

**POSTGRADUATE INSTITUTE OF SCIENCE  
UNIVERSITY OF PERADENIYA**



**Master of Biodiversity, Ecotourism & Environment Management Degree  
Programme (SLQF Level 9)**

**Master of Science (M.Sc.) in Biodiversity, Ecotourism & Environment  
Management Degree Programme (SLQF Level 10)**

**1. INTRODUCTION**

The growth of international tourism in recent years has been dramatic. The World Tourist Organisation estimates that, during the next decade, the flow of tourists in the Asia-Pacific region would grow at an annual rate of some seven percent—double the global average.

Tourism is one of Sri Lanka's fastest growing industries with over 800,000 foreign tourists visiting the country each year. It is a major source of foreign exchange, gross domestic product, income and employment. Most tourism trips are undertaken by international tourists for a range of reasons that include cultural, nature-related, historical and commercial purposes, on which Sri Lanka can offer much. Within this industry, ecotourism sector has recently emerged as a strong segment in Sri Lanka. The prospects for expansion of this trade, based particularly on international visitors, are significant.

Sri Lanka's tourism industry is a major user of biological resources. In addition to nature-based ecotourism, many aspects of tourism, through both marketing and actual experience, are dependent on Sri Lanka's natural environment. The strength of Sri Lanka's biodiversity is a major factor in determining the expansion of the tourism industry. In turn, the tourism industry can be a major force in the conservation of biodiversity of Sri Lanka.

Sri Lanka, although a small island of 65,610 km<sup>2</sup>, is endowed with a profuse diversity of both flora and fauna. Together with the Western Ghats of India, it forms one of the thirty-five biodiversity hotspots of the world. The country has many Protected Areas, which provide the most important base for ecotourism. Among other natural resources of the country are many waterfalls, mountains, rivers, lagoons, coral reefs and the surrounding sea. There is also a rich cultural heritage in Sri Lanka which dates back to over 2,500 years. Several locations contain a great wealth of well-preserved relics of the ancient civilization. These too are of utmost importance to ecotourism in Sri Lanka. Among other features that interest ecotourists are the local arts and crafts, local produce, traditional professions and traditional medicine.

Poor countries such as Sri Lanka that are rich in biodiversity benefit from the income the ecotourists bring in. Rural people benefit from ecotourism without having to overexploit the forests or wetlands, as benefits to local people are integral in ecotourism. However, ecotourism could lead to the overuse of natural resources. Many ecotourist projects are not properly appraised. The guidelines that do exist mostly deal with the obvious issues such as changes in land use patterns, removal of forest trees, and frightening wildlife. What is not considered are the less obvious impacts such as transmission of diseases to wildlife. Subtle changes to wildlife health through disturbance of their daily routines or

increased stress levels, while not apparent to a casual observer, may cause lowered survival and breeding. The welfare of animals should be of paramount importance because without them there will hardly be any ecotourism. Ecotourism should be developed cautiously with careful attention to environmental damage.

Today, there is an alarming awareness regarding the urgent need for environmental protection in general and biodiversity protection in particular, biodiversity protection being part of the broader environmental protection. Numerous opportunities and benefits can be derived by strategically integrating biodiversity and environmental conservation requirements with future tourism needs.

This Masters degree programme deals with biodiversity and other natural resources, cultural heritage, local produce and traditional professions of Sri Lanka that interest an ecotourist. It would also show the importance of environment conservation and management in protecting biodiversity, natural resources and cultural heritage, which would in turn greatly benefit the ecotourism industry. Furthermore, it would discuss the negative impacts of ecotourism and how these could be mitigated. Identifying localities important for ecotourists and visiting those are an integral part of the programme. The programme will greatly benefit the young graduates who seek to engage in ecotourism as a profession, also those that are already in the tourist industry at managerial level, and particularly the graduate naturalists and guides who work freelance or in various tourist facilities. The programme will also be of immense importance to those that are interested in the conservation of biodiversity and other natural resources of Sri Lanka.

## 2. OBJECTIVES OF THE PROGRAMME

To provide

- a sound knowledge of the foundations of ecotourism and environment management
- adequate knowledge in principles of environment conservation and management in protecting biodiversity, natural resources, and cultural heritage which in turn greatly benefit the ecotourism industry

the training for interested graduates who seek to engage in ecotourism as a profession, and to those that are already in the tourism industry at managerial level, and particularly the graduate naturalists and guides who work freelance or in various tourist facilities

## 3. PROGRAMME ELIGIBILITY

Candidates having a bachelor's degree with 30 credits including relevant modules of Environmental Science or equivalent accredited prior learning experience are eligible to follow the programme. Eligible applicants shall face a selection examination followed by an interview, conducted by the PGIS. Employed candidates eligible for admission should produce evidence of leave granted to follow the programme and a letter of release from the Head of the Department/Institution.

## 4. PROGRAMME FEE

Category	Programme Fee	
	Master of Biodiversity, Ecotourism & Environment Management degree programme	M.Sc. in Biodiversity, Ecotourism & Environment Management degree programme
Local candidates	Rs 150,000/-	Rs 250,000/-
Foreign candidates	Rs 300,000/-	Rs 500,000/-

Students registered for the Master of Biodiversity, Ecotourism & Environment Management degree programme shall pay the Programme fee in full or in two (*1/2 at the registration and the balance at the end of the first semester*) or three (*1/3<sup>rd</sup> at the registration, another 1/3<sup>rd</sup> after 4 months from the date of registration and the balance after 8 months from the date of registration*) installments. An additional payment Rs. 80,000/- should be made at the end of the first year to continue for the M.Sc. in Biodiversity, Ecotourism & Environment Management degree programme. Other payments including registration fee, medical fee, library subscription, examination fee and deposits (science and library) should be paid according to the procedure stipulated by the PGIS. (N.B. The Programme fees given above may be revised as per recommendation of the Board of Management of the PGIS.)

## **5. THE PROGRAMME STRUCTURE AND DURATION**

This programme consists of three options for completion.

### **5.1 Masters Degree by Course Work**

The Master of Biodiversity, Ecotourism & Environment Management degree can be obtained by completing course work only (without conducting any research project).

Course work, comprising of theory courses, and laboratory and/or fieldwork, shall be conducted over a period of two semesters of 15 weeks each. The total duration of the degree, including examinations, shall be about 12 months. Satisfactory completion of a minimum of 30 credits of course work with a GPA of not less than 3.00 is required for the successful completion of the degree (Students who do not satisfy the above criteria but obtain a GPA in the range 2.75 to 2.99 for course work of 25 credits are eligible for the Postgraduate Diploma in Biodiversity, Ecotourism, and Environment Management, and those who obtain a GPA in the range 2.75 to 2.99 for course work of 20 credits are eligible for Postgraduate Certificate).

### **5.2 Masters Degree by Course Work and Research (SLQF Level 10)**

In addition to Masters Degree with course work (5.1), the Masters Degree (Research) requires a research project. The duration of the entire programme shall be 24 months inclusive of 5.1. Completion of all the requirements of 5.1 with a GPA of not less than 3.00 is a prerequisite for the Masters Degree (Research). The research project for this degree should be conducted on full-time basis, and completed during the second year. The research component is allocated 30 credits, totalling 60 credits for the entire programme. After successful completion of the research project, the student shall be eligible for the award of the M.Sc. in Biodiversity, Ecotourism, and Environment Management degree (Students who do not complete the research project within the stipulated time period shall be awarded the Master of Biodiversity, Ecotourism, and Environment Management degree).

### **5.3 Extension of the programme for M.Phil. or Ph.D.**

After conducting research for a period of six months in the M.Sc. degree (research) programme, students who have demonstrated exceptional progress may apply for upgrading the degree status to M.Phil. The student should continue the research project and any additional research

work/assignments recommended by the PGIS for a total of two years (60 credits of research) to qualify for the award of the M.Phil. degree.

During the second year of research, students who have demonstrated exceptional and continuous progress may apply for upgrading the degree status from M.Phil. to Ph.D. The student should continue the research project and any additional research work/assignments recommended by the PGIS for another year on full-time basis (additional 30 credits) to qualify for the award of the Ph.D. degree.

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**Programme Summary**

Course Code	Course	Lecture hrs	Practical hrs	No. of Credits
ENM 511	Environmental Biology	21	18	2
ENM 512	Population Ecology and Human Impact on Resources	24	12	2
ENM 513	Biodiversity and Its Conservation	24	12	2
ENM 514	Tourism and Ecotourism in Sri Lanka	24	12	2
ENM 515	Ecotouristic Potential of Sri Lanka	24	12	2
ENM 516	Promotion of Ecotourism	24	12	2
ENM 521	Environment Management, and Sustainable Development	24	12	2
ENM 522	Legal Protection of Environment and Biodiversity	15	–	1
ENM 523	Pollution of Environment and Pollution Management	24	12	2
ENM 524	Habitat Management	24	12	2
ENM 525	Wildlife Management	24	12	2
ENM 526	Aesthetic Landscape Management in Tourist Facilities	20	20	2
ENM 527	Sri Lanka's Ecotourism Resource Base	15	30	2
ENM 599	Independent Study** <sup>1</sup>	500 notional hrs.		5
ENM 699	Research Project**	3000 notional hrs. (one year duration)		30

NC – No change

\*\*<sup>1</sup> Compulsory for Master of Biodiversity, Ecotourism & Environment Management degree (SLQF Level 9)

\*\* Compulsory for M.Sc. in Biodiversity, Ecotourism & Environment Management degree (SLQF Level 10)

## 6. PROGRAMME CONTENTS

**ENM 526: Aesthetic Landscape Management in Tourist Facilities** (*Minor revision: credit number increased from 1 to 2*)

<b>Course code</b>	ENM 526
<b>Course title</b>	Aesthetic Landscape Management in Tourist Facilities
<b>Credits</b>	2
<b>Compulsory/optional</b>	Compulsory
<b>Prerequisites</b>	None
<b>Time allocation</b>	24L; 12P
<b>Aims</b>	<ol style="list-style-type: none"> <li>1. To understand landscaping and maintenance in a tourist facility</li> <li>2. To understand plant production, quarantine measures in landscaping</li> <li>3. To understand development of eco-tourism trade</li> </ol>
<b>Intended learning outcomes</b>	<p>At the end of the successful completion of the course, students will be able to,</p> <ol style="list-style-type: none"> <li>1. Propose a landscape plan for a tourist facility</li> <li>2. Identify different materials for landscapes according to functional basis</li> <li>3. Design different garden styles for suitable tourist facilities</li> <li>4. List and describe additional services for a landscape implementation project</li> <li>5. Write down the requirements of the eco-tourism trade to enhance the use of landscapes sustainably</li> </ol>
<b>Content</b>	<p>Tourism vs. Eco-tourism and landscapes; Assessment of needs of eco-tourists; Use and enhancement of available landscape features to give maximum facilities to the eco-tourists; Requirements of tourist facilities fulfillment by landscaping and environmental concerns; Horticulture and garden layout plans; Using plants for their aesthetic appeal; Gardens of herbs, spices and medicinal plants; Aquaria and Terraria; Landscape design in tourist facilities; Maintenance of landscapes; Greenhouse management; Nursery production and management; Quarantine measures; Demonstrating local arts and crafts production, local professions and local medicinal practice and exhibiting natural products within tourist facilities; Providing nature-based outside activities that interest eco-tourists; Duties of a freelance/tourist facility-employed naturalist and eco-tourist guide.</p>

<b>Course code</b>	599
<b>Course title</b>	Independent Study
<b>Credits</b>	05
<b>Compulsory/optional</b>	Compulsory
<b>Prerequisites</b>	None
<b>Time allocation</b>	500 notional hrs.
<b>Aims</b>	<p>Aims: The overall aim is to familiarize the student with concepts and methods involved in scientific research</p> <p><b>Specific aims:</b></p> <ol style="list-style-type: none"> <li>4. To understand the scientific process in the conduct of research.</li> <li>5. To develop skills to write a review paper and a scientific research proposal.</li> <li>6. To develop skills to make a presentation.</li> <li>7. To master the application of statistical methods on quantitative scientific data.</li> </ol>
<b>Intended learning outcomes</b>	<p>At the end of the successful completion of the course, students will be able to,</p> <ol style="list-style-type: none"> <li>6. Conduct an independent review of literature on a selected topic in the area of Analytical Chemistry.</li> <li>7. Write a formal scientific report conforming to the guidelines provided.</li> <li>8. Transfer the knowledge gained through (2) and (3) above in the form of a presentation.</li> <li>9. Complete a research proposal conforming to the guidelines provided.</li> <li>10. Perform statistical analysis of quantitative data.</li> </ol>
<b>Time allocation</b>	300 h
<b>Content</b>	<p><i>Review paper:</i> Review of literature; Development of the review paper in concise and professional manner and logical presentation of results that have been reported, writing the abstract, compilation of the list of references.</p> <p><i>Proposal writing:</i> Interpretation and critical evaluation of results of published research; Formulation of a research problem: Concise literature review, justification, time frame, identification of resources, budgeting, etc.</p> <p><i>Project:</i> Collection and statistical analysis of data on a topic associated with the review paper.</p> <p><i>Seminar:</i> Presentation of literature and data collected on a given topic; Preparation of an abstract, preparation of slides.</p>

#### Assessment criteria: Continuous Assessment

Component	% marks
Review paper	20
Proposal writing	10
Project	40
Seminar	30

#### Recommended Texts:

1. Backwell, J., Martin, J. (2011) A Scientific Approach to Scientific Writing, Springer.

2. Postgraduate Institute of Science (2016) Guidelines for Writing M.Sc. Project Report/M.Phil. Thesis/Ph.D. Thesis
3. Priyantha, N. (2015) Measurements and Errors in Chemical Analysis, Science Education Unit, University of Peradeniya.

<b>Course code</b>	699
<b>Course title</b>	Research Project
<b>Credits</b>	30
<b>Compulsory/optional</b>	Compulsory
<b>Prerequisites</b>	GPA of 3.00 at M.Sc. (Course work)
<b>Time allocation</b>	3000 notional hrs. (one year duration)
<b>Aims</b>	<p>Aims: The overall aim is to prepare the student to conduct a research independently.</p> <p><b>Specific aims:</b></p> <ol style="list-style-type: none"> <li>1. To train students to apply scientific method in scientific research.</li> <li>2. To train students to generate researchable hypotheses.</li> <li>3. To train students to plan, design and conduct scientific research.</li> <li>4. To gather reliable scientific data, analyse, and interpret.</li> <li>5. To develop skills in scientific writing.</li> </ol>
<b>Intended learning outcomes</b>	<p>At the end of the successful completion of the course, students will be able to,</p> <ol style="list-style-type: none"> <li>1. Apply the scientific method.</li> <li>2. Design a research project.</li> <li>3. Complete a research project.</li> <li>4. Describe ethical issues in scientific research.</li> <li>5. Explain the patenting process in research.</li> <li>6. Make presentations at national/international conferences.</li> <li>7. Produce a thesis conforming to the requirements of the PGIS.</li> <li>8. Write manuscripts for publication in refereed journals.</li> </ol>
<b>Content</b>	The students will conduct sufficient amount of laboratory/field work on a chosen research topic under the guidance provided by an assigned supervisor/s, make a presentation of research findings at a national/international conference, and produce a thesis.

#### Assessment criteria

Continuous assessment	End-semester examination
30%	Oral examination (20%) Thesis (40%) Conference presentation (10%)

#### Recommended Texts:

1. Backwell, J., Martin, J. (2011) A Scientific Approach to Scientific Writing, Springer.
2. Postgraduate Institute of Science (2016) Guidelines for Writing M.Sc. Project Report/M.Phil. Thesis/Ph.D. Thesis
3. Priyantha, N. (2015) Measurements and Errors in Chemical Analysis, Science Education Unit, University of Peradeniya.



## **PROGRAMME CONTENTS OF OTHER COURSES**

### **ENM 511: Environmental Biology (2 credits)**

Biosphere and major groups of plants and animals; Binomial nomenclature; Biogeographic regions and major biomes; Populations, communities and ecosystems; Energy flow and nutrient cycling (biogeochemical cycles); Adaptation of species to their habitats and available resources; Limiting factors, ranges of tolerance and distribution of biota; Resilience of environment and biota; Natural and man-made ecosystems; Mature and immature ecosystems; Major natural ecosystems of the world (aquatic and terrestrial); Major ecosystems of Sri Lanka.

### **ENM 512: Population Ecology and Human Impact on Resources (2 credits)**

Principles of Population Ecology; Population growth and carrying capacity; Population dispersal; Age structure and sex ratio; Population regulation and Life history strategies; Cyclic populations; Survivorship curves and life-tables; Interaction among organisms: Competition, Predation and co-evolution, Mutualism; Human population dynamics and Demographic Transition; People's impact on natural resources; Landuse patterns; Urbanization.

### **ENM 513: Biodiversity and Its Conservation (2 credits)**

Global biodiversity, its present degradation and decline; Biodiversity in the past; Biodiversity hotspots; Indigenous and exotic species; Endemic, Endangered and Threatened species; IUCN Red List of threatened species; Keystone and Umbrella species; Adverse impacts on biodiversity of habitat loss, overuse of resources, invasive species, pollution, and global climatic change; Viability of populations and species extinction; Island biogeography, Habitat fragmentation and loss of biodiversity; Sri Lankan biodiversity.

### **ENM 514: Tourism and Ecotourism in Sri Lanka (2 credits)**

World tourism, Trends in global tourism; Status of tourism in Sri Lanka and role of tourism in the economy; Sustainable tourism; Potential benefits and adverse impacts of tourism; Recent performance by tourist industry; Negative impacts of tourism: Encouragement for poaching of wildlife, Illegal export of wildlife and wildlife products, Stress on wildlife, Drug trafficking, Change of social and monetary values, Introduction of diseases; Effect of local diseases on foreign tourists; Principles and concepts of ecotourism; Notable characteristics of mass tourism and ecotourism; Ecotourism's benefits to local communities and its role in poverty alleviation.

### **ENM 515: Ecotouristic Potential of Sri Lanka (2 credits)**

Ecotouristic potential: Focal attractions; Complimentary attractions; Support attractions; Natural systems such as waterfalls, mountains, escarpments, coastal features and their landscaping and underlying geology; Protected Areas, Forest Reserves; Coral reefs; Botanic gardens; Zoological gardens; Elephant orphanages; Culture: Cultural background, Built culture and living culture (tangible and intangible), Cultural Triangle and World Heritage Sites, Cultural Resources Management and Environment Conservation; Constraints for developing Sri Lanka as an Ecotourism Destination; Average Ecotourist Profile and Typology of an Ecotourist.

### **ENM 516: Promotion of Ecotourism (2 credits)**

Ecotourism services: Sources of information, Infrastructure, Travel operators, Transport Facilities, Hotel and other facilities; Guides and naturalists; Guide books, maps and brochures; Recreation management; Potential for joint ecotourism with nearby countries; Financing tourism, Investment incentives and Foreign investment; Education and Training; Marketing and Promotion of Ecotourism products; Youth Development; Constraints to Tourism: Bureaucratic red tape, Language, Safety and Security problems; Health problems, Nuisance makers to tourists.

### **ENS 521: Environment Management and Sustainable Development (2 credits)**

Basic principles of management; Management of terrestrial and aquatic resources; Sustainable development; Renewable and Non-renewable Resources; Environment management and ISO 14000 series of quality standards; Participation of people of peripheral communities and other stakeholders

in management planning; Conflicts among stakeholders in management; Importance of traditional practices in management; Using management plans for decision making; Sustainable development and conservation of resources; Land use policies and legislation; State, Provincial Councils and Local Authorities, NGOs, private sector and others in management of natural resources; Management for multiple uses; Education and Research in conservation management; Resource development and Environmental Impact Assessment (EIA) in Sri Lanka.

**ENM 522: Legal Protection of Environment and Biodiversity (1 credit)**

Environmental policy, Constitutional provisions for environmental protection and management; Environmental protection by the Provincial Councils; Principles and concepts of environmental law; Practice and enforcement of environmental law in Sri Lanka; Introduction to the Acts and Statutes related to environment conservation and management. Legal instruments in environmental protection with special reference to Environmental Protection Licensing (EPL) Scheme, Load based license fee concept etc. Public participation in environmental policy-making; International conventions and protocols related to environment; Environmental ethics; Environmental education; Environmental watchdogs.

**ENM 523: Pollution of Environment and Pollution Management (2 credits)**

Air pollution: Sources and Effects of air pollution; Classes of air pollutants; Urban air pollution; Air pollution in developed and developing countries; Air quality standards; Acid rain; Photochemical smog; Global warming; Ozone layer depletion; Effects of atmospheric pollution on plants, animals, materials and human health; Water pollution: Aquatic environment and water resources; Types and sources of water pollutants; Agricultural run-off and Eutrophication; Algal toxins; Heavy metals, Pesticides; Thermal pollution; Effects of water pollution on biota; Indicator organisms; Soil and land pollution: Accumulation of solid waste; Ground water pollution; Solid waste cycles; Toxic effects and Methods of solid waste disposal: Economic, aesthetic and environmental problems pertaining to solid waste; Management of other types of waste such as biomedical, chemical and hazardous waste.

**ENM 524: Habitat Management (2 credits)**

Forest types and grasslands in Sri Lanka; Spatial distribution; Vegetation dynamics; Successional and cyclical changes; Deforestation and reforestation with special reference to Sri Lanka; Forest dieback; Forest conservation and management; Roles of the Forest Department and Department of Wildlife Conservation in forest management; Forest protection and law enforcement; Important timber species and extraction of timber and other forest produce for sustained yield; Use of maps, aerial photographs, satellite imageries; GIS, its capacity and application; Management of Wetlands; Coastal habitat Management: Coral and sandstone reefs, estuaries and lagoons, mangroves, sea-grass beds, salt marshes and sand dunes, and their management; Coastal zone developmental activities, Effects of storms and tsunamis on the coastal zone.

**ENM 525: Wildlife Management (2 credits)**

Wildlife management strategies and techniques; Categories of Protected Areas; Design, establishment and management of reserves and Protected Areas; Forest corridors; Genetically Effective Population Size (EPS); Viability of populations and Extinction of species; Concept of Minimum Viable Population (MVP); Rescue and recovery of near extinctions. Management of threatened and endangered species; *In-situ* and *ex-situ* conservation; Animal rights of captive wildlife; Mitigation of conflicts with wildlife; Economics, Politics and Ethics pertaining to conservation; Use of Protected Areas and Buffer Zones for human needs; Legislation on trading (import and export) wildlife (including ornamental species) and wildlife products; International conventions related to wildlife conservation (e.g. CITES, RAMSAR) and their relevance to Sri Lanka; Impact of biotechnology on the conservation of biota.

**ENM 527: Sri Lanka's Ecotourism Resource Base (Field-oriented) (2 credits)**

Natural phenomena: mountains (climbing); waterfalls, caves, sea (diving and surfing), rivers (boating, canoeing & kayaking and white water rafting) and lagoons (boating); Specific Tropical Rain Forests and Dry Forests and Forest plantations; Tea plantations; Ornamental plants, Medicinal plants, and

Spice plants; Specific sites to observe fauna such as Reef fauna, Butterflies, Major fish species of both freshwater and marine, Ornamental fish species, Amphibian diversity, Salient and threatened lizards and snakes, Song birds, raptors and aquatic birds, Resident and migratory birds, Large mammals and small mammals; Specific heritage sites in the Cultural Triangle; Ancient irrigation systems; Remnants of colonial influence; Traditional medicine and arts and crafts; Sites of Traditional professions, Cottage industries, Local crafts and Local produce.

## 7. PROGRAMME EVALUATION

### Evaluation of Course work

Based on the scheme given below, the overall performance of a student in a given course shall be evaluated by the respective instructor(s) and a grade shall be assigned.

#### *Evaluation Scheme*

- For all courses a minimum of 80% attendance is expected.
- The evaluation of each course (except independent study and research project) shall be based on within course and end of course examinations, and assignments. The weightage of marks given below can generally be used as a guideline in the computation of the final grade, except for Independent Study and Research Project.
 

End of course examination	50 - 60%
Continuous assessments (mid-semester examination, assignments, etc.)	40 - 50%
- Courses with laboratory and/or fieldwork shall be evaluated, where applicable, on a continuous assessment basis.
- The minimum grade a student should achieve to pass a course is C.
- Students will be informed of the evaluation scheme by the instructor at the beginning of a given course.

#### *Grade Points and Grade Point Average (GPA)*

The Grade Point Average (GPA) will be computed using the grades earned for core courses and optional courses, taken for credit.

On completion of the end of course examination, the instructor(s) is/are required to hand over the grades of a given course to the programme coordinator who will assign the Grade Points using the following table:

Grade	Grade Point
A+	4.0
A	4.0
A <sup>-</sup>	3.7
B <sup>+</sup>	3.3
B	3.0
B <sup>-</sup>	2.7
C <sup>+</sup>	2.3
C	2.0
D	1.0
E	0.0

The Grade Point Average (GPA) will be computed using the formula:

$$\text{GPA} = \frac{\sum c_i g_i}{\sum c_i}, \quad \text{where } c_i = \text{number of credit units for the } i^{\text{th}} \text{ course, and } g_i = \text{grade point for the } i^{\text{th}} \text{ course}$$

#### *Make-up Examinations*

'Make-up' examinations may be given only to students who fail to sit a particular examination due to medical or other valid reasons acceptable to the PGIS.

#### *Repeat Courses*

If a student fails a course or wishes to improve his/her previous grade in a course, he/she shall repeat the course and course examinations at the next available opportunity. However, he/she may be exempted from repeating the course, and repeat only the course examinations if recommended by the teacher-in-charge or M.Sc. Programme Coordinator. The student may repeat the same course or a substituted (new) optional course in place of the original course. A student is allowed to repeat five credits of coursework free-of-charge. The maximum number of credits a candidate is allowed to repeat is fifteen. The maximum grade a candidate could obtain at a repeat attempt is a B and he/she is allowed to repeat a given course only on two subsequent occasions.

#### **Evaluation of Research Project**

Research project will be evaluated on the basis of a written report (M.Sc. project report) and oral presentation (see Section 6.0 of the PGIS Handbook for the format of the project report).

### **8. PANEL OF TEACHERS**

	<b>Name, qualifications and affiliation</b>	<b>Area of Specialization</b>
1	Prof. C. M. Maddumabandara <i>B.A. (Ceylon), Ph.D. (Cambridge)</i> Emeritus Professor of Geography, UOP	Water Management and Environmental Science
2	Prof. O. A. Ileperuma <i>B.Sc. (Ceylon), Ph.D. (Arizona)</i> Emeritus Professor of Chemistry, UOP	Inorganic Chemistry and Environmental Chemistry
3	Prof. H. M. D. R. Herath <i>B.A. (Peradeniya), M. A. (Delhi), Ph.D. (Peradeniya)</i> Emeritus Professor of Sociology, UOP	Urban Studies, Society Environment and Culture, Development
4	Prof. P. Wickramagamage <i>B.Sc. (Ceylon), M.Sc., Ph.D. (London)</i> Emeritus Professor of Geography, UOP	Physical Geographic - Geomorphology, Pedology and climate
5	Prof. U. Edirisinghe <i>B.Sc. (Ceylon), M.Sc.(Peradeniya), Ph.D. (Peradeniya)</i> Dept of Animal Science, UOP	Animal Science

6	Prof. H. M. D. N. Priyantha <i>B.Sc. (Peradeniya), Ph.D. (Hawaii)</i> Dept. of Chemistry, UOP	Physical/Analytical Chemistry and Environmental Chemistry
7	Prof. H. M. S. P. Madawala <i>B.Sc. (Peradeniya), Ph.D. (Cambridge)</i> Dept. of Botany, UOP	Ecophysiology
8	Dr. M. W. S. K. Yatigammana, <i>B.Sc., M. Sc. (Peradeniya), Ph.D. (Queens, Canada)</i> Dept. of Zoology, UOP	Limnology and Environmental Science
9	Mr. W. M. C. S. Wijesundara <i>B.Sc., M. Sc., M. Phil. (Peradeniya)</i> Dept. of Zoology, UOP	Ecology
10	Dr. J. W. Damunupola <i>B.Sc. (Peradeniya), Ph.D. (Queensland)</i> Dept. of Botany, UOP	Horticulture
11	Dr. A. M. T. A. Gunaratne <i>B.Sc. (Peradeniya), Ph.D. (Aberdeen)</i> Dept. of Botany, UOP	Ecology
12	Dr. G. A. Nalin Suranjith <i>B.Sc. (Peradeniya), Ph.D. (Kentucky)</i> Dept. of Botany, UOP	Seed Biology and Food Science
13	Prof. S. Wijesundara <i>B.Sc., M.Phil. (Peradeniya), Ph.D. (New York)</i> National Institute of Fundamental Studies, Hantana.	Plant Ecology
14	Dr. A. M. A. S. Attanayake <i>B. Sc., M. Sc. (Peradeniya), Ph.D. (Hong Kong)</i> Royal Botanical Gardens, Peradeniya.	Plant systematics and reproductive biology
15	Mr. M. Ekanayake <i>B. Sc. (Peradeniya), PG Dip. (Peradeniya)</i> A. Baur & Co. Travel. Ltd., Colombo.	Outside Expert

## 9. PROGRAMME COORDINATORS

Prof. S. K. Yatigammana  
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