ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

MANGALORE UNIVERSITY

ಕುಲಸಚಿವರ ಕಛೇರಿ
ಮಂಗಳಗಂಗೋತ್ರಿ – 574 199
Office of the Registrar
Mangalagangothri – 574 199

ಕ್ರಮಾಂಕ/ No. : MU/ACC/CR. 19/2022-23/A8

ದಿನಾಂಕ/Date:05/12/2022

NOTIFICATION

Sub: Revised Syllabus of Environmental Studies under NEP-2020 reg.

Ref: 1.Vice Chairman, KSHEC, Bengaluru email dated17/11/2022
2. Vice Chancellor's approval dated:03/12/2022

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The Revised Syllabus of Environmental Studies as a Ability Enhancement Compulsory Course for I/II semester Under Graduate Programmes under NEP 2020 is hereby notified for implementation with effect from the academic year 2022-23 onwards, subject to the ratification of the Academic Council.

Copy of the Syllabus should be downloaded from the Mangalore University website. www.mangaloreuniversity.ac.in

05/12/22

For REGISTRAR.

To:

1) The Principals of all the colleges affiliated to Mangalore University.
2) The Registrar (Evaluation), Mangalore University.
3) Prof. Jayaraj Amin, Chairman UG BOS in Environmental Studies, Chairman Dept. of Political Science, Mangalore University
4) The Assistant Registrar/The Superintendent, Academic Section, O/o the Registrar, Mangalore University.
5) The Director, DUIMS, Mangalore University – with a request to publish in the Website.
6) Guard File
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ENVIRONMENTAL STUDIES

Ability Enhancement Compulsory Course (AECC) under NEP-2020

Total Contact Hours: 4**5**	Course Credits: **3**
No. of Teaching Hours/week: **3**	Duration of ESA/Exam: **2** Hours
Formative assessment Marks: **40**	Semester end assessment Marks: **60**

Course Objectives:

1. To make students realize the importance and their role in the protection and maintenance of a healthy environment for sustainable development.
2. To enable students to grasp the significance and issues related to ecosystems, biodiversity and natural resources, and ways of managing/ protecting them.
3. To enable students to have a nuanced understanding of environmental pollution, solid waste management and climate change and to act with concern on environmental issues.
4. To make students aware of the environmental policies and movements for educating and inspiring the young minds.

Learning Outcomes:

At the end of the course, students will –

1. Understand the importance and dimension of a healthy environment, become environmentally conscious, skilled and responsible in all their actions with a concern for sustainable development.
2. Comprehend the significance and issues related to ecosystems, natural resources and bio-diversity and become aware of the need and ways to protect/ preserve them.
3. Grasp the issues related to environmental pollution, solid waste management and climate change, and become conscious and proactive in the discharge of their responsibilities towards the environment.
4. Become aware and appreciate the values and concerns of environmental movements and policies; and act responsibly on environment-related issues.

ENVIRONMENTAL STUDIES

Content		45 Hours
Unit 1	**Chapter 1: Introduction to Environmental Studies:** • Scope and importance; Concept of sustainability and sustainable development. • Multidisciplinary nature of environmental studies.	**2**
	Chapter 2: Ecosystems • What is an ecosystem? Structure and function of ecosystem • Food chains, food webs; Energy flow in an ecosystem. • Ecological succession. • Case studies of the following ecosystems: a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems – (ponds, oceans, estuaries)	**6**
	Chapter 3: Natural Resources: Renewable and Non-Renewable Resources • Land resources and land usage change; Land degradation, soil erosion and desertification. • Forest resources: Types (Evergreen, Semi ever green, deciduous, scrub forest), Non-Timber forest products, Afforestation • Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (Inter-state, river diversion). • Energy resources: Renewable and non-renewable energy sources, growing energy needs, use of alternate energy sources.	**7**

Unit 2	**Chapter 4: Biodiversity and Conservation** • Levels of biological diversity: Genetic, Species and Ecosystem diversity. • Biogeographic zones of India. • Global biodiversity hotspots; India as a mega-biodiversity nation. • Endangered and Endemic species of India. • Threats to biodiversity: Deforestation, Habitat loss, poaching of wildlife, biological invasions, mining and dam construction. • Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity; Conservation of coastal and Mangrove ecosystem. • Rain water harvesting, Soil conservation and management. • Ecosystem and biodiversity values - Ecological, economic, social, ethical and aesthetic.	**8**

	Chapter 5: Environmental Pollution • Environmental Pollution: Air, water, soil and noise pollution- causes, effects and controls. • Plastic and human health risks. • Solid waste management, Control measures of urban and industrial waste. • Pollution case studies – Yamuna and Tunga River.	**7**
Unit 3	**Chapter 6: Environmental Policies and Practices** • Climate change, global warming, ozone layer depletion, acid rain - impacts on human communities and vegetation. • Environment Laws: Environment Protection Act; Bio-diversity Act-2002; Wildlife (Protection) Act; Forest Conservation Act. • International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD). • Tribal populations and rights, and human wildlife conflicts in Indian context.	**7**
	Chapter 7: Human Communities and the Environment • Human population growth: Impacts on environment, human health and welfare. • Resettlement and rehabilitation of project affected persons - Meaning • Disaster management: Floods, Earthquake, Cyclones and Landslides. • Environmental movements: Chipko, Appiko, Silent valley, Bishnois of Rajasthan. • Environmental ethics: Role of religions and cultures in environmental conservation. • Environmental communication and public awareness.	**6**
	Chapter 8: Field work (Minimum 1) • Visit to an area to document environmental assets: river/forest/flora/fauna, etc. • Visit to a local polluted site- Urban/Rural/Industrial/ Agricultural. • Study of common plants and animals in nearby areas. • Study of simple ecosystems – pond, river, etc. • Green audit of the college campus. • Documentation of environmentalists of your area.	**2**

Pedagogy: Lectures/Tutorials/Interactive Sessions/Open Educational Resources (as reference materials), Practical exercises/Assignments/ Seminars/Group discussions/Field wok and Counselling.

Exercise:

- ✓ Organize debate/quiz/seminar on Environment related topics.
- ✓ Invite experts to deliver special lectures on Environmental issues, Bio-diversity, Green Audit etc.
- ✓ Celebrate different Environmental days.
- ✓ Students can undertake project work on environmental impact assessment of local area.

Assessment:

I. Summative Marks distribution

Formative Assessment	
Assessment Occasion/Type	**Weightage in Marks**
Assessment Test – 1	10
Seminar/ Group discussion	10
Assessment Test – 2	10
Assignment/ /Documentation/project or field work	10
Total	**40**

II. Term End Examination: Semester end will examination will be for 60 marks. The minimum mark to pass the examination is 35% (21 marks).

Formative Assessment (I A) = 40
End Semester Examination = 60
Total = 100 marks

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Question Paper Pattern

(Model)

Section - A **(10 x 2 = 20)**

Answer any **TEN** of the following:

(Four questions from each unit)

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.

Section - B **(8 x5 = 40)**

Answer any **Eight** of the following:

(Four questions from each unit)

13.
14.
15.
16.
17.
18.
19.
20.
21.
22.
23.
24.