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UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF GRADUATE STUDIES

Masters in Environment Management (MEM)

By-Laws

2018

Approved by the Council

Meeting No. 541

Date 12/09/2018

UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF GRADUATE STUDIES

**Masters in Environment Management
(MEM)**

By-Laws made by the Council of the University of Colombo under section 135 of the Universities Act No. 16 of 1978 and its subsequent amendments

Whereas the University of Colombo has been conducting the program leading to the Masters in Environment Management since 2013 under its By-Laws made in that year;

Whereas the said By-Laws have been subsequently amended by the University and the said program has been conducted in terms of the said amended By-Laws and that the students have been registered under the said By-Laws whose registration is still in operation;

Whereas the University Grants Commission has published Sri Lanka Qualifications Framework (SLQF) norms, duration, credit points, etc., of different levels of academic qualifications and has impressed upon the University to revise the existing program to bring them in line with the requirements in the published Qualifications Framework;

Whereas it has become necessary to revise and revamp the program leading to the Masters in Environment Management to bring it on par with the requirements laid down in the Sri Lanka Qualifications Framework as updated and published by the University Grants Commission in 2015;

Whereas a new batch of students has been admitted to the University under the newly revised curriculum which has already been approved by the Faculty Board of the Faculty of Graduate Studies (FGS), the Senate and the Council of the University of Colombo in terms of which approval the students have been following the said revamped and revised program leading to the Masters in Environment Management;

Whereas it has become necessary to enact By- Laws to prescribe the revised and revamped curriculum and other provisions including those relating to procedural and substantive aspects of the program; and

The Council of the University of Colombo on the recommendation of the Senate and the Faculty Board of the Faculty of Graduate Studies of the University of Colombo makes the following By-Laws.

By- Laws

1. (1) These By-Laws may be cited as the Masters in Environment Management (MEM) No. ¹⁵ of 2018.
- (2) These By-Laws shall be deemed to have come into operation with effect from 01st October 2017.

PART I - GENERAL

2. Subject to these By-Laws a person may be awarded the degree of Masters in Environment Management (hereinafter referred to as the "MEM" Degree) if she / he has:
 - (a) been duly registered for the MEM program for the period prescribed by these By-Laws;
 - (b) pursued the program of study in the University to the satisfaction of the Vice- Chancellor as prescribed by these By- Laws, and other Regulations and Rules of the University;
 - (c) satisfied the examiners on all forms of assessment including continuous assessments (such as assignments, etc.), semester-end examinations and independent study component;
 - (d) paid the registration, tuition, supervision, examination, library and other fees and deposits as may be payable by the candidate to the University;
 - (e) ensured that the registration continues to be in force; and
 - (f) fulfilled all other requirements prescribed by these By-Laws and the Rules and Regulations of the University.
3. (1) Applications for registration for the program leading to the MEM shall be invited by notice in the newspapers and/or on the University notice board and/or on-line through the website/internet.
- (2) A person who wishes to follow the program leading to the MEM Degree shall make an application through the conventional and/or on-line mode to the Registrar when the said program is advertised.
- (3) The application shall be on the prescribed form providing the information as the candidate shall be required to submit, including the candidate's qualifications for undertaking the program of study.
4. There shall be a Coordinator for the program and she/he shall be appointed by the Dean of the Faculty of Graduate Studies (FGS).
5. The relevant Registrar in charge of the subject shall the applications received refer to the Coordinator of the program. The Coordinator, having examined the applications for necessary

minimum qualifications, shall call the eligible candidates for a selection test and/or an interview to be conducted by a panel including the Dean, FGS, and the Program Coordinator on which selections may be made. The list of candidates so selected shall be recommended to the Senate through the Board of Studies of Professional Studies (BSPS) and the Faculty Board of the FGS (hereinafter the Faculty Board).

6. No candidate shall be eligible for admission to the program leading to the MEM Degree, unless she/he has the following requirements as per the SLQF 2015:
 - (i) A Bachelor's degree from a recognized University/Institution in Environment Management; or
 - (ii) Any other Bachelor's Degree, with prior learning/work experience in Environment Management; or
 - (iii) Postgraduate Diploma (SLQF 8) from a recognized University/Institution or an equivalent qualification acceptable to the Faculty Board and the Senate of the University with prior learning/work experience in Environment Management; or
 - (iv) Professional qualification in Environment Management from a recognized professional body which is acceptable to the Faculty Board and the Senate of the University with prior learning/work experience in Environment Management; or
 - (v) Completion of NVQ level 7 (Equivalent to Bachelor's degree in SLQF) with relevant work experience in Environment Management as determined by the Faculty Board and the Senate of the University.

And

A good knowledge of English language and satisfactory performance at a selection test and/or a selection interview.

Each application under clause (v) shall be considered on its merit.

7. If the number of persons who have applied and/or who are registered for the study program in any given academic year is not sufficient, in the opinion of the Faculty Board, to make the conducting of the study program financially viable, the Faculty Board reserves the right not to conduct the program, subject to the University refunding any fees except the application fees, that may have been received from candidates.
8. (1) On acceptance of the candidature by the Faculty Board and the Senate, a person shall forthwith register as a postgraduate candidate for MEM Degree of the University upon payment of the prescribed registration, tuition, examination, library and other fees and/or deposits.
 - (2) Unless otherwise decided by the Faculty Board, the minimum period of registration for the MEM program shall be one academic year and the maximum period shall not exceed

three academic years counted from the date of commencement of the program. The initial registration (herein after referred to as first period of registration) shall be valid for an academic year from the date of commencement of the program.

- (3) The registration for MEM program shall be deemed to have lapsed at the expiry of its period of validity. A candidate whose registration has so lapsed may renew her/his registration for a further period of another academic year subject to Clause 17 (3), provided the BSPS and the Faculty Board consider her/him eligible for such registration. However, no registration shall be renewed after the expiry of two academic years from the end of the first period of registration. Any such candidate may seek registration for the MEM program as a fresh candidate if she/he failed to obtain the MEM Degree after the expiry of the maximum period of registration (i.e. three years), in competition with new applicants under the regulations and rules in force at the time of seeking such fresh registration.
 - (4) Notwithstanding anything stated to the contrary, the University shall have the right to cancel at any time the registration of a candidate for the program after due process and for cause assigned.
 - (5) A person who is registered as a candidate for the program shall devote her/his time to her/his studies at the University.
9. No student shall abstain from participating at classes (lectures, discussions, seminars etc.) or leave the island, or withdraw from examination or a classroom test whether conducted through the conventional mode and/or information communication technology driven on-line mode or a combination of multi-modes, without prior approval from the Faculty Board of the FGS.

PART II – STRUCTURE OF THE PROGRAM

10. (1) The program leading to the MEM Degree, unless otherwise decided by the Senate on the recommendation of the Faculty Board for special reasons, shall be one academic year with eight (08) courses of 25 total credits, and an Independent Study component of 7000-8000 words which carries 05 credits, offered in two semesters as prescribed in the Schedule.
- (2) The titles of the courses, syllabi, course codes, credit values and other details are those set out in the Schedule and the Senate shall have power, on the recommendation of the Faculty Board to amend, add to, delete from or vary the courses, their titles, syllabi, course

codes, credit values and other details of the program. Such amendments shall come into effect after due notice .

11. The Program of Study and Examinations leading to the MEM Degree shall be conducted in the conventional mode and/or through the information communication technology driven on-line mode or a combination of multi-modes and these By-Laws, and other relevant By-Laws, Rules and Regulations passed by the University shall be so applied and interpreted in order to facilitate the effective conduct of the study program without compromising its integrity and quality.
12. The medium of instruction and examination shall be English.
13. The Senate, on the recommendation of the Faculty Board shall appoint a Board of Examiners to conduct examinations and assess the performance of candidates.

PART III

SCHEME OF EVALUATION AND

CRITERIA FOR PASS, MERIT, DISTINCTION OR INCOMPLETE

14.
 - 14.1 Each course shall carry a maximum of 100 marks. The evaluation of a candidate's performance at each of the courses shall take the forms of continuous assessments and End-of-Semester written Examinations.
 - 14.2 In each of the taught courses 50 percent of the maximum mark shall be based on continuous assessments which assess the performance of the candidate at assignments, classroom tests, quizzes, reports, discussions, seminars, oral presentations, etc..
 - 14.3 The balance 50 percent of marks shall be used for assessing the performance of the candidates at the end of semester closed book written examination in an examination hall setting.
15.
 - 15.1 The candidates may be evaluated in respect of continuous assessments by the teachers concerned.
 - 15.2 The end of semester written question papers of the courses shall be prepared, as far as possible, by the relevant teachers and moderated by an expert of the subject.
 - 15.3 The examination of written answer scripts of the End of Semester Examinations and the Independent Study shall be assessed by two independent examiners appointed by the Senate, on the recommendation of the Faculty Board .
16. The End of Semester Examination of each Semester shall be as held far as possible at the end of the relevant Semester, unless the Senate on the recommendation of the Faculty Board,

decides otherwise.

17. (1) A candidate shall take the End-of-Semester Examination at the very first occasion when it is held for the Semester after the completion of lectures and other forms of instruction.
- (2) Any candidate who fails to take the End-of-Semester Examination at the very first occasion when it is held for the Semester after the completion of lectures and other forms of instruction shall, unless excused on medical grounds or any other valid grounds approved by the Senate on recommendation of the Faculty Board, be deemed to have exhausted an attempt at taking the Examination when calculating the total number of attempts at which a candidate can take the Examination.
- (3) No candidate shall be eligible to take the End-of-Semester Examination on more than three occasions (attempts) and in calculating the number of occasions (attempts) a candidate is eligible to take the Examination, the deemed attempt as referred to in sub-Clause (2) above shall also be taken into account.
18. (1) A person shall not be permitted to take the End- of Semester Examination unless she/he has:
- (i) been duly registered as a MEM candidate from the commencement of the academic year for which the examination is held;
 - (ii) satisfied the attendance requirements at lectures, seminars etc. as prescribed by the Faculty Board;
 - (iii) has ensured that she/he has paid the necessary examination fees and made other payments to the University duly in respect of the entire Examination or those courses which he/she has been required to take, as the case may be;
 - (iv) registered with the Examinations Branch of the University for the Examination she/he intends to sit; and
 - (v) duly applied for the examination in accordance with the prescribed manner.
- (2) A candidate shall be issued the relevant admission card by the University to enter the Examination Hall where the End-of-Semester Examination is held once she/he satisfies the requirements mentioned in the Sub-Clause (1) above.
- (3) All the rules relating to the examinations and assessments as contained in the Examination Procedure, Offences and Punishment Regulation No. 1 of 1986, and its subsequent amendments shall *mutatis mutandis* apply to the MEM examinations as well.
- (4) Without prejudice to the generality of the Regulation No. 1 of 1986, rules relating to different forms of on-line assessment and Class Room Tests shall be formulated and

implemented by the Coordinator and the relevant course teacher.

- (5) Any matters relating to such rules shall be decided by the Faculty Board on the recommendation of the Coordinator and the Board of Studies of Professional Studies . Such rules may vary from course to course as well as from year to year. Such rules shall be tabled at the Faculty Board as soon as possible.
 - (6) No change of these rules can take place without giving adequate notice to the candidates of the program.
19. (1) Rules relating to assignments, presentations, class-room tests and other examinations shall be announced, from time to time, by the program Coordinator in consultation with the teachers concerned and the Dean,FGS with the approval of the BSPS and Faculty Board and such rules shall not be changed or revoked unless otherwise decided by the Faculty Board.
- (2) The Senate, on the recommendation of the Faculty Board, shall have the power to set down the rules governing the conduct of examinations and assessments as well as to deal with any situation for which rules have already not been made.
20. (1) Each of the Eight (08) taught courses and the Independent Study component shall carry a maximum Grade Point Value (GPV) of 4.00.
- (2) A candidate's performance in each of the courses shall be graded according to the following scheme and the calculation of Grade Point Average (GPA) is carried out considering the Grade Point Value for each such course and Credits allocated accordingly.

Scheme of Assessment

Range of Marks	Grade	Grade Point Value	Pass/ Not completed
90-100	A ⁺	4.00	Distinction
80-89	A	4.00	
75-79	A-	3.70	
70-74	B ⁺	3.30	Merit
65-69	B	3.00	Pass
60-64	B ⁻	2.70	
55-59	C ⁺	2.30	Not Completed
50-54	C	2.00	
45-49	C ⁻	1.70	
40-44	D ⁺	1.30	
30-39	D	1.00	
00-29	E	0.00	

(Source: UGC Circular No. 901)

$$GPA = \frac{\sum_{i=1}^n GPV_i C_i}{\sum_{i=1}^n C_i}$$

Where GPV_i and C_i are the Grade Point Value earned and credit values allocated respectively for the n^{th} courses. Any calculated GPA shall be rounded to the second decimal place.

21. A candidate shall be deemed to have been successful at the examination leading to the award of the MEM Degree if she/he obtains a Grade Point Value of not less than 2.70 each for all the taught courses totaling 25 Credits and for the Independent Study component.
22. A candidate who has been successful at the examination leading to the award of the MEM Degree may be awarded a Distinction Pass at the examination if she/he obtains a minimum Grade Point Average (GPA) of 3.70 or more during the first period of registration.
23. A candidate who has been successful at the examination leading to the award of the MEM Degree may be awarded a Merit Pass at the examination if she/he obtains GPA score between 3.30 and 3.69 during the first period of registration.
24. (1) A candidate shall be deemed to have an incomplete result in one or more taught courses and independent study of the MEM program if she/he obtains a GPV of less than 2.70.
(2) A candidate who has incomplete result having obtained a GPV of less than 2.70 in any taught course/s during a particular semester shall repeat the written examinations of the respective course/s at the next available occasion. Such candidates shall be given the option of carrying forward the continuous assessment marks earned for that respective course/s conducted during the particular semester.
(3) A candidate who obtains a GPV of less than 2.70 in the Independent Study shall be considered unsuccessful and incomplete in the Independent Study and shall re-submit the Independent Study within a period of one year.
(4) A candidate who has an incomplete result may successfully complete the examinations, including the Independent Study where it is applicable, leading to the MEM programme if she/he satisfies the requirements prescribed in section 21 above.
25. A candidate with incomplete results shall be eligible for two further attempts provided she/he has a valid registration. She/ he shall take the courses in which she/he has

incomplete result/s on the very next occasion when the examination is held provided that she/he is eligible to take the examination.

26. The University shall announce through notification the names of candidates who have passed the MEM examination and those who have incomplete results in the MEM examination after completing the whole examination.

PART IV - MISCELLANEOUS

27. (1) The fees for application, tuition, examination, and repeat examination, library facilities shall be determined from time to time by the Council of the University. The fees paid shall under no circumstances be refunded, except under section 7 of these By-laws.
- (2) There shall be additional fees charged from repeat candidates as determined by the Faculty Board and the Council depending on the expenses to be incurred by the University to service their repeat attempts in the instruction and examination processes.
- (3) The fee payable for a certificate or statement of results or transcripts shall be determined by the Council.
- (4) A fee shall be charged for replacement of a lost student identity card or lost library card at rates determined by the Council.

PART V - TRANSITIONAL PROVISIONS

28. (1) Notwithstanding anything contained in these By-Laws, the candidates who have already been registered under the provisions of the By-Laws of MEM No 1 of 2013 as amended subsequently (hereinafter referred to as the 2013 By-Laws) shall be entitled to continue their program under and subject to those provisions. To that extent the provisions of the MEM By-Laws of 2013 as amended subsequently shall be operative temporarily.
- (2) Any candidate who has already been registered for the MEM program under the 2013 By-Laws shall enjoy a transition period of three years within which they shall be governed by those provisions to complete their program according to the requirements of the MEM program.
- (3) The candidates who have been registered for the MEM program under the 2013 By-Laws and who have not successfully completed the requirements for the award of the MEM

under those provisions (the MEM program) may within a period of one year from these By-Laws come into effect apply to the University that they be considered for transfer to the program under the present By-Laws.

Provided that the Council reserves the right either to decline such request or to permit such request subject to such conditions as it may deem necessary to impose on the recommendations of the Faculty Board and the Senate.

29. (1) The Council, on the recommendation of the Senate and the Faculty Board may consider granting an exemption from following a course/courses and taking the examination of the course/courses, subject to such conditions as it may deem fit and proper. This decision shall be made by the Council on a case-by-case basis and its decision shall be final.
- (2) The Council retains the discretion to deny any request made under sub-Clause 29.1 above if it thinks that granting the facility will be prejudicial to the interests of any stake holders.
30. The Vice Chancellor of the University shall have the authority, in consultation with the Dean of the FGS, to take such actions or give such directions not inconsistent with the spirit and principles underlying the provisions of these By-Laws as appears to her/him to be necessary or expedient for the purpose of removing any difficulties that may arise in the interpretation of the provisions or for which there is no provision in these By-Laws or in the case of students who had followed or have been following the MEM Program under the earlier arrangements and/or By-Laws.

PART IV- INTERPRETATIONS

30. In these By-Laws unless the context otherwise requires

“Council” means the Council of the University of Colombo constituted by the University Act. No. 16 of 1978. (as amended).

“Senate” means the Senate of the University of Colombo constituted by the University Act. No. 16 of 1978 (as amended).

“Faculty” means the Faculty of Graduate Studies

“Faculty Board” means the Faculty Board of the Faculty of Graduate Studies

“Registrar” means the Registrar, the Acting Registrar, Deputy Registrar or any other officer authorized to sign for and on behalf of the Registrar of the University of Colombo.

“Application” means an application for registration or for entry to an examination.

“Board of Studies” and “BSPS” means the Board of Studies of Professional Studies of the FGS relevant to the above postgraduate degree programme.

31. Any question regarding the interpretation of these By-Laws shall be referred to the Council and whose decision thereon shall be final.

SCHEDULE

Masters in Environment Management (MEM)

SLQF Level 09

The program of study leading to the Masters in Environment Management shall offer the subjects as given below in the academic year (Semester I & II).

Academic year	Code of Course modules	Name of Course Module	Number of credits
Semester I	MEM 6101	Natural Resources and Environment Management	03
	MEM 6102	Industrial Resources and Environment Management	03
	MEM 6103	Environment Tools for Management	03
	MEM 6104	Research Methods	03
Semester II	MEM 6201	Global Environmental Issues, their Implications and Mitigation	04
	MEM 6202	State Policies and their Implications on the Environment	04
	MEM 6203	Environmental Law	02
	MEM 6204	Climate Change Impacts, Mitigation and Adaptation	03
	MEM 6205	Independent Study	05
Total Credits			30

Course Title	Natural Resource and Environment Management		
Course Code	MEM 6101	Notional Hours	150 Hours
No of Credits	3.0 Credits		Lectures, Class discussions, Tutorials, Guided/ Self-learning, and related evaluation
Pre-requisites Course Codes	None		
Course Type	Compulsory		
Course Description: This course will provide the students with a sound knowledge on types of renewable and non renewable natural resources and their importance in maintaining life on earth, threats to water, soil, vegetation and wildlife resources due to unplanned human actions, and management aspects for sustainable use. The dimensions of sustainable economic growth and development, planning concepts and resource economics will also be introduced to students.			
Learning Objectives: 1. To familiarize with natural resources and their importance 2. To understand the current status of natural resources and the need for their sustainable use 3. To describe the economic aspects of resource management 4. To appreciate the current trends in management of water, energy, forest and soil resources .			
Learning Outcomes: Upon completion of this course, students will be able to 1. discuss the reasons for depletion and degradation of natural resources 2. explain economical concepts and theory in natural resource management 3. suggest measures to mitigate depletion and degradation of water, soil, energy and forest resource			
Course Contents			Aligned Learning Outcomes
Renewable and non renewable resources. Energy, Water, Soil Vegetation and Wildlife, Oceans as a natural resources. Planning concepts and definitions in natural resource management. The economic dimensions of sustainable economic growth and development and resource economics: Management of Energy, Water, Soil Vegetation, Wildlife and Marine Resources.			1,2,3
Evaluation Method			Weight
Continuous Assessments			40 %
End of Semester Examination			60%
Major reading: 1. Daniel, R. Lynch (2009): Sustainable Natural Resource Management for Scientists and Engineers. Cambridge University Press. 2. Michael, J. Conroy and James, T. Peterson (2009): Decision Making in Natural Resource Management-A Structured, Adaptive Approach. Wiley-Blackwell.			

Course Title	Industrial Resource and Environment Management		
Course Code	MEM 6102	Notional Hours	150 Hours
No of Credits	3.0 Credits		Lectures, Class discussion, Tutorials, Self/Guided reading, and related evaluation
Pre-requisites Course Codes	None		
Course Type	Compulsory		
Course Description: This course will provide the students with knowledge and understanding of the efficient management and eco friendly practices in material and energy flow, releasing industrial wastes, increasing the efficiency of production, reducing environment risks and strengthening occupational health and safety of workers in the industrial environment.			
Learning Objectives			
<ol style="list-style-type: none">1. To identify the need for an efficient and cleaner industrial practices for sustainable development2. To describe the procedures for efficient material and energy flow, eco friendly disposal and recycling technologies of industrial waste3. To discuss methods of occupational hygiene and practices adopted in the working environment			
Learning Outcomes			
Upon completion of this students will be able to			
<ol style="list-style-type: none">1. Understand the need for an efficient and cleaner industrial processes2. Appraise the procedures adopted for sustainable use of raw materials and energy3. Describe the occupational health and safety procedures and practices of workers4. Review industrial waste management practices5. Design appropriate strategies for efficient use of raw materials, recycling of waste, conservation of energy and occupational hygiene practices for various industrial sectors			
Course Contents			Aligned Learning Outcomes
Industrial products, processes and evaluation of eco-efficiency,. Material and Energy flow in industries. Environment risks and Health hazards and Occupational Health. Generation of waste and Waste management. Energy consumption and conservation. Historical developments, trends and prospects for managing industrial resources.			1,2, 3,4,5
Evaluation Method			Weight
(a) Continuous Assessments			40 %
(b) End of Semester Examination			60%
Major reading:			
<ol style="list-style-type: none">1. Gupta Amit (2006). Industrial Safety and Environment. Laxmy Publications (Pvt)Ltd, Bangalore.2. Singh M. Ohiji T.Asthana R. (2016). Green and Sustainable Manufacturing of Advanced Material. Elsevier, Netherlands			

Course Title	Tools for Environment Management		
Course Code	MEM 6103	Notional Hours	150 Hours Lectures, Class discussion, Tutorials, Self-learning, Guided readings, and related evaluation
No of Credits	3.0 Credits		
Pre-requisites Course Codes	None		
Course Type	Compulsory		
Course Description: This course will provide the students with a sound understanding as to how the environmental performance can be assessed against various developments using suitable indicators, processes and techniques. It will also address the importance in environmental education to inculcate attitudes and habits in human community to care and protect the environment from unplanned human activities.			
Learning Objectives To acquire knowledge of environment tools that are being used to assess environment performance in sustainable development in relation to environmental accounting, cleaner production. risk analysis. Evaluation of environmental impacts, and to demonstrate the role of environmental education in effective environment management.			
Learning Outcomes At the end of the course students will be able to 1. Describe various environmental performance indicators, processes and procedures adopted in sustainable development 2. Suggest suitable environmental tools for various development sectors 3. Appreciate the value of environmental education			
Course Contents			Aligned Learning Outcomes
Sustainable development, Indicators of Environment quality, Environmental management system (EMS). Environmental Accounting, Green budgeting and Auditing, ISO standards, Cleaner production. Environmental Risk Analysis. Strategic Environment and Environmental Impact Analysis. Economics of Environment planning and management. Green buildings for sustainable development. Environmental education.			1,2,3
Evaluation Method			Weight
(a) Continuous Assessments			40 %
(b) End of Semester Examination			60%
Major reading: (1) Cannier Larry (1996). Environmental Impact Assessment, New York: McGraw Hill. (2) Bakshi T. S. Naveh Z.(2013). Environmental education, Plenum Press, London (3) Calow P. P. (1998). Handbook on Environment Risk Assessment and Management, Blackell Science Ltd. (4) Sheldon. C. Yoxton. M (1999)Environmental Management Systems.Earthscan, London			

Course Title	Research Methods		
Course Code	MEM 6104	Notional Hours	150 hours
No. of Credits	03		Formal lectures, class room discussions, computer laboratory sessions, participant's oral presentations
Pre-requisites Course Codes	None		
Course Type	Core		
Course Description: The course is expected to inculcate appropriate attitudes in students for conducting effective research in the field of Environment Management. This course attempts to familiarize students with the approaches and methods for multidisciplinary research in environment management. Guidance will be provided on identifying the research topic, formulating research questions and objectives, conducting a literature review, sampling and data collection techniques, data analysis using statistics, presentation of results. Students will work on developing a research proposal.			
Learning Objectives			
<ol style="list-style-type: none">1. Make aware of research in the fields of natural sciences, economics and sociology in environment management and ethical conduct in research2. Educate on the research process, conducting a literature review, setting research questions and objectives, sampling techniques, data collection and statistical analysis of data3. Familiarize with academic writing4. Identify a research problem related to environment management and develop a research proposal.			
Learning Outcomes			
At the end of the course, students will be able to: <ol style="list-style-type: none">1. Understand the distinct focus of research in natural sciences, economics and sociology2. Critically review the scholarly articles, identify gaps in research3. Discuss the methods of data collection and analysis, generating new information4. Formulate aims and objectives, establish a research framework in relation to the research problem/topic being studied (developing a research proposal)			
Course Contents			Aligned Learning Outcomes
How to select a research topic and formulate research questions and objectives. Introduction to research approaches in natural sciences, sociology and economics and appropriate research designs. Searching literature for research. Data collection and sampling methods. Use of statistics in research. Writing reports and dissertations: Ethical concerns of research, Developing a research proposal.			1, 2 3, 4
Evaluation Method			Weight
(a) End of Semester Examination			60%
(b) Development of a Research Proposal			40%
Major Reading:			
<ol style="list-style-type: none">1. Abebe, A. Daniels, J. McKean, J.W., Kapenga J.A. (2001). Statistics and Data analysis. Western Michigan University. E book2. Recent scholarly articles relevant to the research topic			

Course Title	Global Environmental Issues, their Implications and mitigation		
Course Code	MEM 6201	Notional Hours	200 Hours
No of Credits	4.0 Credits		Lectures, Class discussion, Tutorials, Self/ guided readings, and related evaluation
Pre-requisites Course Codes	None		
Course Type	Compulsory		
Course Description: This course will provide the students with knowledge and understanding on global environmental issues, their implications on the environment international and national co-operation and coordination for mitigation of the threats to the environment.			
Learning Objectives			
<div>1. Enhance the knowledge on the key issues and links between economic development and environmental management</div> <div>2. Provide an in-depth knowledge on global environment issues and their implications on natural resources and socio-cultural environment.</div> <div>3. Familiarize with the multinational agreements and national co-operation for mitigation of the threats to the environment.</div>			
Learning Outcomes			
<div>At the end of this course, students will be able to</div> <div>1. Identify the paradigm between development and environment management</div> <div>2. Understand the global environmental issues and their implications on the environment</div> <div>3. Describe the role of global, regional multilateral agreements and national level corporation in mitigating detrimental impacts to the environment</div>			
Course Contents			Aligned Learning Outcomes
In depth studies of global environment issues such as climate change, pollution, habitat and species loss, desertification, environment degradation, El- Nino effects, overexploitation, biological invasions, human-animal conflict, use of genetically modified organisms, bio-piracy etc. Economic development and Conservation. Multilateral agreements at global, regional level, and national collaborations for mitigation of environment issues.			1, 2,3
Evaluation Method			Weight
(a) Continuous Assessments			40 %
(b) End of Semester Examination			60%
Major reading:			
<div>(1) Barbier (1987): The concept of sustainable development. Environmental Conservation, 14(2).</div> <div>(2) Oswald, J. Schmitz (2007): Ecology and Ecosystem. Conservation Island Press.</div> <div>(3) Redcliff (1992): The Meaning of Sustainable Development. Geo forum, 23.</div>			

Course Title	State Policies and their Implications on the Environment		
Course Code	MEM 6202	Notional Hours	200 hours
No of Credits	4.0 Credits		Lectures, Class discussion, Tutorials, Self/guided readings, and related evaluation
Pre-requisites Course Codes	None		
Course Type	Compulsory		
Course Description: This course will provide the students with the knowledge and understanding of the state policies related to sustainable exploitation of the natural resources and protection of the environment, and theories of policy making for sustainable development;			
Learning Objectives: <div>1. Introduce policies related to the sustainable exploitation of the natural resources and protection of the environment.</div> <div>2. Describe how policy agendas emerge and evolve, the drivers and barriers influencing policy development, institutional structures for environmental policy making, stakeholder engagement, and the implementation of environmental policies.</div>			
Learning Outcomes: At the end of the course, students will be able to <div>1. Identify key policies that focus on sustainable exploitation of the natural resources and protection of the environment</div> <div>2. Understand the economic concepts and principles of environmental policy development</div> <div>3. Familiarize with the analytical tools and methodology adopted to design and evaluate policies</div>			
Course Contents			Aligned Learning Outcomes
Policies relating to key environmental Challenges, advanced technologies such as genetic transformation and nano- technology, sustainable exploitation of the natural resources, and protection of the environment. Introduction to theories of public policy. Rationale for public policy and market failure, methodology and tools used for public policy development and analysis. Policy implementation.			1,2,3
Evaluation method			Weight
(a) Continuous Assessments			40 %
(b) End of Semester Examination			60%
Major readings: (1) World Bank (1992): World Development Report. Development and the Environment. Oxford: Oxford University Press. (2) World Wide Fund for Nature (2004): Living Planet Report 2004.Gland, Switzerland. (3) World Resource Institute (WRI) (2000): World Resource 2000-2007. World Resource Institute, Washington, DC. (4) Scholarly articles relevant to the topics			

Course Title	Environmental Law		
Course Code	MEM 6203	Notional Hours	100 Hours
No of Credits	2.0 Credits		Lectures, Class discussion, Tutorials, Self-learning, Guided readings, and related evaluation
Pre-requisites Course Codes	None		
Course Type	Compulsory		
Course Description: The course will provide students with the knowledge of the principles of environmental Law, domestic legal provisions available to regulate and impose legal constraints on environmental management and land use planning and the principles and rules of international law aiming the protection of the environment.			
Learning Objectives To provide the knowledge on the Principles of Environmental Law, Environmental Rights, Common Legal Mechanisms for Environmental Protection, Principal areas of Environmental Law-e.g. Water, Air, Soil, and Market based instruments for environmental management.			
Learning Outcomes At the end of the course, students will be able to 1. Describe basic legal principles and practices pertaining to environment management 2. Appreciate and apply appropriately the principles of environmental law, domestic legal provisions and the principles and rules of international law for the protection of the environment.			
Course Contents		Aligned Learning Outcomes	
The Process of developing national legislation. Legal aspects of sustainable development. Human rights and environmental rights. Legislation related to pollution control, aquatic resources, biodiversity, climate change. Sustainable tourism and legal aspects, Conflicts and legislation. Overlaps and loopholes in legislation in Sri Lanka. Case studies.		1, 2	
Evaluation Method		Weight	
(a) Continuous Assessments		40 %	
(b) End of Semester Examination		60%	
Major reading: (1) Atapattu S., (2006): Emerging Principles of International Environmental Law, Transnational Publishers. (2) Birnie B. and Boyle A., (2009): International Law and the Environment, (3rd ed.) Oxford University Press: Oxford. (3) Environmental Foundation Ltd, Judges and Environmental Law: A Handbook for the Sri Lankan Judiciary (2009) (4) Puvimanasinghe S. (2007): Foreign Investment, Human Rights and the Environment: a Perspective from South Asia, Martinus Nijhoff publishers.			

Course Title	Climate Change Impacts, Mitigation and Adaptation		
Course Code	MEM 6204	Notional Hours	150 Hours
No of Credits	3.0 Credits		Lectures, Class discussion, Tutorials, Self-learning, Guided readings, and related evaluation
Pre-requisites Course Codes	None		
Course Type	Compulsory		
Course Description: This course will provide the students with a sound knowledge and understanding of the scientific and social issues on global climate change, its impact on development, measures for mitigation and adaptation.			
Learning Objectives			
<ol style="list-style-type: none">1. Introduce the scientific and social issues responsible for global climate change2. Study the pattern of climate change and its future projections3. Educate students on direct and indirect effects of climate change on development.4. Describe the measures taken for climate change mitigation and adaptation by various sectors			
Learning Outcomes			
At the end of this course, the students will be able to			
<ol style="list-style-type: none">1. Identify the reasons and patterns of global climate change process2. Understand impacts of climate change on development3. Describe measures and practices on climate change mitigation and adaptation			
Course Contents			Aligned Learning Outcomes
Climate change patterns and projections, forecast and information systems. Carbon foot print. Greenhouse gas (GHG) emissions. Economics of climate change mitigation and adaptation. Vulnerability assessment. Carbon sequestration. Recent developments in climate adaptation of sectors such as Agriculture, Forestry and Biodiversity, Coastal and Fisheries, Health etc.			1,2,3
Evaluation Method			Weight
(a) Continuous Assessments			40 %
(b) End of Semester Examination			60%
Major reading:			
<ol style="list-style-type: none">(1) Mann, Michael E., and Lee R. Kump, (2009): Dire Predictions: Understanding Global Warming. Dorling Kindersley Limited.(2) Philander, S. George (2000): Is the Temperature Rising? The Uncertain Science of Global Warming. Princeton University Press.(3) Smith, Mike, (2010): Warnings: The True Story of How Science Tamed the Weather, Greenleaf Book Group Press.			

Course Title	Independent Study		
Course Code	MEM 6209	250 Notional Hours	Lectures, Class discussions, Self/ guided reading, oral presentations, and related evaluation
No of Credits	5.0 Credits		
Pre-requisites Course Codes	Research Methods MEM 6104		
Course Type	Compulsory		
Course Description: The independent study is undertaken by the students after following research methods course. The student will select an appropriate topic relevant to Environment Management. Using the knowledge gained from the pre requisite course of investigative skills, high level of theoretical engagement supported by literature, applicable methodology will be demonstrated in this course.			
Learning Objectives			
1. To demonstrate thorough understanding of theoretical knowledge 2. To be able to display critical awareness of their subject area 3. To be able to deal with complex issues systematically and creatively			
Learning Outcomes			
At the end of the course the students will be able to 1. Demonstrate self-direction and originality in tackling and solving problems 2. Make sound judgments and communicate decisions clearly to others 3. Plan and implement tasks at professional level			
Course Contents		Aligned Learning Outcomes	
Selection of suitable research topic, research proposal presentation writing of the Literature Review, methods and/or theoretical underpinning, analysis/discussion and conclusion		1,2,3	
Evaluation Method:		Weight	
Two independent examiners approved by the Senate		100%	
Major reading:			
1. Gregory G. Colomb, Joseph M. Williams, and Wayne C. Booth (1995) <i>The Craft of Research</i> 2. Scott R. Matkovich APA Made Easy (3 rd edition) 2013 3. https://writingcenter.fas.harvard.edu/pages/developing-thesis 4. ROBERT WOOD JOHNSON FOUNDATION QUALITATIVE RESEARCH GUIDELINES PROJECT, http://www.qualres.org/ Grand Canyon University: Arizona 5. https://cirt.gcu.edu/research/developmentresources/research_ready/qualitative/approaches 6. Literature on qualitative methods http://www.unicef-irc.org/publications/pdf.iwp_2009_05.pdf			

Graduate Profile

Subject Specific Outcomes
Knowledge Comprehensive understanding of high level of theoretical engagement supported by literature.
Skills Development of investigative skills of a selected researchable topic applying relevant methodology effectively in the field of conflict and peace Integrate some research skills into peace practice.
Attitudes Applying theories to a practical scenario or contemporary emerging conflicts and look for viable and potential solutions in order to have sustainable peace well as the core values and qualities that may make them more effective demonstrate good practices and success stories locally, nationally and globally.
Mind-set and Paradigm Theoretical knowledge and practical problems – compatibility concerns and interpret relevant theories and concepts to resolve local problems and convinced by theoretical approaches as those approaches will produce ideal and peaceful solutions to conflicts.
