr. R. A. Maithreepala

B.Sc. (Ruhuna), MPhil (Ruhuna), PhD (NTHU, Taiwan)

Environmental Geo-chemistry, Radio chemistry, Water & wastewater technologies, Environmental chemical analysis, Mineral-water interfacial processes

Dr. K.S.S. Atapaththu

B.Sc. (Honors) (Ruhuna), M.Sc. (AIT, Thailand), PhD (Saitama, Japan)

Abiotic Stress on aquatic plants, Aquatic resources management, Phytoremediation, Aquatic ecology

Lecturer (Probationary)

Dr. U.A.D. Jayasinghe

B.Sc. (Hons) (Kelaniya,SL), MPhil (Kelaniya,SL), PhD(UCAS,China)

Stable Isotopic Ecology, Aquatic ecology, Fish population dynamics, Culture based fisheries, Acoustic Ecology

Mr. Pandula. T. Kirinde Arachchige (*on study leave*)

B.Sc. (Honors) (Ruhuna)

Environmental chemistry, Wastewater technology and Natural product chemistry

6.3 Courses Offered by the Department of Limnology and Water Technology

6.3.1 Courses for Level 1 Semester 1

LIM1112

Introduction to Limnology (Theory, 24 hrs; practical 18 hrs)

Definitions, history and development of Limnology; Water as a natural resource; Hydrologic cycle; Origin, forms and distribution of lentic and lotic aquatic systems including lakes, reservoirs, streams, wetlands and ground water aquifers; Lake as an ecosystem, Lake succession process and eutrophication

LIM1122

Freshwater fauna (Theory, 24 hrs; practical 18hrs)

Morphology, biology, distribution and importance of freshwater invertebrates and vertebrates

CHM1111

Principles in Chemistry (Theory, 15 hrs)

Atom, Attraction forces and bonding, Molecular shapes & energetics of chemical reactions, Periodicity of atomic properties

CHM1122

Analytical Chemistry 1 (Theory 20 hrs, Practical 30 hrs)

Basic statistics for chemical analysis, Buffer solutions, Volumetric analysis

6.3.2 Courses for Level 1 Semester II

LIM1212

Physical and Chemical Limnology (Theory 24 hrs; Practical, 18 hrs)

Light penetration, Heat balance and zonation, Types of flow, Turbulence, vertical and horizontal circulations, thermal stratification, and their influence on the chemical composition; nutrient availability and cycling in freshwater systems.

LIM1222

Freshwater Flora (Theory 24 hrs; Practical, 18 hrs)

Classification, morphology, biology, Distribution and importance of freshwater micro and macro algae and other plants

CHM1212

Inorganic Chemistry (Theory 24 hrs; Practical, 18 hrs)

Selected topics on chemistry of s, p, d and f block elements: Electron configurations, Oxidation states, Physical properties, Allotropes, Organometallic chemistry and coordination chemistry, An elementary course on radio chemistry

6.3.3 Courses for Level 2 Semester I

LIM2111

Physics of Water (Theory, 15 hrs)

Steam and water as a function of pressure, Density, Viscosity, Surface tension, Thermodynamics, Thermal conductivity, Molar volumes and expansion coefficients, behaviour of sound in water, electrical conductivity of water, fluid dynamics, Applications of supercritical water.

LIM2123

Theoretical Ecology and Ecological modelling (Theory 37hrs; Practical 24 hrs)

Introduction to ecology, Ecological principles and special features of aquatic habitats, Energy and material utilization, transition through biotic and abiotic interactions and niches aggregation, Primary and secondary production, Population dynamics and models applied in freshwater communities, growth models, Ecotones, Methods in ecological research.

LIM2132

Microbial quality of water (Theory 24hrs; Practical 18 hrs)

Microorganisms and potable water, Origin of microorganisms of public health significance, Characteristics, types, metabolism, multiplication, survival, Health problems caused by polluted drinking water, Epidemiology of drinking water infections, Risk assessment methods, Microorganisms in sewage treatment, pathogens in sewage, Disinfection of effluent, International regulations and WHO guidelines on pool and spa management, Transmission of infections as a result of chemical quality of pool water, occupational health & safety in the pools.

LIM2141

Biodiversity and evaluation strategies (Theory, 12hrs; Practical, 9 hrs)

Species diversity, ecosystem diversity and genetic diversity. Patterns of biodiversity (α , β and γ), Ecological indicators, indexes, and diversity indices for ecological conditions of various aquatic habitats

CHM2111

Analytical Chemistry II (Theory, 12hrs; Practical, 6 hrs)

Electrochemistry, Electro Analytical Chemistry: Classifications of electro analytical methods according to the electrical properties being measured, Fundamentals of electro chemistry, Potentiometric method, End point detection, Electrogravimetric and coulometric Methods; Electrogravimetric methods of analysis, Voltammetry, Excitation signals in voltametry, Voltametric Systems, Voltamograms, Introduction to Chromatography

CHM2122

Organic Chemistry (Theory 24hrs, Practical 18 hrs)

Basic concepts in Organic Chemistry, Nomenclature of Organic compounds, Conformational analysis, Isomerism, Structure and reactivity of Aliphatic compounds, Concept of Aromaticity and reactions of Aromatic compounds, Natural product Chemistry.

6.3.4 Courses for Level 2 Semester II

LIM2212

Limnology of Wetlands, Lagoons and Estuaries (Theory, 24 hrs; Practical, 18 hrs)

Geography of wetlands, geology and chemistry of wetlands, wetland ecosystems, physical and chemical processes of wetlands; biology, biodiversity and ecology of different types of wetlands; Ecosystem services and values of wetlands; General features of lagoons and estuaries, sediment transportation and dynamics, chemical composition and processes in brackish waters, specific biological communities and their adaptations, and maintenance of their populations.

LIM2222

Aquatic Toxicology and Human health risk (Theory, 24 hrs; Practical, 18 hrs)

Fundamentals of toxicity, Types of toxicants and toxicities, quantification of toxicity, transport and biochemical transformation mechanisms, dose-response relationships, bioaccumulation, bio availability of toxicants, Evaluation of environmental & human health risk, hazard identification, exposure assessment, dose-response assessment, risk characterization, quantitative risk measurements.

CHM 2212

Physical Chemistry I (Theory, 26 hrs; Practical, 12 hrs)

Colligative properties, chemical thermodynamics, gaseous state of matter, chemical Kinetics, photochemistry, surface & colloidal chemistry

6.3.5 Courses for Level 3 Semester I

LIM3112

Hydraulics (Theory, 24 hrs; Practical, 18 hrs)

Physical Fluid Properties, Hydrostatic Pressure - Pressure Forces on Plane and Submerged Surfaces, Fluids in Motion - Laminar and Turbulent Flow, Bernoulli's Equation, Flow in Pipes - The Darcy-Weisbach Equation, Determining Discharge, Determining Head Loss, Head Distribution along Pipelines, Open Channel Flow - Characteristics, Steady Uniform Flow, Manning's Equation, Specific Energy and Critical Depth, Supercritical and subcritical Flow, Non-uniform Flow, Gradually and rapidly varied non-uniform Flow

LIM3122

Geochemistry (Theory, 30 hrs)

Behaviour of major and trace elements in different soil-water systems, Geochemical Cycles, Geological, chemical and biological processes for the mineral dissolution and precipitation, microbial processes in the control of pH, redox and nutrient cycling, determining 'background' metal concentrations, preparing and the use of geochemical maps, geochemistry for human health.

LIM3132

Aquatic Pollution (Theory, 24 hrs; Practical, 18 hrs)

Sources, and types of aquatic pollutants, their fate and transport mechanism, chemical methods and biological indices for estimation of aquatic pollution

LIM3142 Water Treatment Technology (Theory, 24 hrs; Practical, 18 hrs)

Established water quality standards for different purposes and discharge, different techniques of Water treatment for Drinking, Industrial and other purposes.

LIM3152

Wastewater Treatment Technology (Theory, 24 hrs; Practical, 18 hrs)

Features of wastewater from various sources, Collection systems and storm water management, Cartage and vacuum, conventional and small-bore sewerage, Decentralised treatment, Pit latrines, septic tanks, small-scale oxidation plants, Low-intensity and alternative systems, Waste stabilisation ponds, constructed wetlands, aerated lagoons, oxidation ditches, Advanced biological oxidation, Enhanced mass transfer (pure oxygen, deep shaft), Biomass retention (fluidised and expanded bed, membrane bio-reactor, submerged aerated filters), Nutrient removal and tertiary treatment, Physico-chemical, biological including anammox, Anaerobic wastewater treatment, limitations and applications, types of process, Advanced integrated systems, Trade effluent.

LIM3161

Quality Assessment of Aquatic Systems (Theory, 12 hrs; Practical, 9 hrs)

Strategies for water quality assessment, Selection of water quality variables, Hydrological variables, General variables, Nutrients, Organic matter, Major ions, inorganic variables, Metals, Organic contaminants, Microbiological indicators, Selection of variables, Data handling and presentations

CHM3112

Advanced Aquatic Chemistry (Theory, 30 hrs)

Atmosphere-water interactions, precipitation and Dissolution, solid-solution interface and kinetics at the interface, adsorption, inter particle interactions, trace metal cycling regulation and biological role, kinetics of redox processes, photochemical processes.

CHM3122

Physical Chemistry II (Theory, 24 hrs; Practical, 18 hrs)

Molecular Spectroscopy; UV-visible spectroscopy: Atomic-Absorption Spectroscopy (AAS), NMR spectroscopy, Infra-Red spectroscopy (IR), Mass spectroscopy, Electron Spin Resonance spectroscopy (ESR); Mössbauer spectroscopy

6.3.6 Courses for Level 3 Semester II

LIM3213

Principles and Applications of Hydrology (Theory, 38 hrs; Practical, 21 hrs)

Hydrologic cycle, meteorological and hydrological parameters and their measurements, Flow measurement and hydrograph analysis, Hydrologic data series and statistical analysis, Hydrological modelling.

LIM3222

Hydrologic control structures and reservoirs (Theory, 24 hrs; Practical, 18 hrs)

Flow measurement structures; weirs, flumes, Flow regulating structures; intakes, pumps, gates, spillways, canals, division boxes, turnouts, checks Water storage structures; dams, anicuts; Types of reservoirs, Storage zones of a reservoir, relation of inflow-outflow and storage of a reservoir, Hydraulic reservoir routing methods, sedimentation and clearance

LIM3231

Hydrogeology and Desalination (Theory, 15 hrs)

Groundwater hydrology, development of subsurface sources, well losses and specific capacity, aquifers and non-equilibrium formulas, measurements of groundwater yields, well exploration techniques, modeling Steady flow with basic methods, Modeling transient well hydraulics, computer assisted flow modeling: Occurrence of salt water, need for utilization of salt water, methods of desalination, cost aspects and economics of desalination

LIM3241

Scientific Communication and Research Ethics (Theory 10 hrs, Practical, 15 hrs)

Introduction to Scholarly Information Sources, copyright laws, plagiarism prevention techniques. Citation styles and compiling reference lists. Effective presentation skills and communication channels.

LIM3252

Groundwater Exploration and Extraction (Theory, 24 hrs; Practical, 18 hrs)

Importance of groundwater and role of geology in order to understand and manage hidden water resources, Hydro-stratigraphy, Aquifer tests, Wells and well design, Groundwater quality and contamination, Groundwater hydrology, Development of subsurface sources, well losses and specific capacity, aquifers and non equilibrium formulae, measurements of groundwater yields, modeling Steady flow with basic methods, Modeling transient well hydraulics , computer assisted flow modeling

CHM3211 (OP)

Radiochemistry (Theory, 15 hrs)

Radioactivity: instability of nucleus, chart of the nuclides, modes of radioactive decay, decay energy diagrams, measurements and units in radioactivity, decay laws, mass to activity relationship, Origin of radionuclide through nucleo-synthesis and cosmic processes, non-primordial radionuclide, Nuclear fission and fusion, Civil and military nuclear cycles, Reprocessing of nuclear fuel and nuclear waste disposal strategies, Natural radiological hazards, Nuclear accidents, Incidents and environmental leaks, Methods of determination, Radionuclide behaviour in the environment, Radiocarbon applications, U-series disequilibria and dating (snow), Impulse radiometric dating methods, Radionuclide as tools in aquatic and terrestrial environmental studies.

6.3.7 Courses for Level 4 Semester I

LIM4112

Irrigation (Theory, 24 hrs; Practical, 18 hrs)

Irrigation engineering and hydraulic structures, Concepts of Irrigation and Irrigation Water Management, Crop water requirements and irrigation scheduling, Guidelines for the preparation of technical drawings, Surface irrigation systems, Sprinkler irrigation systems, Localized irrigation systems, Irrigation equipment for pressurized systems, Financial and economic appraisal of irrigation projects, Construction of irrigation schemes, ancient irrigation systems of Sri Lanka.

LIM4122

Water Resource Management (Theory, 24 hrs; Practical, 18 hrs)

Water resources assessment, drought and flood management, effect of catchment development, runoff, water use and demand management, rainwater harvesting, Economics of water resources development.

LIM4131

Water Economics (Theory, 15 hrs)

Role of economics in water resource management, Economic solutions, Assessing benefits for environmental decision making, cost analysis in water, modeling the market process, Green accounting

LIM4142 (OP)

Pipe bourn Water Distribution (Theory, 26 hrs; Practical, 12 hrs)

Water Demand - Categories, patterns, calculation and forecasting, Hydraulics of Pressurized Flows, single pipe calculation, branched and looped networks, system and pump characteristics, pressure related demand, Hydraulics of storage and pumps, Main Components of Hydraulic Design, pipe materials, valves and other equipment, Pumps and Mechanical Equipment, Network construction, Operation and Maintenance.

LIM4151

Water Governance and Policy (Theory, 15 hrs)

Water policies and governance, Nature-society, Water conflict and cooperation, Developmental and environmental issues, International Environmental Law, Water and climate change, Water and agriculture, International Climate Politics and Justice, World Water Assessment Programme, Water poverty and health, The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law

LIM4161 (OP)

Environmental Impact Assessments (Theory, 15 hrs)

Principles of Environmental Assessment and Management, Procedures and Methods of EIA, Strategic Environmental Assessment (SEA), guidelines for EIA, ecologically sustainable development, impact evaluation in terms of environmental and socio-economic criteria, future directions, Critical examination of the assumptions, Historical evolution of impact assessment in selected parts of the world.

LIM4171

Surveying and Levelling (Theory, 10 hrs, Practical, 15 hrs)

Basic Principals and definitions, linear and angular measurements, levelling and contouring, setting out drawings, plane-table surveying, field applications, modern levelling apparatus. Graphical Interpretation of surveying data.

LIM4182

Disaster Analysis and Management (Theory, 20 hrs, Practical, 30 hrs)

Introduction to Hazards, Vulnerabilities and Disasters, Disaster Risk Reduction and Development Planning, Disaster Response and Post-Disaster Recovery

LIM4191

Nanotechnology (Theory, 15 hrs)

Introduction to nanotechnology, Atomic, molecular and crystal structure, associated length scales, material properties and the effects of decreased dimensions, useful applications, fabrication methods, characterisation methods, bio-molecular motors, environmental impact of Nano materials and Nano technology behind basic science.

CHM4112

Biochemistry (Theory, 24 hrs, Practical, 18 hrs)

Proteins, Enzymes, Protein purification, Carbohydrates, Nucleic acids, Phosphorus in biology, Relationship between DNA, RNA and proteins, Structure, function and replication of DNA, human genome and DNA Sequencing, RNA and Protein synthesis, Energy and cellular metabolism, glycolysis, TCA cycle, oxidative phosphorylation, gluconeogenesis, metabolism of glycogen, fat, amino acid and alcohol .

CHM4121**Green chemistry (Theory, 15 hrs)**

Principles of green chemistry, Applications of green chemical technology in aquatic sciences and in naval industry. Low carbon and low energy utilization technologies

CHM4132**Natural product chemistry (Theory, 24 hrs, Practical 18hrs)**

Alkaloids, Terpenoids, Flavonoids, Steroids, Saponins, Drug development, Extraction, Isolation, and Characterization of Natural products

6.3.8 Courses for Level 4 Semester II**LIM4218****Research Project, Thesis Writing and Viva-voce**

An 8 credit project specific to limnology or water science and technology programmes is required. The purpose of the project will be to provide in depth knowledge of application of science and technology. Time for experimentation is limited and considerable emphasis will be placed on the analysis, interpretation and discussion of the experimental results obtained.

LIM4220**Industrial &/or Field Training (report to be submitted)****6.4 Courses for those who specialise in Water Sciences and Technology**

Course Units for Water Sciences and Technology Special Degree.

Module No.	Course code	Name of the Module	Status	Credits	Theory (Hrs)	Practical (Hrs)	
Level I	Semester I	LIM1112	Introduction to Limnology	C	2	24	18
		LIM1122	Freshwater Fauna	C	2	24	18
		CHM1111	Principles in Chemistry	C	1	15	0
		CHM1122	Analytical Chemistry -I	C	2	20	30
		OCG 1111	Introduction to Oceanography	C	1	15	0
		OCG1121	Earth History, origin and evolution of life	C	1	15	0
		OCG1132	Earth Material	C	2	24	18
		FAQ1131	Cell Biology	C	1	13	6
		OCG1141	Mathematics I	C	1	15	0
		FDN1111	Preliminary English - I	ND	1	15	0
		FDN1121	Computer Literacy -I	ND	1	10	15
		FDN1131	Snorkelling and Life saving	OP	1	9	18
	Semester II	LIM1212	Physical and Chemical Limnology	C	2	24	18
		LIM1222	Freshwater Flora	C	2	24	18
		CHM1212	Inorganic Chemistry	C	2	24	18
		FAQ1222	Fundamentals of fish Genetics	C	2	21	21
OCG1222		Marine Biology – Invertebrate Fauna	C	2	24	18	
OCG1232	Marine Biology – Vertebrate Fauna	C	2	24	18		

		OCG1242	Introduction to Geospatial Analysis	C	2	24	18
		FDN1211	Preliminary English - II	ND	1	15	0
		FDN1221	Computer Literacy –II	ND	1	10	15
Level II	Semester I	LIM2111	Physics of Water	C	1	15	0
		LIM2123	Theoretical Ecology and Ecological Modeling	C	3	37	24
		LIM2132	Microbial Quality of Water	C	2	24	18
		LIM2141	Biodiversity and Evaluation Strategies	C	1	12	09
		CHM2111	Analytical Chemistry II	C	1	12	6
		CHM2122	Organic Chemistry	C	2	24	18
		OCG2111	Tectonics and Ocean Basins	C	1	15	0
		OCG2122	Marine Biology –Flora	C	2	24	18
		OCG2133	Biological Oceanography	C	3	30	45
	FDN2111	Intermediate English -I	ND	1	15	0	
	FDN2121	Computer Literacy III	ND	1	10	15	
	Semester II	LIM2212	Limnology of Wetlands, Lagoons and Estuaries	C	2	24	18
		LIM2222	Aquatic Toxicology and Human Health Risk	C	2	24	18
		CHM2212	Physical Chemistry I	C	2	26	12
		OCG2212	Statistics for Experimental Analysis	C	2	24	18
		OCG2222	Geomorphology and Morphometric Analysis	C	2	24	18
		OCG2233	Chemical Oceanography	C	3	30	45
		OCG2243	Physical Oceanography	C	3	30	45
FDN2211		Intermediate English -II	ND	1	15	0	
FDN2221		Computer Literacy IV	ND	1	12	15	
Level III	Semester I	LIM3112	Hydraulics	C	2	24	18
		LIM3122	Geochemistry	C	2	30	0
		LIM3132	Aquatic Pollution	C	2	24	18
		LIM3142	Water Treatment Technology	C	2	24	18
		LIM3152	Wastewater Treatment Technology	C	2	24	18
		LIM3161	Quality Assessment of aquatic systems	C	1	12	9
		CHM3112	Advanced Aquatic Chemistry	C	2	30	0
		CHM3122	Physical Chemistry II	C	2	24	18
		OCG3112	Mineralogy	OP	2	24	18
		OCG3132	Hydrography and Navigation	OP	2	24	18
		OCG3142	Remote sensing and GNSS	C	2	24	18
		OCG3152	Statistics for Experimental Analysis II	C	2	21	27
		OCG3162	Sedimentology	OP	2	24	18
		OCG3172	Mathematics II	C	2	24	18
		OCG31A1	Introduction to Socio-economics	OP	1	12	9
		OCG31C2	Marine and Coastal Ecosystems	OP	2	24	18
		AQU3112	Aquaculture I - Introduction	OP	2	24	18
		AQU3123	Aquaculture II: Food and Nutrition	OP	3	30	45
		FDN3122	Information literacy and library skills	ND	2	24	18
	FDN3111	Advanced English I	ND	1	15	0	
	Se m	LIM3213	Principles and Applications of Hydrology	C	3	38	21
	LIM3222	Hydrologic Control Structures and	C	2	24	18	

			Reservoirs				
		LIM3231	Hydrogeology	op	1	15	0
		LIM3241	Scientific Communication and Research Ethics	C	1	15	0
		LIM3252	Groundwater Exploration and Extraction	C	2	24	18
		CHM3211	Radiochemistry	OP	1	15	0
		OCG 3212	Petrology	OP	2	24	18
		OCG3223	Structural and Field geology	OP	3	30	45
		OCG 3232	Coastal processes and Morphology	OP	2	24	18
		OCG 3241	Introduction to Meteorology	C	1	12	9
		OCG 3251	Law of the Sea	OP	1	15	0
		FDN3211	Advanced English -II	ND	1	15	0
Level IV	Semester I	LIM4112	Irrigation	C	2	24	18
		LIM4122	Water Resource Management	C	2	24	18
		LIM4131	Water Economics	C	1	15	0
		LIM4142	Water transport and Distribution	OP	2	26	12
		LIM4151	Water Governance and Policy	C	1	15	0
		LIM4161	Environmental Impact Assessments	OP	1	15	0
		LIM4171	Surveying and Levelling	C	1	10	15
		LIM4182	Disaster Analysis and Management	C	2	20	30
		LIM4191	Nanotechnology	OP	1	15	0
		CHM4112	Biochemistry	C	2	24	18
		CHM4121	Green Chemistry	C	1	15	0
		CHM4132	Natural product Chemistry	C	2	24	18
		OCG4132	Integrated Coastal Management	OP	2	24	18
		OCG4141	Climate change and Oceans	OP	1	15	0
		OCG 4172	Marine & coastal Biodiversity Conservation and Management	OP	2	24	18
	Semester II	LIM4218	Research Project, Thesis Writing and Viva-voce	C	8		
		LIM4220	Industrial and Field training (report to be submitted)	C	0		

Department of Oceanography and Marine Geology

7.1 Introduction

Department of Oceanography and Marine Geology is a multidisciplinary department dedicated to discover and disseminate knowledge on coastal zones, oceans, ocean floor and atmosphere and marine resources. The Department provides knowledge related to processes and interactions among oceans, atmosphere, biosphere and geosphere by collecting, analyzing, and modeling large data sets to solve important complex problems of short, medium and long-term concern to the society. Students access the opportunity to learn marine issues in classroom and to develop their skills by engaging in research conducted in inshore, ashore and offshore. Our mission requires action in three principal roles, teaching, research and outreach.

The Department conduct interdisciplinary research in the ocean and on its boundaries, maintain advanced library and laboratory facilities and sound collaborations with various universities and marine science institutes all over the world. Outreach: The Department serve its constituents by providing, education and guidance about the ocean environment, awareness programs for the community and by enhancing the general economic and intellectual well-being of the society.

7.2 Academic Staff of the Department

Head

Dr. Upul Premarathne

B.Sc. (Geology-Hons) (Peradeniya),

M.Sc. (Petroleum Geosciences) (Norwegian University of Science & Technology),

Ph.D. (Petroleum Geology/ Organic geochemistry) (Hokkaido, Japan),

Chartered Geologist (Institute of Geology, Sri Lanka).

Petroleum geology, seismic data interpretation and processing, organic geochemistry, basin and petroleum system modelling, petroleum economics, policy formulation

Senior Lecturers

Dr. Pradeep Nalaka Ranasinghe

B.Sc. (Geology - Hons) (Peradeniya), M.Phil (Peradeniya),

PhD (USA), Pg. Dip. in Archaeology (Kelaniya)

Marine and Coastal Geology, Sedimentology, Paleoclimatology

Dr. P.B. Terney Pradeep Kumara (on sabbatical Leave)

B.Sc. (Zoology - Hons) (Ruhuna), PhD (Kalmar, Sweden)

Ecology of coral reefs; Reef restoration, Coastal and marine ecosystems, Coastal zone management

Lecturer (Probationary)

Mrs. R.G. Anushika Iroshanie (on Study Leave)
B.Sc. (Fisheries Biology - Hons) (Ruhuna), MSc (Bodø, Norway)
Reading for PhD (China)
Molecular biology, Marine ecology

Ms. R.M. Gayani Nilupika Thilakarathna (on Study Leave)
B.Sc. (Zoology - Hons) (Peradeniya), Reading for PhD (Australia)
Marine ecology, Marine invertebrate taxonomy

Mr. Gayantha R. L. Kodikara
B.Sc. (Geology-Hons) (University of Peradeniya)
M.Sc. (Geo-information and Earth Observation) (ITC, The Netherlands)
M.Tech. (GIS & Remote Sensing) (Indian Institute of Remote Sensing, India)
Planetary Geosciences, GIS and Remote Sensing

Mr. Kokuhennadige Hashan Niroshana
B.Sc. (Special) Oceanography and Marine Geology – Hons (Ruhuna)
M.Sc. in Marine and Lacustrine Sciences & Management
(University of Ghent, Vrije Universiteit Brussels, University of Antwerp, Belgium)
Marine Biology, Chemical Oceanography, Environmental Impact Assessment

7.3 Courses Offered by the Department of Oceanography and Marine Geology

7.3.1 Courses for Level I, Semester I

OCG1111

Introduction to Oceanography (Theory, 15 hrs)

Definition for oceanography, History of oceanography, major oceanographic expeditions and their findings, international oceanographic research institutions, ocean basins, water and ocean structure, Formation of ocean waves, tides and currents.

OCG1121

Earth History, Origin and Evolution of Life (Theory, 15 hrs)

Origin & evolution of earth, geological time scale, Numerical dating, early life and its patterns, earliest Palaeozoic history, major tectonic geological and climatic events and evolution of life through the geological history, fossils and fossilization.

OCG1132

Earth Material (Theory, 24 hrs; Practical, 18 hrs)

Introduction to crystallography, Properties of minerals, rock forming minerals, rock cycle, sedimentary rock formation, sedimentary rock classification, metamorphism, metamorphic rocks, formation of intrusive and extrusive igneous rocks, Igneous rock classification.

OCG1141**Mathematics 1 (Theory, 15 hrs)**

Sets and inequalities, Linear and quadratic equation, Function and graphs, Trigonometric function Exponential and logarithmic function, Differential calculus, Integral calculus, Matrices and determinants.

7.3.2 Courses for Level I Semester II**OCG1222****Marine Biology – Invertebrate Fauna (Theory, 24 hrs; Practical, 18 hrs)**

Diversity of marine fauna - Introduction, Diversity of marine invertebrate fauna-introduction, Basic characteristics, diversity and classification, general form and function, Form and function of marine groups /adaptations of phyla: Protozoans, Porifera, Cnidaria, Nematoda, Platyhelminthes, Annelida, Mollusca, Arthropoda, Echinodermata, Coelenterata.

OCG1232**Marine Biology – Vertebrate Fauna (Theory, 24 hrs; Practical, 18 hrs)**

Protostomes and deuterostomes, protochordates, diversity of marine vertebrates, Basic characteristics/form and function of different group: Reptilia (Orders Chelonia, Crocodilia, sub order Ophidia) Aves, Mammalia.

OCG1242**Introduction to Geospatial Analysis (Theory, 24 hrs; Practical, 18 hrs)**

Introduction and terminology, Basic Primitives, Spatial Relationships, Spatial Statistics, Building Blocks of Spatial Analysis Spatial and Spatio-temporal Data Models and Methods Geometric and Related Operations, Queries, Computations and Density Distance Operations.

7.3.3 Courses for Level 2, Semester I**OCG2111****Tectonics and Ocean Basins (Theory, 15 hrs)**

Structure and formation of oceanic lithosphere, Super continents, continental drift and plate tectonics, Wilson cycle, Continental margins, Sea mounts and volcanic islands, evolution of Indian, Pacific and Atlantic basins, Geological characteristics of each basin.

OCG2122**Marine Biology –Flora (Theory, 24 hrs; Practical, 18 hrs)**

Diversity and classification of marine flora, basic characteristics and biology of sea grass, sea weeds, mangroves, salt marsh vegetation, dune vegetation.

OCG2133**Biological Oceanography (Theory, 30 hrs; Practical, 45 hrs)**

Diversity of marine ecosystems, Zonation, Benthic/pelagic communities, Primary and secondary production in ocean, factors regulating primary production, Photosynthetic and Chemosynthetic organisms, Benthic communities and their contribution to reef formation and erosion, Toxic organisms, Red tides etc., Interactions among marine organisms.

7.3.4 Courses for Level 2 Semester II

OCG2212

Statistics for Experimental Analysis I (Theory, 24 hrs; Practical, 18 hrs)

Types of data and presentations, populations and samples, measures of central tendency, measures of variability and dispersion, probabilities, data transformations, the normal distribution, one-sample hypotheses, two-sample hypotheses paired-sample hypotheses, multi sample hypotheses, analysis of variance, multiple comparisons, linear regression equations, linear correlation, multiple regression and correlation, polynomial regression, testing for goodness of fit.

OCG2222

Geomorphology and Morphometric Analysis (Theory, 24 hrs; Practical, 18 hrs)

Physical and chemical weathering, Fluvial processes and land forms, wind processes and land forms, glacial land forms, Earth's surface features as functions of geological structures, processes and time. Landform analysis using topographic maps and stereographic aerial photos. Trigonometry, Introductions to surface mapping and modeling, Surface geometry, Watersheds and Drainage

OCG2233

Chemical Oceanography (Theory, 30 hrs; Practical, 45 hrs)

Characteristics of water & sea water, salt, temperature and density, gases in seawater, alkalinity and carbonate chemistry, nutrient chemistry, major minor and trace elements, ionic interactions, atmospheric chemistry and ocean.

OCG2243

Physical Oceanography (Theory, 30 hrs; Practical, 45 hrs)

Temperature, salinity and density, upper ocean response to winds, Geotropic currents, wind driven circulation, vortices in the ocean, deep circulation, equatorial processes, Ocean waves, coastal processes and tides.

7.3.5 Courses for Level 3 Semester I

OCG3112

Mineralogy (Theory, 24 hrs; Practical, 18 hrs)

Crystallography, Physical Properties, Optical Mineralogy, Chemical analysis of Minerals, Neso silicate, Sorosilicate, Chain silicates, Phyllo silicates, Framework silicates, Sulphide Minerals, Carbonate minerals, Oxide Minerals.

OCG3122

Geophysics for Marine Science (Theory, 24 hrs; Practical, 18 hrs)

Sea bed imaging by SoNAR and lidar, marine seismic exploration, Marine gravity surveying, marine magnetic surveying, Investigate sea floor using electrical and radiometric methods, Ground Penetration Radar (GPR).

OCG3132

Hydrography and Navigation (Theory, 24 hrs; Practical, 18 hrs)

Introduction, Echo sounding systems and principles, Positioning at sea, Planning and quality control for ocean mapping, Modern Survey and mapping techniques, General and Nautical Cartography. Introduction to Navigation and Basic Definitions, Position and Direction on Earth's Surface, Unit of Measures, Charts and Projections, Bearings and Conversions, Chart Work and Fixing the Ship, Pilotage, Anchoring, Rule of the Road (ROR), International Maritime Law, International Signals.

OCG3142

Remote Sensing and GNSS (Theory, 24 hrs; Practical, 18 hrs)

Introduction to Remote Sensing, Remote Sensing Basics, Satellite Remote Sensing Systems, Introduction to Aerial Photography, Visual Image Interpretation, Introduction to digital image processing, Applications of Remote Sensing, Introduction to Global Navigation Satellite Systems.

OCG3152

Statistics for Experimental Analysis II (Theory, 21 hrs; Practical, 27 hrs)

Multiple regressions, MANOVA, Cluster analysis, Principal component analysis, discriminant analysis, Time series analysis.

OCG3162

Sedimentology (Theory, 24 hrs; Practical, 18 hrs)

Weathering and Soils, Transport and Deposition of Siliciclastic Sediment, Sedimentary Textures, Sedimentary Structures, Continental (Terrestrial) Environments, Marginal-Marine Environments, Siliciclastic Marine Environments, Carbonate and Evaporite Environments.

OCG3172

Mathematics II (Theory, 24 hrs; Practical, 18 hrs)

Partial derivatives application, Introduction to vectors, Linear combination, Linear dependence and independence, Bases and dimensions, Scalar product, Triple scalar product, Triple vector product, Solution of vector equations involving products, Cylindrical polar coordinates, Spherical polar coordinates.

OCG3181

Marine Chemistry (Theory, 15 hrs)

Sources of materials of the fluvial pathway, atmospheric pathway, hydrothermal pathway, relative flux magnitudes, material sinks; marine sediments and its composition, sediment interstitial waters and diagenesis.

OCG3191

Earth System Physics (Theory, 15 hrs)

Wave dynamics, Earth gravity and Magnetic fields

OCG31A1

Introduction to Socioeconomics (Theory, 12 hrs, Practical 09 hrs)

Benefits from coastal ecosystems, Direct use benefits, Indirect use benefits, Livelihood associated with coastal ecosystems (fishing, tourism, coral mining, ornamental fish collecting, etc), Socio-economic status of coastal communities which depend on coastal ecosystems, Community participation in coastal resource management, Role and responsibility of genders in coastal resources utilization and management, Traditional knowledge, attitudes and community awareness regarding the importance of coastal ecosystems, Resource users' and their responsibilities with respect to conservation and management of coastal ecosystems, Environmental valuation.

OCG31B1

Marine Mammalian Biology (Theory, 15 hrs)

Marine mammal evolution, Marine mammal diversity and classification, Adaptations, Ecology and status of Mysticeti, Odontoceti, Pinnipeds, Sirenians, Dolphins, Otters, Polar bears, Threats and conservation of marine mammals.

OCG31C2

Marine and Coastal Ecosystems (Theory, 24 hrs; Practical, 18 hrs)

Sea shores, Rocky/sandy/muddy, Mangroves, Lagoons and estuaries, Sea grass beds, Sea weed beds, Sand dunes, Mud flats, Deltas, Marine and Coastal eco-systems in Sri Lanka.

OCG31D2

Paleontology and Micropaleontology (Theory, 24 hrs; Practical, 18 hrs)

The nature of the fossil record, Growth and form, populations and species, systematic. Evolutionary morphology, Biostratigraphy, Evolutionary rates and trends, global diversity and extinctions, paleoecology and paleobiogeography, Applied micro paleontology, organic walled micro fossils, inorganic walled microfossil.

7.3.6 Courses for Level 3 Semester II

OCG3212

Petrology (Theory, 24 hrs; Practical, 18 hrs)

Igneous Minerals and Textures, Chemistry and Classification of Igneous Rocks, Volcanism, Origin and Crystallization of Magmas, Igneous rocks of different crustal settings, Occurrence of Sedimentary Rocks, Classification of clastic and carbonate sedimentary rocks, Common sedimentary rocks, Metamorphism, Macroscopic Properties of Metamorphic Rocks, Metamorphism of Mafic and Ultramafic Igneous Rocks, Aluminous Clastic Rocks and Calcareous Rocks.

OCG3223

Structural and Field Geology (Theory, 30 hrs; Practical, 45 hrs)

Fundamentals of tectonic forces and deformation, Brittle structures, ductile structures, Whole-Earth Structure and Plate Tectonics, Rifting, Seafloor Spreading, and Extensional Tectonics, Convergence and Collision Fold-Thrust Belts, Strike-Slip Tectonics, Regional tectonics. Field equipment, Field safety, Keeping field records,, Recording structural and textural information of various rocks, Making geological maps, Geological sampling.

OCG3232

Coastal processes and Morphology (Theory, 24 hrs; Practical, 18 hrs)

Waves, Surf zone circulation, Coastal Sediment transport, Beach and near shore, Fluvial, wave and tide dominated environments, Rocky and coral coasts, sand dunes, Barrier system, sea level variability and coastal landforms, Coastal morphology of Sri Lanka.

OCG3241

Introduction to Meteorology (Theory, 12 hrs)

Atmospheric structure, Heat, Temperature and Circulation, Basics of Dynamic Meteorology, Tropical Weather Systems, Weather Monitoring, Analysis and Forecasting.

OCG3251

Law of the Sea (Theory, 15 hrs)

An introduction to UNCLOS, Territorial sea and contiguous zone, Exclusive economic zone, Continental shelf, High Seas, The Area, Marine Scientific research, Continental Shelf claim of Sri Lanka. Application of international treaty to domestic laws. Other International/multinational/ bilateral treaties.

OCG3261

Indian Ocean and Bengal Fan (Theory, 15 hrs)

Indian Ocean: Evolution, physiography and tectonics, current and circulation, ocean chemistry, diversity of macro and micro fauna and flora, living and non-living resources. Bengal fan: morphology, geometry, stratigraphy, and processes

OCG3272

Paleoceanography and Paleoclimatology (Theory, 20 hrs; Practical, 30 hrs)

Proxies in paleoceanography and Paleoclimatology, Geochronology, Reconstruction of paleo-ocean, land and atmospheric conditions, Tectonic scale climate change, Orbital scale climate change, Cenozoic climate, Holocene climate variability, Abrupt climate events. Sea level changes, Evolution and variability of Indian Monsoons. Sea Level changes in the Indian Ocean.

OCG3281

Marine Archaeology (Theory, 12 hrs; Practical, 9 hrs)

World maritime history with respect to marine fisheries and maritime activities, Maritime archaeological techniques, Nautical archaeology, Management of coastal heritage, Use of Geographic Information Systems (GIS), Underwater recording of areas and structures with archaeological importance, Analyses of animal bones to gather historic information, Analyses of ceramics and lithic material, Key dating information on the wrecks in which they are found.

OCG3292

Ocean Modelling (Theory, 15 hrs; Practical, 45 hrs)

Introduction to MathLab and Open Source Software, Fourier Transformation, Filtering, spectral analysis, Gridding, Integration of ODE and OD models, Building a model, Model analysis and optimization, Inverse methods and assimilation techniques, One dimensional model, Gyre models. Global Circulation models, Visualization using MathLab.

OCG32A1

Coral Ecology (Theory, 12 hrs; Practical, 9 hrs)

Types of reefs, Reef distribution, Biodiversity of coral reefs, interactions among reef dwelling organisms, Reef fish diversity, Environmental stress on reef forming organisms and associates, reefs and their conservation, coral transplanting and establishment of artificial reefs.

OCG32B1

Satellite Oceanography (Theory, 12 hrs; Practical, 9 hrs)

The general principles of remote sensing of the sea, Pre-processing, Positional registration and Oceanographic sampling for "sea truth", Sea Surface Temperature (SST) mapping, Basic principles of satellite altimetry, Sea Surface Roughness, Microwave scatterometer, Synthetic Aperture Radar, Basic principles of satellite measurements of ocean color, Chlorophyll and photosynthesis, Estimation of phytoplankton biomass from satellite ocean color observations.

7.3.7 Courses for Level 4 Semester I

OCG4113

Introduction to Upstream Petroleum industry (Theory, 40 hrs; Practical, 15 hrs)

Basic hydrocarbon chemistry, Physical properties of petroleum, Formation of a petroleum system (Source, generation, migration and traps), Sedimentary Basin analysis, Seismic processing and interpretation (Basic steps of interpretation such as Horizons and Fault picking, mapping, depth conversion, direct hydrocarbon indications) Drilling for Oil and Gas,

Introduction to Directional Drilling, Petrophysics, App HSE management in Oil and Gas industry Appraisal, Reservoir Development and Production.

OCG4121

Coastal & Marine non-living resources (Theory, 15 hrs)

Terrigenous, volcanogenic, authigenic, diagenetic, evaporitic, and biogenic mineral deposits; chemical compounds from the sea. Coastal and offshore mineral deposits around Sri Lanka.

OCG4132

Integrated Coastal Management (Theory, 24 hrs; Practical, 18 hrs)

Introduction to Integrated Coastal Management Concept, Principles of Integrated Coastal Management, Tools for implementing ICM, Coastal project development, evaluation and management.

OCG4141

Climate change and Oceans (Theory, 15 hrs)

Ocean acidification, Sea level changes, Melting of polar ice caps, Impact on the global conveyor belt, Effect on marine and coastal organisms and coral reefs, Extreme weather events, Adaptations and mitigations, Intergovernmental panel on climate change.

OCG4151 (Theory, 15 hrs)

Biogeochemistry

Chemical composition of organic matter, production preservation and degradation of organic matter, long term fate of the organic matter in the geosphere, chemical stratigraphic concepts.

OCG4162

Advanced Physical Oceanography (Theory, 24 hrs; Practical, 18 hrs)

Ocean Mixing (large and small scale), up welling, down welling, longshore currents, permanent currents (gyres, eddies), boundary currents, oceanic heat budget, wind driven circulation. Tides, description of tides, tide-generating forces, main tidal periods, tidal classification, shape of the tidal wave, co-oscillation tides. Small scale processes, turbulence, skin layer dynamics, boundary layer dynamics, boundary layer height, Data quality control, processing and analysis, Estuarine oceanography. Definition of an estuary, Flushing time of an estuary and methods of determining it, mixing of salt and freshwater, salt flux, salt balance and water exchange, tidal current, estuarine circulation

OCG4172*

Marine & coastal Biodiversity Conservation and Management (Theory, 24 hrs; Practical, 18 hrs)

The Need for marine biodiversity Conservation. Biodiversity in coastal and marine ecosystems around Sri Lanka. Threatened and sensitive species and habitats. Impacts of human activities on ecosystem composition, Structure and function. Application of science to biodiversity conservation and management, Sampling and recording, Selection, Design and management of marine protected areas, Assessing likely impacts and monitoring change, Recovery, restoration and replacement of habitats and species.

OCG4182*

Wetland Management (Theory, 24 hrs; Practical, 18 hrs)

Physical, chemical and biological characteristics of wetlands, including hydrology, soils, vegetation and wildlife, Wetland classification and rating, Wetland functions and assessment

of functions, Setting management objectives, Selection management strategies, creating zones, Reviewing and adjusting Monitoring, Artificial wetlands.

OCG4191*

Coastal Hazards and Mitigation (Theory, 15 hrs)

Tsunamis, Cyclones, Coastal Flooding, Hydrologic hazards Coastal erosion and sedimentation, Coastal dune hazards, Coastal marine Pollution, Remote sensing of hazards, Identification of past events and their intensity. Calculation of recurrence intervals, Hazard preparedness.

OCG41A1

Ocean Tourism (Theory, 15 hrs)

An introduction to coastal and marine tourism. The magnitude and economic importance of coastal tourism, Sustainable tourism: tourism Growth vs. tourism development, the main impacts and challenges, The need for planning, Rationale for tourism planning, Integrated tourism planning, Approaches to integrated tourism planning, Ecological Footprint .The concept of tourism carrying capacity, Global issues and coastal tourism, Tourism management through Environmental Assessment.

OCG41B1

Upstream Hydrocarbon Industry-Environment, Legal and Fiscal Regime (Theory, 15 hrs)

Upstream petroleum fiscal regimes, Fundamentals of natural gas, Basic Economic principles and financial evaluation techniques, Demand, value chain and resource base, Industry structure and oil price, Analysis of the legal regime pertaining to the Upstream oil and gas sector in Sri Lanka. Classification of the fiscal Regime related to upstream petroleum activities in Sri Lanka, Various concepts of offshore petroleum activities; Fundamentals of the Upstream petroleum agreements; Dispute resolution.

OCG41C1

Special Topics in Oceanography (Theory, 24 hrs; Practical, 18 hrs)

This unit will be conducted by an expert on a theme decided by him/her. Course is based on research paper discussions.

7.3.8 Courses for Level 4 Semesters II

OCG4218

Research Project, Thesis Writing and Viva-voce

An 8 credit project specific to Oceanography and Marine Geology will be to provide in depth knowledge of application of science and technology. Time for experimentation is limited and considerable emphasis will be placed on the analysis, interpretation and discussion of the experimental results obtained.

OCG4220

Industrial or field training (Report to be submitted)

Note

Three months industrial training . All Units bearing OCG course code are compulsory for those who want to be specialised in Oceanography & Marine Geology

Note:* minimum of one module should be followed from the OCG 4172, OCG 4182 and OCG 4191.

7.4 Courses for Those Who want to be Specialised in Oceanography and Marine Geology

Summary of the Course Units for Oceanography and Marine Geology Special Degree is given in Table 7.1

Table 7.1 Summary of the courses for Special Degree in Oceanography and Marine Geology.

Module No.	Course code	Name of the Module	Status	Credits	Theory (Hrs)	Practical (Hrs)		
Level I	Semester 1	LIM1112	Introduction to Limnology	C	2	24	18	
		LIM1122	Freshwater Fauna	C	2	24	18	
		CHM1111	Principles in Chemistry	C	1	15	0	
		CHM1122	Analytical Chemistry -I	C	2	20	30	
		OCG 1111	Introduction to Oceanography	C	1	15	0	
		OCG1121	Earth History, origin and evolution of life	C	1	15	0	
		OCG1132	Earth Material	C	2	24	18	
		FAQ1131	Cell Biology	C	1	13	6	
		OCG1141	Mathematics I	C	1	15	0	
		FDN1111	Preliminary English - I	ND	1	15	0	
		FDN1121	Computer Literacy -I	ND	1	10	15	
		FDN1131	Snorkelling and Life saving	OP	1	9	18	
		Semester II	LIM212	Physical and Chemical Limnology	C	2	24	18
			LIM222	Freshwater Flora	C	2	24	18
	CHM212		Inorganic Chemistry	C	2	24	18	
	FAQ222		Fundamentals of Genetics	C	2	21	21	
	OCG222		Marine Biology – Invertebrate Fauna	C	2	24	18	
	OCG232		Marine Biology – Vertebrate Fauna	C	2	24	18	
	OCG242		Introduction to Geospatial Analysis	C	2	24	18	
	FDN211		Preliminary English - II	ND	1	15	0	
	FDN221		Computer Literacy -II	ND	1	10	15	
	Level II	Semester I	LIM2111	Physics of Water	C	1	15	0
			LIM2123	Theoretical Ecology and Ecological Modeling	C	3	37	24
LIM2132			Microbial Quality of Water	C	2	24	18	
LIM2141			Biodiversity and Evaluation Strategies	C	1	12	09	
CHM2111			Analytical Chemistry II	C	1	12	9	
CHM2122			Organic Chemistry	C	2	24	18	
OCG2111			Tectonics and Ocean Basins	C	1	15	0	
OCG2122			Marine Biology –Flora	C	2	24	18	
OCG2133			Biological Oceanography	C	3	30	45	
FDN2111			Intermediate English -I	ND	1	15	0	
FDN2121		Computer Literacy III	ND	1	10	15		
Se	LIM2212	Limnology of Wetlands, Lagoons and Estuaries	C	2	24	18		

		LIM2222	Aquatic Toxicology and Human Health Risk	C	2	24	18
		CHM2212	Physical Chemistry I	C	2	26	12
		OCG2212	Statistics for Experimental Analysis	C	2	24	18
		OCG2222	Geomorphology and Morphometric Analysis	C	2	24	18
		OCG2233	Chemical Oceanography	C	3	30	45
		OCG2243	Physical Oceanography	C	3	30	45
		FDN2211	Intermediate English -II	ND	1	15	0
		FDN2221	Computer Literacy IV	ND	1	12	15
Course Module for B.Sc in Marine and Freshwater Science Level III Specialization in Oceanography and Marine Geology							
Level III	Semester I	OCG3112	Mineralogy	C	2	24	18
		OCG3122	Geophysics for Marine Science	C	2	24	18
		OCG3132	Hydrography and Navigation	C	2	24	18
		OCG3142	Remote sensing and GNSS	C	2	24	18
		OCG3152	Statistics for Experimental Analysis II	C	2	21	27
		OCG3162	Sedimentology	C	2	24	18
		OCG3172	Mathematics II	OP	2	24	18
		OCG3181	Marine Chemistry	OP	1	15	0
		OCG3191	Earth system Physics	OP	1	15	0
		OCG31A1	Introduction to Socio-economics	OP	1	12	9
		OCG31B1	Marine Mammalian Biology	OP	1	15	0
		OCG31C2	Marine and Coastal Ecosystems	OP	2	24	18
		OCG31D2	Palaeontology and Micropaleontology	OP	2	24	18
		LIM3112	Hydraulics	OP	2	24	18
		LIM3122	Geochemistry	OP	2	30	0
		LIM3132	Aquatic Pollution	OP	2	24	18
		LIM3161	Quality Assessment of aquatic systems	OP	1	12	9
		CHM3112	Advanced Aquatic Chemistry	OP	2	30	0
	FSH3131	Fisheries Oceanography	OP	1	12	9	
	FDN3111	Advanced English I	ND	1	15	0	
	FDN3122	Information Literacy and Library skills	ND	2	24	18	
	Semester II	OCG 3212	Petrology	C	2	24	18
		OCG3223	Structural and Field geology	C	3	30	45
		OCG 3232	Coastal processes and Morphology	C	2	24	18
		OCG 3241	Introduction to Meteorology	C	1	12	9
		OCG 3251	Law of the Sea	C	1	15	0
		OCG3261	Indian Ocean and Bengal Fan	C	1	15	0
		OCG3272	Paleoceanography and Paleoclimatology	OP	2	20	30
		OCG3281	Marine Archaeology	OP	1	12	9
		OCG3292	Ocean Modelling	OP	2	15	45
		OCG32A1	Coral Ecology	OP	1	12	9
		OCG32B1	Satellite Oceanography	OP	1	12	9
		LIM3213	Principles and Applications of Hydrology	OP	3	38	21
		LIM3231	Hydrogeology	OP	1	15	0
LIM3241		Scientific Communication and Research Ethics	OP	1	15	0	
CHM3211		Radiochemistry	OP	1	15	0	
FDN3211		Advanced English –II	ND	1	15	0	
Course Module for B.Sc in Marine and Freshwater Science Level IV Specialization in Oceanography and Marine Geology							

Level IV	Semester I	OCG 4113	Introduction to Upstream Petroleum Industry	C	3	40	15
		OCG4121	Coastal & Marine Non-living resources	C	1	15	0
		OCG4132	Integrated Coastal Management	C	2	24	18
		OCG4141	Climate change and Oceans	C	1	15	0
		OCG 4151	Biogeochemistry	OP	1	15	0
		OCG4162	Advanced Physical Oceanography	OP	2	24	18
		OCG 4172*	Marine & coastal Biodiversity Conservation and Management	OP	2	24	18
		OCG 4182*	Wetland Management	OP	2	24	18
		OCG 4191*	Coastal Hazards and Mitigation	OP	1	15	0
		OCG 41A1	Ocean Tourism	OP	1	15	0
		OCG41B1	Upstream Hydrocarbon Industry-Environment, Legal and Fiscal Regime	OP	1	15	0
		OCG41C1	Special Topics in Oceanography	ND	1	15	0
		LIM4161	Environmental Impact Assessments	OP	1	15	0
		LIM4171	Surveying and Levelling	OP	1	10	15
		LIM4182	Disaster Analysis and Management	OP	2	20	30
	CHM4112	Biochemistry	OP	2	24	18	
	Semester II	OCG4218	Research Project, Thesis Writing and Viva-voce	C	8		
OCG4220		Industrial or Field Training	C	0			

Library, University of Ruhuna

8.1 Introduction

The Library of University of Ruhuna being a central research library in the southern region of Sri Lanka caters for vast variety of communities in the country. The Ruhuna University Library has four branch libraries in addition to the Main Library, which serve the Faculty of Agricultural at Mapalana, Faculty of Engineering at Hapugala and Faculty of Medicine at Karapitiya and Mahamodara.

Main Library located in the Wellamadama university premises which serves the communities of five faculties; Faculty of Humanities and Social Science, Faculty of Fisheries and Marine Science & Technology, Faculty of Science, Faculty of Management and Finance and Faculty of Graduate Studies. In addition to that services are provided for outside communities too.

8.2 Staff of the Library

Staff of the Library of University of Ruhuna consisted of 12 Academic staff members and two administrative staff members.

Academic Staff Members

Librarian

Mr. Ananda Karunaratne

B.Dev.Studies (Statistics) (Hons)(Colombo)
Dip. in Lib. and Inf. Science (Kelaniya)
MSSc. (Lib. & Inf. Science) (Kelaniya)

Senior Assistant Librarian (Faculty of Agriculture)

Mrs. S.L. Gammanpila

B.Sc. Agri (Hons) (Ruhuna)
MLS (Colombo)

Senior Assistant Librarian (Technical Service)

Mr. N. Hettiatiarachchi

B.Sc. (Hons) (Ruhuna)
MSSc. (Lib. & Inf. Science) (Kelaniya)

Senior Assistant Librarian (Reader Service)

Mr. U.A. Lal

B.A.(Hons) (Peradeniya)
MSSc. (Lib. & Inf. Science) (Kelaniya)

Senior Assistant Librarian (Faculty of Engineering)

Mr. J.J. GarusingArachchi

B.A. (Hons) (Kelaniya)
MLS (Colombo)

Senior Assistant Librarian (Periodical Section)

Mrs. T. KuruppuArachchi

B.Sc. (Hons) (Ruhuna)
MLS (Colombo)
Reading for Ph.D. (Australia)

Senior Assistant Librarian (Faculty of Medicine)

Mr. K.T.S. Pushpakumara

B.Sc. (Hons) (Ruhuna)

	MLS (Colombo)
Senior Assistant Librarian (Technical Service)	Mr. K.H. Ramanayaka B.Sc. (Hons) (Ruhuna) MSSc. (Lib. & Inf. Science) (Kelaniya) Reading for Ph.D. (China)
Senior Assistant Librarian (Cataloguing and Classification)	Mr. I.D.K.L. Fernando B.Sc. (Hons) (Ruhuna) M.ISM. (Colombo)
Senior Assistant Librarian (Cataloguing and Classification)	Mrs. Sakunthala Senevirathna B.A. - Lib Sci. (Hons) (Kelaniya) Dip. in Journalism (Colombo) MSSc. (Lib. & Inf. Science) (Kelaniya)
Assistant Librarian (Periodical Section)	Ms. P.K. Jayasekara B.Sc. Agri (Hons) (Ruhuna) MLS (Colombo)
Assistant Librarian (Faculty of Medicine)	Mr. P.G. Nishantha B.Sc. (Hons) (J'Pura) MLS (Colombo)
Administrative Staff Members	
Senior Assistant Registrar (Library Services)	Mr. C.P.K. Edirisinghe B.A. (Hons) (J'Pura) PDBA (Ruhuna)
Senior Assistant Registrar (Library Services)	Mrs. G.A. Jagathi Hemmali

8.3 Library Opening Hours

A description of hours of opening is given in the following table.

Description of the period	Days of opening	Hours of opening
Semester	Monday to Friday	8.00 a.m. to 6.00 p.m.
	Saturdays	8.30 a.m. to 5.00 p.m.
	Sundays	Closed
Study Leave and Examination	Monday to Friday	8.00 a.m. to 8.00 p.m.
	Saturdays and Sundays	8.30 a.m. to 5.00 p.m.
Long Vacation	Monday to Friday	8.00 a.m. to 5.00 p.m.
	Saturdays	8.30 a.m. to 5.00p.m.
	Sundays	Closed
Public holidays and Poya days	-	Closed

Note - Opening hours of library may be revised

8.4 Library Collections

The library consisted of sections for lending, reference, periodicals and special collections. In detailed descriptions of library collections are given below.

8.4.1 Lending Section

Lending section is located in the second floor of the Library. Lending section issues books for a period of two weeks to undergraduates. If needed which can be extended for another two weeks through the "ISURu" database.

8.4.2 Reference Section

This section is located in the first floor of the Library. Reference section includes reference materials and permanent reference materials. Reference materials are issued to students for overnight use. Reference materials could be borrowed between 3.00 p.m. to 5.00 p.m. and should be returned before 10.00 a.m. of the due date.

Permanent reference materials (such as encyclopaedias, dictionaries, glossaries and other valuable books) are intended strictly for reference within the library. Reading facilities are provided in this section.

8.4.3 Periodical Section

Periodical section is located in the first floor of the Library. The periodical section consists with different kinds of printed and online resources, such as; back volumes of printed journals, newsletters, printed periodicals currently subscribed by University of Ruhuna Library, online databases subscribed through Consortium of Academic Libraries of Sri Lanka (CONSAL) and past examination papers.

Printed periodicals currently subscribed by University of Ruhuna Library

1. Scientific American
2. National Geographic Magazine
3. Time magazine
4. Lanka Monthly Digest
5. Journal of the National Science Foundation of Sri Lanka
6. මෙවද්දාපරයා

Databases subscribed through Consortium of Academic Libraries of Sri Lanka (CONSAL)

1. Emerald
2. Taylor & Francis
3. SAGE Research Methods Online
4. Oxford University Press
5. Wiley online Journal
6. HINARI
7. AGORA
8. OARE

Printed materials available in periodical section are meant to be used within the Library. This collection is opened from 9.00 a.m. to 4.00 p.m. on weekdays.

8.4.4 The Sri Lanka Collection (Ceylon room)

This collection is arranged in a separate room in the first floor. The library materials, which are useful to obtain various information about Sri Lanka, are arranged in this collection, such as;

1. Government publications (Annual reports, statistical reports)
2. Rohana collection
3. Copies of Master's and Doctoral theses of Academic staff and students of the University of Ruhuna

4. Professor Justin Labrooy collection
5. Professor Alawaththagoda Premadasa collection
6. Newspaper collection

Readers may not allow to remove library resources from this collection. This collection is opened from 9.00 a.m. to 4.00 p.m. on weekdays.

8.4.5 Legal Deposit Collection

Legal Deposit Collection is located in the second floor of the Library. Legal Deposit Collection is the latest collection in Main Library., University of Ruhuna. The University of Ruhuna has become fortunate to join the group of institutes in Sri Lanka that have been maintaining legal deposit collections since 2013. This collection consisted of all the publications published within Sri Lanka since 1990. Currently, this valuable collection consisting of about 200,000 items including books, newspapers, journals, magazines, handbooks, annual reports, pamphlets, government publications such as gazettes, hansards, acts and school text books, proceedings, posters etc. written in various languages. These items are stored under preservative conditions and only available for reference within the collection. This collection is opened from 9.00 a.m. to 4.00 p.m. on weekdays.

8.4.6 Colour Plate Collection

Colour plate collection is located in the first floor of the library. This collection consisted of books with valuable colour images. Colour plate collection is kept in a locked glass cupboard in the Reference section of the library for careful preservation. Students need to make a request to use this collection.

8.5 Library Resource Classification

The library materials in the University of Ruhuna Library is organized according to the Dewey Decimal Classification (DDC) system. DDC helps to arrange library materials by discipline. The main classes of DDC as follows;

DDC number	Discipline
000	Computer science and general works
100	Philosophy and psychology
200	Religion
300	Social Sciences
400	Language
500	Natural sciences and mathematics
600	Technology (Applied science)
700	Arts; Fine arts and decorative arts
800	Literature and rhetoric
900	Geography and history

8.6 Library Catalogue

An Online Public Access Catalogue (OPAC) is a computerized online database of all the resources held in the library. Users can use OPAC to search library materials available in the library. It can be accessed from URL: isuru.lib.ruh.ac.lk. OPAC provides facilities to search library materials using keywords, title, author, subject, ISBN, series and call number

8.7 Library Services

8.7.1 Ask a Librarian Service

Senior Assistant Librarians and Assistant Librarians of the University of Ruhuna Library provide reference services to the library users with direction to library materials, advices on

library collections and services and searching multiple kinds of information from multiple sources.

8.7.2 Skill Development Programs

Library of University of Ruhuna is currently conducting Information Literacy course modules in Faculty of Fisheries and Marine Science & Technology, Faculty of Agricultural, Faculty of Engineering and Faculty of Medicine. The main purpose of these modules is to develop students' information literacy and library skills. Academic staff of the library facilitates students throughout the course module with comprehensive theoretical and practical work.

In addition to this course unit, library conducting continuous student orientation, training and support with information management through workshops and seminars.

8.7.3 Inter-Library Loans (ILL)

Any book and photocopies of research articles in journals, which are not available in the University of Ruhuna Library, but available elsewhere, could be obtained via inter-library loan. readers who wish to avail themselves of the faculty should use the application available at the Library Office.

8.7.4 Library Resource Centre

Library Resource Centre provides following facilities;

- Computer Lab - 20 users can occupy at a time
- Library Auditorium - can be used for 80 users with the modern electronic facilities

8.7.5 Photocopying Service

The Library provides a photocopying service for those who requires copies of reference materials available in the Library. An agency photocopy service was installed to the Library.

8.7.6 Student Counselling

The student counselling service of the library provides services and programs which promote the personal development and psychological well-being of students. Students have the opportunity to discuss their various psychological, social and financial issues or any other difficulties they face during their university education and library use. counselling services maintain strict confidently.

8.7.7 Outreach Programs

Library of University of Ruhuna is conducting workshops, training programs and awareness programs to enhance the information literacy skills of teacher librarians, library science students and different target populations in Southern province.

8.8 Library Membership

Full membership of the library is available to all registered undergraduate and postgraduate students of University of Ruhuna. All students are required to register at the library by using the application form provided.

8.8.1 Borrowing Library Resources

With the exception of certain categories (i.e. Permanent reference materials, dictionaries, atlases, books under special collections etc.) all other books may be borrowed. The university record book or identity card must be produced when borrowing books. Books may be borrowed before 5.00 p.m. Details about the number of books can be borrowed is given in following table.

Number of books can be borrowed by students

Degree program and Level	Lending books	Reference books	Electronic media
Level I	03	01	01
Level II	04	02	01

Level III	05	02	01
Level IV	06	02	01
Postgraduate	03	01	-

Note - Level I students are only allowed to borrow one 'Student centred learning' material.

8.8.2 Returning Library Resources

Borrowed books must be returned by 9.00 a.m. on the due date. Borrowers remain responsible for books, which are issued to them.

If an issued book is lost or damaged, the matter should be reported to the library immediately. Borrower has to replace it with a new copy of the same edition or subsequent edition within due date. If the book is not available in the market, the borrower will be charged for the replacement cost of the book and a processing fee of 25% from the value of the book.

All library resources borrowed must be returned and all outstanding fines must be paid when a student leaves the university. Users who fail to fulfil their obligations may have their degree certificate withheld until they return the borrowed resources and pay the fine.

8.8.3 Fines and Payments

A fine of Rs.1.00 per day will be imposed in respect of each book borrowed from lending section, if not returned by the due date. A fine of Rs.3.00 per day will be imposed in respect of each book borrowed from reference section, if not returned by the due date. All payments should be made to the Shroff of the University.

English Language Teaching Unit (ELTU)

The English Language Teaching Unit (ELTU), located in the faculty of Humanities and Social Sciences, is common to all faculties of the university. It offers academic programmes aiming at developing undergraduate's reading, writing, listening and speaking skills.

Head

Mr. K.S.G.S Nishantha
*English Trained, BA (Kelaniya), MA (Kelaniya), MA (New Castle),
MPhil (Kelaniya)*

Senior Lecturers

Dr. D.V.N. Harischandra
BA (Hon) (Peradeniya), MPhil (Peradeniya), PhD (JNU)

Mr. P.N Rathnayake
BA (Hon) (Sabaragamuwa), MA (Kelaniya)

Mr. Wimal Wijesinghe
*BA (Colombo), MA (Kelaniya), PG. Dip. In ELT (Tertiary Level) (Colombo), MPhil
(Kelaniya)*

Mr. K.S.G.S Nishantha
*English Trained, BA (Kelaniya), MA (Kelaniya), MA (New Castle),
MPhil (Kelaniya)*

Lecturers (Probationary)

Mr. S. G.S Samaraweera
BA (Jayawardanapura) MA (Kelaniya)

Ms. Indu Gamage
BA (Kelaniya), MA (Kelaniya)

Mr. R. Gunawardane
BA (SUSL), MA (Kelaniya)

Ms. Nethranjalee Dissanayake
BA (Hons) (Kelaniya)

Instructor

Mr. A.J.G. Hettiarachchi
BA (Peradeniya) (English Trained)

Mr. J.W. Gnanathilake
Diploma in TESL (NIE) CELTA – (Cambridge) (English Trained)

9.1 Placement Test

All new entrants are expected to sit a placement test and are grouped on the basis of their performance.

9.2 Requirement of English Language for obtaining the B.Sc. Degree

In order to obtain the B.Sc. in Fisheries and Marine Sciences (Special) Degree, it is compulsory that students pass Level I, Level II and Level III examinations in English.

When a student completes Level I, II and III, a certificate in Proficiency in English will be issued by the University.

9.3 UTEL (University Test of English Language)

UTEL, which has been introduced to the University System, is rather equivalent to the format of Cambridge University Examination, since the student is tested on all four components, e.g. Listening, Speaking, Reading and Writing. The students who get through Listening and Reading components would be eligible to take the other two components. The opportunity is given to all students sit for the Level 5 of the UTEL levels. Those students who pass Level five will get this opportunity to sit higher levels , Level 6, 7, 8 etc.

Sports and Recreation

Activities pertaining to sports and recreations are conducted by the Department of Physical Education. The Department is governed under a Sports Advisory Board, which consists of officials of the department and two academic representatives from each of the Faculties.

10.1 Staff of the Department of Physical Education

Director

Mr. P.N. Weerasinghe

B.Com. (J'pura), Dip. in Sport

Instructors

Ms. S.V.K. de Silva

Dip. in Sports

Mr. K. H. Keerthikumara

B.A. (Kelaniya)

Mr. P.K. Sanath Chandana

The main aim of the Physical education unit is to produce graduates with good physical and mental standing, who possess good leadership qualities and obey common decisions and the Law of the Nation. To fulfill the above aim, the department conducts many physical education and sports activities.

There are numerous student sports activities organized by the physical education department, including both indoor and outdoor sports. A gymnasium with training facilities is located in the Wellamadama University complex for indoor sports and it is open for the students at 9.00am to 5.00pm every day (except poyadays).

In addition to the permanent instructors, whenever necessary, external assistance is sought for coaching on part – time basis.

10.2 Sports Facilities

At present, it provides the facilities for following indoor sports:

Basketball (Men and Women)

Table Tennis (Men and Women)

Wrestling

Volleyball (Men and Women)

Carrrom (Men Women)

Karate (Men and Women)

Badminton (Men and Women)

Netball

Weight –Lifting (Men and Women)

Chess (Men and Women)

Taekwondo (Men and Women)

Outdoor sports facilities are provided to students at Wellamadama University grounds. Following sports facilities are made available free of charge to all students.

Athletics (Men and Women)

Elle (Men and Women)

Football

Hockey (Men and Women)

Cricket

Baseball (Men)

There are annual sports events such as Inter – Faculty, Freshers Athletic meet, Inter – Faculty tournament and Inter – University Tournaments. In addition, Sri Lanka University Games (SLUG) is held at a selected University once in three years. Students are able to participate in the World University Sports Festival, which is held once in two years. At the end of each year, Colours Awarding Ceremony is held and those who excel in these sports activities at tournaments and meets are awarded colours.

The University provides several facilities for those who participate in sports events. Sports goods are freely available to students who participate in tournaments/ meets and also for practice sessions. A subsistence of Rs.300.00 is paid per day for students participate in an event held outside the University. The students who are representing the University team the University will be provided T shirt for each player only charging 20% of price. For practise sessions of Inter University Games, the University provides an allowance Rs.30.00 per day per students to have nourishment.

Fees and Examinations

11.1 Fees Levied for Registration for a Degree Programme

Following table (Table 10.1) provides the details of fees to be paid for different activities by each undergraduate on registration for a degree programme.

Table 10.1: Fees for registration for a degree programme

Degree Programme	Undergraduate
Registration (per year)	For Level I Rs. 900.00 and the other Levels Rs. 200.00 per year
Library fee	100.00
Library deposit (refundable)	
Science deposit	100.00
Medical fee	50.00
Supervision fee (per year)	-
Research fee (per year)	-
Internet/Computer fee	-
Thesis evaluation fee If one local & one foreign supervisor	-
Application processing fee	

Any repeat student who wants to follow a relevant Theory Course Unit for another occasion may follow it after making a payment of Rs 250.00 per Course Unit, only if the Faculty Board approval is granted.

11.2 Examination Fees

No examination fee is levied from all undergraduates, who are sitting for any examination for the first time. Students, who sit for examinations more than once, will have to pay an examination fee as lay down by the University. Information on examination fees as follows:

For all theory Course Unit – per credit	Rs: 20/=
For all practical Course Unit – per credit	Rs: 30/=
For all combined Course Units - per credit	Rs: 25/=
For MMA 1b30 Course Unit	Rs. 40/=
For CLC & CCIT Course Units	Rs.40/=
For English & Library Course FSC 1140 Course Units	Rs.40/=

11.3 Examination Criteria

The Bachelor of Science in Fisheries and Marine Sciences degree programme includes eight semesters during which students will have to follow Core Course Units (CCU) offered by respective departments and Optional Course Units (OCU) acceptable to the Faculty. The Degree examination will consist of end semester/academic year examinations for both practical and theory Course Units. In the case of practical Course Units or Combined Course Units, with a practical component, examinations will be held as desired by respective departments.

11.3.1 Grades allocated for Course Units

A grade will be awarded on the overall performance in each Course Unit as follows:

Grade	Marks (%)
A+	85 - 100
A	70 - 84
A-	65 - 69
B+	60 - 64
B	55 - 59
B-	50 - 54

Grade	Marks (%)
C+	45 - 49
C	40 - 44
C-	36 - 39
D+	33 - 35
D	30 - 32
E	0 - 29

Grade Points:

The range of marks is partitioned into a sequence of suitable sub-ranges (as decided by the Faculty) and these sub-ranges are designated by the symbols **E, D, D+, C-, C, C+, B-, B, B+, A-, A, A+**. These are called grades and grade points are assigned according to the following table.

Grade	GPA
A+	4.0
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7

Grade	GPA
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
E	0

(Note: A+ and A have the same grade point)

Grade Point Average (GPA): This is the credit weighted mean of all the grade points obtained by a student for all the Course Units he/she has offered with a minimum of 120 credits. It is calculated to the second decimal place. Pass, Fail or eligible for Honours etc. will be determined by the **GPA**.

$$\text{GPA} = \frac{\sum(c_i g_i)}{\sum(c_i)}$$

Where, c_i and g_i are the number of credits and the grade point values (GPV) respectively for the i^{th} Course Unit.

11.3.2 Pass in Course Units

- (i) A candidate who obtains a grade **C** or better for a Course Unit will be considered to have passed in that Course Unit. If a student fails to complete a Course Unit, an acceptable reason has to be produced, failing which a grade of **E** will be given. If the given reason is accepted by the Senate on the recommendation of the

Faculty Board, such an occasion will be considered as the first attempt of the respective student for that Course Unit.

- (ii) A candidate who obtains either grade **C-**, **D+**, **D** or **E** for a particular Course Unit may re-sit the examination of the same Course Unit for the purpose of improving the grade within the stipulated period. However, the maximum marks awarded would be 40% (grade **C**) and in the event a student obtains a lower grade, he/she will be entitled to the previous grade. Above candidates are not entitled to attend lectures/practical sessions in the Course Unit/s in which, he/she has failed.

11.3.4 Award of Honours

A student, who has fulfilled all the stipulated conditions in sections 3, shall be awarded Honours, if he/she completes the following additional requirements within four academic years from the date of first registration, securing average of grade **C** or better aggregating to a minimum of 120 credits. However, it shall be within the power of the Senate to declare for some specified reason that a student is eligible for the award of the Honours at a subsequent occasion.

First Class Honours

- (a) Grades of **A** in Course Units aggregating to a minimum of 54 credits,
- (b) GPA of 3.70 or above and
- (c) At least grade **C** for all the Course Units whose credits shall add up to at least 114.

Second Class (Upper Division) Honours

- (a) Grades of **A-** or better in Course Units aggregating to a minimum of 40 credits,
- (b) GPA of 3.30 – 3.69 and
- (c) At least grade **C** for all Course Units whose credits shall add up to at least 114.

Second Class (Lower Division) Honours

- (a) GPA of 3.00 - 3.29 and
- (b) At least grade **C** for all the Course Units whose credits shall add up to at least 114.

11.3.5 Other requirements

11.3.5.1 Attendance for Course Units

Students are required to maintain a minimum of 80% attendance at all Course Units to be eligible to sit for the relevant examinations. Those who do not fulfil this requirement will be considered as to have failed in the particular Course Unit. Absence on medical grounds or due to any other valid reason must be approved by the Faculty Board.

Illness while attending the programme

If a student is unable to attend lectures and /or practical classes due to an illness he/she should inform the university Medical Officer within a week. If a student wishes, he/she can get medical assistance from a government or private doctor. However, the University medical officer should approve the medical certificates issued by them.

Medical certificates from private doctors are accepted only for a maximum period of three days and twice per semester.

Illness during examination period

If a student is unable to sit for the examination due to an illness he/she should inform the University Medical Officer and Examination Branch of the University immediately.

On the instance of failure to inform as above, government medical certificates are compulsory for examination period and private medical certificates are not accepted. Such medical certificates should be submitted to the Dean's Office within seven days from the last date of the period covered by the medical certificate. If a medical certificate is obtained from the Government Medical officer outside the university, approval of the University Medical Officer is compulsory.

If the absence from classes of a particular Course Unit is not approved by the Faculty, in such cases results for such Course Unit/s are automatically graded as **E**.

A student who obtains grades lower than C for a Course Unit may;

- i. follow that Course Unit again
- or
- ii. take part in the mid-semester and final examinations of that Course Unit again,

in order to improve his/her grade. For this purpose only three more attempts shall be given, within a maximum period of seven academic years from the date of first registration for the degree programme, and the maximum grade given shall be a grade **C**. However, such candidates will not be allowed to attend the practical classes, but they may be allowed to sit a practical examination.

In case of practical Course Units where continuous assessments/*viva voce*/submission of reports is one component of evaluation of an examination, if a student obtains a grade below **C** at the first attempt he/she will be exempted from continuous assessments/*viva voce*/submission of reports is one component of evaluation of an examination, in future attempts.

11.3.5.2 Release of final results

In addition to the examination Criteria stated above, the candidates should fulfil the following in order to release the final results of the Degree.

- i. Proficiency in English (FDN1111, FDN1211, FDN2111, FDN2211, FDN 3111, FDN 3211)
- ii. Computer Literacy Course (FDN1121, FDN1221, FDN2121, FDN2221),
- iii. Grade **D** or better for Information Literacy and Library Skills (FDN3122)
- iv. Grade **D** or better for Biomathematics course unit (FDN 1142), where it is applicable
- v. Satisfactory completion of Industrial Training, and
- vi. Submission of corrected hard bound final copy of the research project report as prescribed by the Faculty.

11.3.5.3 Effective Date of the Degree

The following day after the date on which the candidate sits for the last written examination shall be considered as the effective date of the degree. In case of a candidate who fails to complete the degree within four academic years, the effective date shall be the following day of the last date of the semester examination in which he/she sits for the last attempt.

12.1 Vice Chancellor's and Dean's Awards

Vice Chancellor's and Dean's Awards shall be awarded annually to the students with the best overall performances in each Faculty. They are funded by the University and administered by the Deputy Vice Chancellor's office in consultation and collaboration with faculties and assisted by the Divisions of Examinations and the Student Affairs. Only the Vice Chancellor's Award shall be noted on students' academic transcript.

12.1.1 Dean's Awards

Dean's awards shall be awarded to following categories:

- Best first year student
- Best second year student
- Best third year student
- Best fourth year student

A certificate of achievement (and a cash prize of Rs. 10,000.00) will be awarded annually at an Awards Ceremony held at the faculty level.

Dean's List: Five students in each batch who top the list under the approved marking scheme shall be included in the Dean's list and announced at the relevant Faculty Board Meetings. A certificate of achievement will be issued to each student at the annual Faculty Awards Ceremony.

12.1.2 Vice Chancellor's Awards

Awarded to the

- Best student who completed the degree of each Faculty

A Medal and a Certificate of Achievement will be awarded. A student who has completed the degree will be eligible for the Vice Chancellor's Award. The Vice Chancellor's Medal and a certificate of achievement will be awarded at the General Convocation.

Vice Chancellor's List: Ten students who top the list under the approved marking scheme shall be included in the Vice Chancellor's list.

12.1.3 Eligibility Requirements

- a) The students shall obtain an average GPA required to obtain a Second Class Upper Division with respect to each Faculty in the first attempt of the relevant examination for his/her courses of study in both 1st and 2nd semesters of each academic year, to be eligible for an award.
- b) Any student who has had disciplinary action taken against him/her by the University and warned (in writing) by the Vice Chancellor or Deputy Vice Chancellor as found guilty for any misconduct shall not be eligible for and award.

- c) The overall score achieved by the candidate shall not be less than 70% for the Vice Chancellor's Award and 65% for the Dean's Award.

12.1.4 Criteria of selection

- Marks for academic achievements (maximum 60)
 - a) The applicant with the highest GPA will be given 60 marks. The other eligible students will be given marks which are scaled down according to their GPA.

While the GPA obtained at each examination will be considered separately for the Deans award, the overall GPA obtained for all examinations will be considered for the Vice Chancellors Award.

- Marks for sports achievements (maximum 20)
 - a) The applicants who have received University colours will be awarded 5 marks per each colour award and 2 marks will be allocated for Inter- University participation.

- Marks for extra -curricular activities other than sports (maximum 20)

a) Student Unions and Associations

Maximum of 1 mark will be allocated for each position per year and will consider only the posts of President, Secretary, Treasurer and Editor. These Student Unions and Associations should be registered and approved by the particular Faculty Board / Senate and University Council and need to maintain a bank account for their transactions. Proper annual accounts and a progress report should be submitted to the DVC through proper channels. The office bearers needed to be appointed at the AGM with the participation of Senior Treasurer, Patron or the Dean.

- Presentations at conferences/ seminars

Maximum of 1 mark will be allocated for a presentation by the applicant.

- Publishing Books

Maximum of 2 marks will be allocated per publication.

- Art Exhibitions, Oratory competition, Singing, Dancing, National level newspaper articles, Poetries, important exhibitions, Patents etc.

Quality of these activities will be assessed by the subcommittee and marks will be allocated accordingly

(Allocation of marks should be decided by a subcommittee appointed by the Faculty Board/ Senate)

Special Note:

If the overall score achieved by two or more candidates for the Vice Chancellor's Awards is identical, special panel consisting VC, DVC and Dean of the relevant Faculty shall re-evaluate the candidates to select the best student.

Chapter

13

Student Services

13.1 Student Affairs Branch

There is a Student Affairs Branch at the University to look after the needs of the students outside their courses. It is located in the second floor of the administration building. Many

services such as registration of new students, Mahapola scholarships, Bursaries, other scholarships, student hostels and cafeterias, photocopy services are operated by the student affairs branch.

Assistant Registrar (Student Affairs)

Ms. J. A. M. S. Wijerathna

B.Sc (J'pura), BIT HDip. (Colombo)

In addition, this branch coordinates two other important services, Student Counselling Service and Health Service.

Proctor

Prof. Piyasiri Vithanage

BA (Ruhuna), M.Sc. (PGIA), M.Phil (Ruhuna)

Deputy Proctor of the Faculty

Dr. U.A.D. Jayasinghe

B.Sc. (Kelaniya), MPhil (Kelaniya), PhD (Chines and Academic of Science)

Senior Student Counsellor of the University

Prof. E. P. S. Chandana

B.Sc. (Ruhuna), M.Phil (Ruhuna), PhD (Kyoto, Japan)

Deputy Senior Student Counsellor of the Faculty

Dr. K.H.M. Ashoka Deepananda

B.Sc. (Hons in Zoology) (Ruhuna, SL), M.Sc. (Bremen, Germany), PhD (Kelaniya, SL)

13.2 University Medical Facilities

The medical centre is located in a building close to the Department of Physics. This centre provides health care to staff and students.

Medical staff

Dr. A. Weerasinge (MBBS, Ceylon)

Dr. S. Yapa (MBBS, Ceylon)

Dr. M.D. Milton (MBBS, Ceylon)(acting Chief Medical Officer)

Dental Unit

Dr. (Ms.) S. Athapaththu (BDS, Pera.)

Nurse

Ms. W.A. Gunasekera

Ms. M.G.S. Krishanthi

Every student of the university at the enrolment must face a medical test. The aim of this test is to determine whether the student has suitable health condition to continue the academic career without difficulties. If a student is found to be suffering from a severe disease, he/she is directed to special clinics in the hospital for treatments. During the academic year, the medical centre opens for treatment for students as well as staff from 8.00 am to 4.00 pm on

weekdays. All drugs are free of charge to the students. If a prescribed drug is not available in the clinic, the University will reimburse the expenses.

Medical unit have 07 active units. Started at 08.00 am to 04.00pm

01. Medical Examination by
 - Chief UMO
 - Visiting UMO (i)
 - Visiting UMO (ii)
 - Doctors available for 09.00 am to 04 pm
02. Dental Unit
 - Function for 08.00 am to 04.00 pm
 - Doctor available for 08.00 am to 04.00 pm
03. Pharmacy
 - Open at 08.00 to 04.00 pm
04. Laboratory
 - Open at 10.00 am to 01.00 pm
 - MLT available at same time
05. Student Counsellor
 - Once a week Tuesday 01.00 pm to 04.00 pm
06. Public Health Inspectors
 - 02 PHI's available at 08.00 am to 04.00 pm
07. Ambulance service on request
 - University to Hospital and Hostels free of charges

Medical Centre have 15 staff members

- i. Doctors 03
- ii. Dental Surgeon 01
- iii. Nurses 02
- iv. Pharmacist 01
- v. PHI's 02
- vi. Attendants 04
- vii. Labourers 02

13.2.1 Medical Certificates

If a student is unable to attend lectures and /or practical classes due to an illness he/she should inform the university medical officer within a week. If a student wishes he/she can get medical assistance from a government or private doctor. However, the university medical officer should approve the medical certificates issued by them.

13.2.2 Illness during examination period

If a student is unable to sit for the exam due to an illness he/she should inform the university medical officer and examination branch immediately. The medical certificates obtained from outside medical officers should be submitted to the Deans office within three days with the approval of the university medical officer.

Whenever necessary, students should follow the above procedure in producing medical certificate for smooth functioning of their education during stipulated period of study.

13.3 Career Guidance Unit

13.3.1 Introduction

Career for undergraduates in Universities was recently recognized as a matter of policy by the Government of Sri Lanka. At the University of Ruhuna, the Career Guidance Unit was set up in

March 2000 to provide Career Guidance Services to the undergraduates. Since then, the unit has implemented various programmes to make the undergraduates aware of the employment opportunities available, develop the professional qualities and skills required to perform smart in the job market while effectively utilizing career opportunities, and develop the attitudes and soft skills of the students essential to manage both personal life and student life. The unit is also in the process of building continuous links with the private sector as well as the government institutions to facilitate productive interaction between the undergraduates and such institutions to make use the industrial training and career opportunities.

13.3.2 Staff of Career Guidance Unit

This unit comprises of a Director, Faculty Career Advisors and Career Guidance Counselors as mentioned below.

Director	A.C. Karunaratna / Senior Lecturer Telephone - Office: 041 22222681 Ext: 2132 Mobile: 071 6054017 E-mail: acruhuna@gmail.com
Career Guidance Counselor	Ms. Sujeewa Dilrukshi Vidanagamage BA (Hon), MA (Sociology), PGD (Counseling), Dip.in Coun. (IPC), MPC Mobile: 071 4475666 Email: sujeewapt@gmail.com
	Ms. Pubudu Mallawarachchi BSc (Hon) (Ruhuna), Dip in Counseling (Ruhuna) Industrial Training (Korea) Mobile: 071 8359365 E-mail: bpkcgu@gmail.com
	Ms. R.M.A.S. Rathnayaka BA (Image Art), Dip in Career Guidance Dip in Photography Mobile: 071 047 3119 Email : anushashamali@gmail.com
Computer Application Assistant	Mr. N.B. R. Madhushanka
Office Assistant	Mr. R. Wasantha

13.3.3 Faculty Career Advisors

Faculty of Agriculture	Mr. A.L. Sandika / Senior Lecturer Department of Agricultural Economics Mobile : 071 8180670 Email: sandika@agecon.ruh.ac.lk
	Ms. S.N. Malkanthi / Senior Lecturer Department of Civil and Environmental

Faculty of Engineering	Engineering Mobile: 077 2869264 Email: snmalkanthi@cee.ruh.ac.lk
Faculty of Fisheries and Marine Science & Technology	Dr. P. N. Ranasinghe / Senior Lecturer Department of Oceanography & Marine Geology Mobile : 071 8425475 Email: nalakaranasinghe@hotmail.com
Faculty of Humanities and Social Sciences	Mr. Sumudu Walakuluge Department of Public Policy Mobile: 071 6362036 Email: walakulugeslfs@gmail.com
Faculty of Management and Finance	Mr. A.G. Deepal / Senior Lecturer Department of Accounting and Finance Mobile: 071 2168524 Email: deepalguru@gmail.com
Faculty of Medicine	Dr. Avindra Jayawerdeena / Senior Lecturer Department of Medical Education and Staff Development Unit Mobile: 077 0530249 Email: avindrajaya@gmail.com
Faculty of Science	Dr. K.K.G.U. Hemamali / Senior Lecturer Department of Botany Mobile: 071 8209489 Email: upekshahe@yahoo.com

13.4 Centre Modern Languages & Civilizations (CMLC)

13.4.1 Introduction

This centre was established on July 26, 2002 as “Resource Centre for Modern Languages” and was later upgraded to the Centre for Modern Languages and Civilizations. Presently, French, German, Hindi, Japanese, Korean and Tamil courses are being conducted by this centre for the undergraduates as well as for the staff of the University of Ruhuna. All study programmes on modern languages are conducted by a team of local and foreign instructors/teachers.

13.4.2 Staff Members (CMLC)

Coordinator - Mrs. Lokeshwari Karunarathna
Senior Assistant Registrar -Mr. Piyal Renuka

13.4.3 Language Coordinators

Hindi -Rev Dr. U Mahinda (Dept of Pali & Budhist)
French -Prof. EA Gamini Fonseka(ELTU)
German -Dr. MK Abeyrathna (Dept of Mathematics)
Japanese -Prof. Tilak P.D. Gamage (Dept. of Limnology and Water Technology)
Tamil -Mr. MMA Razzaq (Dept of Geography)
Korean -Prof. Ms. NJ De S Amarasinghe (Dept of Zoology)

13.5 Financial Assistance for Students

There are several financial assistance programmes to help student's finance their education when their own family resources are inadequate. At present, students are offered the following financial assistance for the University education:

- Mahapola higher education scholarships
- Student bursaries
- Education Department Scholarships
- Other scholarships

In addition, there are number of Merit scholarships and awards offered to the students of extraordinary performance.

13.5.1 Mahapola Higher Education Scholarships

The University Grants Commission sends application forms to all University entrees to apply for this scholarship. The student should send the completed forms to the University Grants commission. The student's parent's income, the number of siblings studying under 18 years of age, the distance from his/her home to the University and the students rank at district level are considered when granting the scholarship. A merit scholarship is also granted according to student's merits. Amount of money paid for merit and general scholarship are Rs. 5,050.00 and Rs 5,000.00 per instalment respectively.

13.5.2 Student Bursaries

The students who are not granted Mahapola scholarships are able to apply for bursaries offered by the University. The University calls applications for student's loans from University entrees. Family income, the number of siblings studying under 19 years of age and the distance from his/her home to the University is considered when granting the bursaries. Full student bursary per instalment is Rs. 4,000.00 and half student bursary is Rs. 3,900.00 per instalment.

13.5.3 Education Department Scholarship

Students are able to extend the scholarships, which they had in the school through university education. Students should submit all the information about these scholarships to the student's affairs Branch.

13.5.4 Other Scholarships Available via UGC

The University Grants Commission calls applications for the scholarships from the students who do not receive Mahapola or student bursaries. Please refer the UGC official web site for more information.

13.5.5 Viru Sisu Foundation scholarship

This scholarship is granted for a number of selected students who face financial hardships. At the beginning of each academic year a selection committee will decide the amount of the scholarship and the number of students who will receive the scholarship.

13.6 Hostel Facilities

At present, the University supplies hostel facilities only for a limited number of students. However, further expansion of this facility is envisaged. First year and final year students are given the priority. These hostel are looked after by a team consists of Wardens and sub-wardens. A few university-own houses and rented houses as well are used as student's hostels. The Table 11.1 shows currently available hostel accommodation. Those who get hostel facilities a nominal fee of Rs. 600/= is charged as hostel fee for using hostel facilities per student per academic year.

Table 12.1 Hostel facilities available for students.

Hostel	Number of students
<i>Boys Hostels</i>	
Meddawatta	300
Bikku	105
Eliyakanda old (Boys)	80
Eliyakand new (Boys)	396
<i>Girl's Hostels</i>	
Eliyakanda old (Girls)	180
Eliyakand new (Girls)	396
Wellamadama I	92
Wellamadama II	424
Wellamadama III	416
Pamburana II	80
Rented Hostel II	30

13.7 Miscellaneous Facilities

13.7.1 Cafeterias

There are five cafeterias located in the Wellamadama University Complex.

Student Cafeteria
 Student hostel Cafeteria
 staff cafeterias

13.7.2 Convenience Stores

1. The 'World University Service' maintains a bookshop (WUS Book Shop), which stocks stationary goods.
2. The University also maintains a co-operative store (SANASA) in university premises, and daily provisions can be brought from it.
3. Facilities of Barbour saloon and Shoe repair center are also available inside the university.

13.7.3 Monthly Season-Tickets

Ruhuna University Students are able to buy monthly season tickets at concessionary rates for the train and for the public bus service.

13.7.4 Postal Service

Ruhuna University Post Office is located opposite to the main entrance and is open from Monday through Saturday from 8.00 am to 5.00 pm.

13.7.5 Banks

Branches of Bank of Ceylon and People's Bank are located at the University premises. The usual banking hours apply to these branches.

Chapter 14

Student Unions and Societies

14.1 Student Union

According to the amended University act of 1988, section 26, students of each faculty can form a Faculty Union comprised of all students of the faculty. The main objective of this union is to promote academic actions, to safeguard the rights of the student population, to work for the advancement and welfare of the students and the faculty.

14.2 Student Societies

The society of Fisheries and Living Aquatic Resource was established in 2000. The main objective of this society is to improve public awareness of the importance of conserving and maintaining the living resources of aquatic environments in Sri Lanka, including endemic fish and other economically important living aquatic resources. In addition, society's activities include addressing important matters related to marine and freshwater fishery resources, fishery industry, and ornamental fish production. The society also makes attention to conservation of coral reefs and reef-associated organisms.

<u>Society</u>	<u>Registered Academic Year</u>
1. Soft skills society	2014/2015
2. Students society on Oceanography and Marine Geology (SSOMG)	2016/2017
3. Student's society of Fisheries and Aquaculture (SOFAA)	2014/2015

14.3 The Cultural Centre

This centre functions in collaboration with the Ministry of Cultural Affairs. It consists of an Aesthetic Unit and a Research Unit.

Aesthetic Unit helps to promote aesthetic sensitivity, creative skills among the university population. The unit conducts on oriental music, western music, violin, dancing, cinematic study, literacy efficiency, drawing and sculpting from 4.00 p.m. to 6.00 p.m. on weekdays and from 9.00 am to 4.00 pm at weekends. Research Unit researches and conserves the regional cultural features and heritage of national importance. It is further expected to undertake activities to conserve the regional folk arts and folklore, to collect and conserve the cultural features endemic to this region, to publish classical articles and make documentary films on the traditional performing arts of the South and the artistes of the South.

Mr. Santhasiri Abeywarna officiates as the Coordinator of the center and Mrs. H. K. Indrani who has been appointed by the Cultural Ministry functions as Cultural Officer.

14.4 Employment Opportunities for Graduates

Temporary Demonstrator

Almost all Departments recruit a considerable number of students as Temporary Demonstrators on completion of their final examination. These assignments normally last for three months up to two years. The selection is based on their performance at examinations as well as in the classes. Special attention is given to satisfactory attendance at lectures and practical classes and performance at English Examinations conducted by the English Language Teaching Unit of the University.

Research Assistantships

Graduates with satisfactory performance at academic programmes would have opportunities to obtain Research Assistantships depending on the facilities and grants available in different departments of the faculty. A limited number of Research Assistants will be allowed to proceed for postgraduate degrees such as M.Phil and Ph.D.

Appendix A

Registrar

Ms. P.S. Kalugama

BA (J'pura, S.L), M.A. (London), PDBA(Ruhuna)

Bursar (Acting)

Mr. A.M.A Siriwardhana

B.Sc. (J'pura), ICASL (Inter Mediate)

PDBA (Ruhuna)

Administrative/Finance Officers of the Wellamadama Complex

1. Legal & Documentation

Mr. G.L. Erathna

LLB (S.L.) Attorney at Law, PG Dip in Conflict Resolution (Colombo)

Deputy Registrar

2. General Administration

Ms. P.M.S.P Yapa

B.Sc.(Sp.) Hons (Ruhuna), MBA (Ruhuna)

Deputy Registrar

Mr.T.M.K Subaweera

BA (Colombo), MA(KLN), Attorney at Law

Senior Assistant Registrar

Ms. G.H.C Nadeeshani

BSc HRM. (Sp.) Hons (J'pura), CIMA(final)

Assistant Registrar

3. Examination

Ms. C. Seneviratne

B.Sc. (General) Hons (Ruhuna), PDBA (Ruhuna), Dip in English(CMB)

Deputy Registrar

4. Non-Academic Establishment

Ms. K.G.C.A. Bandarathilake

B.Sc. Management (Public) (Sp.) Hons (J'pura), ICASL (Intermediate),

Executive Dip in Accounting & Finance Part I (ICASL)

Senior Assistant Registrar

5. Academic Establishment

Ms. H.G.N. Devika

B.A. (Kelaniya)

Senior Assistant Registrar

6. Distance and Continuing Education Unit

Mr. W.W Anura

B.A. Hons. (PDN) M.A. (CPDS) Tribhuwan, Nepal, Dip in English for Employment (Ruh),
Dip in Psychological Counselling (RUH)
Assistant Registrar

7. Salaries & Payments

Ms. K.V.R Widyaratne

B.B.A (Sp.) Hons (Ruh), CBA (ICASL), MAAT,
Dip in English for Employment (Ruh)
Senior Assistant Bursar

8. Accounts

Ms. V.G.M Priyangika

B.Sc Mgt (Sp.) Hons (J'pura), ACA
Assistant Bursar

9. Supplies

Ms. B.H.Chintha

B.Com (Sp.) Hons (Kelaniya), PDBS(Ruhuna)
Dip in English for Employment (Ruhuna)
Senior Assistant Bursar

10. Internal Audit

Mr. O.V.L.P Anura

BBA (Sp) Hons (Ruhuna)
Senior Assistant Internal Auditor

Mr. S.W. Kodithuwakku

B.Com (Sp.)(Ruhuna), PG Dip. In ICASL
Senior Assistant Internal Auditor

11. Library

Mr.C.P.K Edirisinghe

BA stat Hons (J'pura), PDDBA (Ruhuna)
Senior Assistant Registrar(Library Service)

12. Library/ International Affairs Unit

Ms.G.A.J Hemamali

BA stat Hons (J'pura), PDDBA (Ruhuna)
Senior Assistant Registrar

13. Security Officer

Mr. H.N. Dias

Chief Security Officer

14. Physical Education

Mr. P.N. Weerasinghe

B.Com (Sp.)(J'pura), Dip. In Sports (SL)
Director (Physical Education)

15. Works Engineer

Mr. D. Sirichandra

B.Sc. Eng. Hons (Moratuwa),

PG. Dip (Building Services Engineering), MIES, AMIESL

Administrative / Finance Officers of Faculties

1. Faculty of Humanities and Social Sciences

Mr. P.A. Piyal Renuka

BA Statistics (J'pura), PG Dip in Community Development (Colombo)

PDBA (Ruhuna)

Senior Assistant Registrar

2. Faculty of Science

Ms. K.D. De Silva Jayasekara

B.Sc. (Spe.) Zoology Environment Science (Colombo), M.Sc. Natural Resource Management (Peradeniya)

Assistant Registrar

3. Faculty of Management & Finance

Mr. K.G.N. Kumara

B.Sc. Agriculture (Ruhuna), MSc (Peradeniya)

Assistant Registrar

4. Faculty of Fisheries & Marine Sciences & Technology

Mr. D.M.H.C Dasanayake

BSc Hons. in Business Information Technology (Greenwich)

Assistant Registrar

5. Faculty of Graduate Studies

Mr. L. Isuru Kalpage

B.Sc. Finance (Sp.) Hons (J'pura), Intermediate Level (ICASL)

Assistant Registrar

6. Faculty of Agriculture

Mrs. S.K.K. Mudalige

B.Sc. Agri. Hons (Ruhuna) MSc (Pera.)

Certificate in HRM (Massey), MBA (Ruhana)

Senior Assistant Registrar

Miss H.Pushpika Hewaratne

P.B. Mgt (Kelaniya), Dip in Accountancy (SLIATE)

Dip in Com. Software (Technical Educational Institute)

ICASL, Intermediate Level)

Assistant Bursar

Mr. U.P Belpagoda

BSc Agri. (Sri Lanka)

Farm Manager

7. Faculty of Engineering

Ms. G.H.C. Nadeeshani
B.Sc. HRM. (Sp.) Hons (J'pura), CIMA(final)
Assistant Registrar

Ms. A.S.I. Fernando
B.Com (Kelaniya),ACA
Assistant Bursar

Mr. A.G.K.M.S Sriyantha
B.Sc. Eng. Production (Pera.)
Workshop Engineer

8. Faculty of Medicine

Ms. Y. Hiroshani Piyadasa
B.Sc .Agri. Hons (Ruhuna),
Senior Assistant Registrar

Ms. A. Anusha
B.Sc . Business Administration (Sp.) (J'pura)
Final I (ICASL)
Senior Assistant Bursar

Appendix B

PROHIBITION OF RAGGING AND OTHER FORMS OF VIOLENCE IN EDUCATIONAL INSTITUTIONS Act No 20 of 1998

AN ACT TO ELIMINATE RAGGING AND OTHER FORMS OF VIOLENCE, AND CRUEL, INHUMAN AND DEGRADING TREATMENT, FROM EDUCATIONAL INSTITUTIONS

BE it enacted by the Parliament of the Democratic, Socialist Republic of Sri Lanka as follows

Short title

1. This Act may be cited as the Prohibition of Ragging and Other Forms of Violence in Educational Institutions Act, No. 20 of 1998.

Ragging,

- (1) Any person who commits, or participates in; ragging, within or outside an educational institution, shall be guilty of an offence under this Act and shall on conviction after summary trial before a Magistrate be liable, to rigorous imprisonment for a term not exceeding two years and may also be ordered to pay compensation of an amount determined by court, to the person in respect of whom the offence was committed for the injuries caused to such person.
- (2) A person who, whilst committing ragging causes sexual harassment or grievous hurt to any student or a member of the staff, of an educational institution shall be guilty of an offence under this Act and shall on conviction after summary trial before a Magistrate be liable to imprisonment for a term not exceeding ten years and may -also be ordered to pay compensation of an amount determined by court, to the person in respect of whom the offence was committed for the injuries caused to such person

Criminal Intimidation,

- (3) Any person who, within or outside an educational institution, threatens, verbally or in writing, to cause injury to the person, reputation or property of any student or a member of the staff, of an educational institution (in this section referred to as "the victim") or to the person, reputation or property of some other person in whom the victim is interested, with the intention of causing fear in the victim or of compelling the victim to do any act which the victim is not legally required to do, or to omit to do any act which the victim is entitled to do, shall be guilty of an offence under this Act and shall on conviction after summary trial before a Magistrate be liable to rigorous imprisonment for a term not exceeding five years.

Hostage taking,

- (4) Any person who does any act by which the personal liberty and the freedom of movement of any student or a member of the staff of an educational institution or other person within such educational institution or any premises under the management and control of such educational institution, is restrained without lawful justification and for the purpose of forcing such student, member of the staff or

person to take a particular course of action, shall be guilty of an offence under this Act and shall on conviction after summary trial before a Magistrate, be liable to rigorous imprisonment for a term not exceeding seven years.

Wrongful restraint,

(5) Any person who unlawfully obstructs any student or a member of the staff of an educational institution, in such a manner as to prevent such student or member of the staff from proceeding in any direction in which such student or member of the staff, has a right to proceed, shall be guilty of an offence under this Act and shall on conviction after summary trial before a Magistrate be liable to rigorous imprisonment for a term not exceeding seven years.

Unlawful confinement,

(6) Any person who unlawfully restrains any student or a member of the staff of an educational institution in such a manner as to prevent such student or member of the staff from proceeding beyond certain circumscribing limits, shall be guilty of an offence under this Act and shall on conviction after summary trial before a Magistrate be liable to imprisonment for a term not exceeding seven years.

Forcible occupation and damage to property of an educational institution,

(7) (1) Any person who, without lawful excuse, occupies, by force, any premises of, or under the management or control of, an educational institution shall be guilty of an offence under this Act, and shall on conviction after summary trial before a Magistrate be liable to imprisonment for a term not exceeding ten years or to a fine not exceeding ten thousand rupees or to both such imprisonment and fine.

(7) (2) Any person who causes mischief in respect of any property of, or under the management or control of, an educational institution shall be guilty of an offence under this Act and shall on conviction after summary trial before a Magistrate he liable to imprisonment for a term to not exceeding twenty years and a fine of five thousand rupees or three times the amount of the loss or damage caused to such property, which ever amount is higher.

Orders of expulsion or dismissal

(8) Where a person is convicted of an offence under this Act, the court may, having regard to the gravity of the offence"

(a) In any case where the person convicted is a student of an educational institution; order that such person be expelled from such institution;

(b) In any case where the person convicted is a member of the staff of an educational institution; order that such person be dismissed from such educational institution.

Bail

(9) (1) A person suspected or accused of committing an offence under subsection (2) of section 2 or section 4 of this Act shall not be released on bail except by the judge of a High Court established by Article 154P of the Constitution. In exercising his discretion to grant bail such Judge shall have regard to the provisions of section 14 of the Bail Act, No. 30 of 1997.

Certain Provisions of the Code of Criminal Procedure Act not

(9) (2) where a person is convicted of an offence under subsection (2) of section 2 or section 4 of this Act, and an appeal is preferred against such conviction, the Court convicting such person may, taking into consideration the gravity of the offence and the antecedents of the person convicted, either release or refuse to release, such person on bail.

(10) Notwithstanding anything in the Code of Criminal Procedure Act, No, 15 of 1979"

(a) the provisions of section 303 of that Act shall not apply in the case of any person who is convicted,

(b) the provisions of section 306 of that Act shall not apply in the case of any person who pleads or is found guilty, by or before any court of any offence under subsection (2) of section 2 or section 4 of this Act.

Offences under this Act deemed to be cognizable offences or found guilty of an offence under this Act.

(11) All offences under this Act shall be deemed to be cognizable Offences for the purposes of the application of the provisions of the Code of Criminal Procedure Act, No. 15 of 1979, notwithstanding anything contained in the First Schedule to that Act.

Certificate.

(12) Where in any prosecution for an offence under this Act, a question arises whether any person is a student or a member of the staff of an educational institution or whether any premises or property is the property of, or is under the management and control of, an educational institution a certificate purporting to be under the hand of the head or other officer of such educational institution to the effect that the person named therein is a student or a member of the staff of such educational institution, or that the premises or property specified therein is the property of, or is under the management and control of, such educational institution, shall be admissible in evidence without proof of signature and shall be prima facie evidence of the facts stated therein.

Admissibility of statement in evidence

(13) (1) If in the course, of a trial for an offence under this Act, any witness shall on any material point contradict either expressly or by necessary implication a statement previously given by him in the course of any investigation into such offence, it shall be lawful for the Magistrate if, after due inquiry into the circumstances in which statement was made, he considers it safe and just."

(a) to act upon the statement given by the witness in the course of the investigation, if such statement is corroborated in material particulars by evidence from an independent source; and

(b) to have such witness at the conclusion of such trial, tried before such court upon a charge for intentionally giving false evidence in a stage of a judicial proceeding

(2) At any trial under paragraph (b) of subsection (1) it shall be sufficient to prove that the accused made the contradictory statements alleged in the charge and it shall not be necessary to prove which of such statement is false

Provisions of this Act to be in addition to and not in derogation of the provisions of the 14. Penal Code & c

(14) The provisions of this Act shall be in addition to and not in derogation of, the provisions of the Penal Code, the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment Act, No. 22 of 1994 or any other law.

***Priority for trials and appeals under this Act.
Sinhala text to Prevail in case of inconsistency***

(15) Every Court shall give priority to the trial of any person charged with any offence under this Act and to the bearing of any appeal from the conviction of any person for appeals under any such offence and any sentence imposed on such conviction.

(16) In this Act unless the context otherwise requires”
"criminal force", "force", "grievous hurt", "hurt" and "mischief shall have the respective meanings assigned to them in the Penal Code;

"educational institution" means -

- (a) Higher Educational Institution.
- (b) any other institution recognized under Chapter IV of the Universities Act, No. 16 of 1978;
- (c) the Buddhist and Pali University established by the Buddhist and Pali University of Sri Lanka Act, No. 74 of 1981;
- (d) the Buddha Sravaka Bhikku University, established by the Buddha Sravaka Bhikku University Act, No. 26 of 1996;
- (e) any institute registered under section 14 of the Tertiary and Vocational Education Act, No. 20 of 1990;
- (f) any Advanced Technical institute established under the Sri Lanka Institute- of Technical Education Act, No. 29 of 1995;
- (g) a Pirivena registered under the Pirivena Education Act, No. 64 of 1979 and receiving grants from State funds and includes a Pirivena Training institute established under that Act;
- (h) the Sri Lanka Law College;
- (i) the National Institute of Education established, by the National Institute of Education Act, No.
- (j) a College of Education established by the: Colleges of Education Act, No. 30 of 1986, or a Training College;
- (k) a Government school or an assisted school or an unaided school, within the meaning of the Education Ordinance (Chapter 185);
- (l) and includes any other institution established for the purpose of providing education, instruction or training;

"head of an educational institution" means the Vice- Cancellor, Mahopadyaya, Director, President, Principal or any other person howsoever designated charged with the administration and management of the affairs of such educational institution;

“Higher Educational institution” has the meaning assigned to it in the Universities Act, No.16 of 1978;

“ragging” means any act which causes or is likely to cause physical or psychological injury or mental pain or: fear to a student or a member of the staff of an Educational Institution.

'Student “means a student of an Educational Institution.

"Sexual harassment" means the use of criminal force, words or actions to cause sexual annoyance or harassment to a student or a member of the staff of an educational institution.