Mahatma Gandhi University Kottayam

Programme	**BBA/ BBA (HONOURS) / BBA (HONOURS WITH RESEARCH)**					
Course Name	**Environmental Science and Sustainability**					
Type of Course	VALUE ADDED COURSE					
Course Code	MG1VACBBA100					
Course Level	**NA**					
Course Summary	This course aims to familiarize students with fundamental environmentalconcepts and their relevance to business operations, preparing them to addressforthcoming sustainability challenges. It is designed to equip students with theknowledge and skills needed to make decisions that account for environmentalconsequences, fostering environmentally sensitive and responsible futuremanagers. The course content is divided into four comprehensive units. Unit 1introduces basic environmental principles, the man-environment relationship. Unit 2 focuses on ecosystems, biodiversity, and sustainable practices. Unit 3 addresses environmental pollution, wastemanagement, and sustainable development strategies. Finally, Unit 4 exploressocial issues, environmental legislation, and practical applications throughhands-on fieldwork. Through this holistic approach, students will gain a deepunderstanding of environmental processes, the importance of sustainablepractices, and their role in promoting sustainability within business contexts. Course Objectives: 1. This course aims to familiarize students with basic environmental concepts, their relevance to business operations, and forthcoming sustainability challenges. 2. This course will equip students to make decisions that consider environmental consequences. 3. This course will enable future business graduates to become environmentally sensitive and responsible managers.						
Semester	One	Credits		2		Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		2	0	0	0	2

Pre-requisites, if any	NA

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	Annual PO No	MGUPO
1	Understand the basic environmental concepts and issues relevant to the business and management field.	U, R	Y1-PO1	6,10
2	Recognize the interdependence between environmental processes and socioeconomic dynamics.	U, An	Y1-PO3	6
3	Determine the role of business decisions, policies, and actions in minimizing environmental degradation.	E	Y1-PO3	1
4	Identify possible solutions to curb environmental problems caused by managerial actions.	An, E	Y1-PO4	1
5	Develop skills to address immediate environmental concerns through changes in business operations, policies, and decisions.	A, C	Y1-PO4	10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)				

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Course description	Hrs	CO No.
1	**Understanding Environment, Natural Resources, and Sustainability:** Fundamental environmental concepts and their relevance to business operations; Components and segments of the environment, the man-environmentrelationship, and historical environmental movements. Concept of sustainability;Classification of natural resources, Sustainable practices in managing resources,including deforestation, water conservation, energy security, and food securityissues.		CO1
2	**Ecosystems, Biodiversity, and Sustainable Practices:** Various natural ecosystems, learning about their structure, functions, andecological		CO2

	characteristics. The importance of biodiversity, the threats it faces, andthe methods used for its conservation. Ecosystem resilience, homeostasis, andcarrying capacity, emphasizing the need for sustainable ecosystem management.Strategies for in situ and ex situ conservation, nature reserves, and thesignificance of India as a mega diverse nation.		
3	**Environmental Pollution, Waste Management, and SustainableDevelopment** Various types of environmental pollution, including air, water, noise, soil, andmarine pollution, and their impacts on businesses and communities. Causes ofpollution, such as global climate change, ozone layer depletion, the greenhouseeffect, and acid rain, with a particular focus on pollution episodes in India. Solid waste management; Naturaland man-made disasters, their management, and the role of businesses inmitigating disaster impacts.		CO1
4	**Social Issues, Legislation, and Practical Applications** Dynamic interactions between society and the environment, with a focus onsustainable development and environmental ethics. Role of businesses inachieving sustainable development goals and promoting responsibleconsumption. Overview of key environmental legislation and the judiciary's rolein environmental protection, including the Water (Prevention and Control ofPollution) Act of 1974, the Environment (Protection) Act of 1986, and the Air(Prevention and Control of Pollution) Act of 1981.Environmental justice,environmental refugees, and the resettlement and rehabilitation of affectedpopulations.		CO2

Teaching andLearning Approach	**Classroom Procedure (Mode of transaction)** • Conduct interactive sessions and classes by environmental scientist and consultants. • Students will have to create a comprehensive report and presentation on any one topic highlighting key findings and recommendations for improving environmental and sustainable management in societies. A suggestive list of projects topics is

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<tr><td>Assessment Types</td><td>
MODE OF ASSESSMENT

Continuous Comprehensive Assessment (CCA) (Maximum Marks: 15)
<table>
<tr><th>Sl. No</th><th>Component</th><th>Activity</th><th>Marks</th></tr>
<tr><td>1</td><td>Internal Exam 30 minutes (Best out of two)</td><td>Multiple Choice Question
(30 questions of 1 mark each)
(The marks obtained to be converted to 10)</td><td>10</td></tr>
<tr><td>2</td><td>Assignments/Dossier</td><td>(Any assignment or Dossier topic related to the course objective)</td><td>5</td></tr>
<tr><td colspan="3">Total Marks</td><td>15</td></tr>
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B. End Semester Evaluation (Maximum Marks: 35)
<table>
<tr><th>Sl. No</th><th>Component</th><th>Activity</th><th>Marks</th></tr>
<tr><td>1</td><td>Project Presentation (Final Assessment)</td><td>Project evaluation and viva voce
15 marks for project report and 20 marks for viva voce examination</td><td>35</td></tr>
<tr><td colspan="3">Total Marks</td><td>35</td></tr>
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Suggested list of project topics

- ✓ Ecosystem Analysis and Conservation Strategies: Study the structure and function of a local ecosystem and propose strategies for its conservation, both in situ and ex situ.
- ✓ India's Biodiversity and Conservation Efforts: Examine the significance of India as a mega diverse nation and evaluate current conservation efforts and nature reserves.
- ✓ Renewable vs Non-Renewable Resources: Analyze the usage, advantages, and challenges associated with renewable and non-

renewable natural resources in a specific region.

- ✓ Impact of Human Activities on Natural Resources: Investigate the impact of human activities on the availability and quality of natural resources, with a focus on sustainable utilization.
- ✓ Impact of Pollution on Human Health: Assess the effects of air, water, soil, or noise pollution on human health in an urban area.
- ✓ Deforestation and Its Impact on Biodiversity: Explore the causes and consequences of deforestation and propose measures to mitigate biodiversity loss.
- ✓ Climate Change Adaptation and Mitigation Strategies: Evaluate the effectiveness of current strategies to combat climate change and global warming in a specific country or region.
- ✓ Innovative Waste Management Solutions: Investigate and propose innovative methods for waste management, focusing on recycling, composting, and waste-to-energy technologies.
- ✓ Implementation of SDGs in Developing Countries: Case study analysis of the implementation of specific SDGs in a developing country, focusing on successes and challenges.
- ✓ Sustainable Practices in the Fashion Industry: Explore sustainable practices within the fashion industry and assess their impact on environmental conservation.
- ✓ Sustainability in Urban Planning: Investigate how urban planning practices can contribute to achieving sustainability and SDGs in growing cities.
- ✓ Comparative Study of SDG Implementation: Conduct a comparative study of the implementation of SDGs in two different countries, highlighting best practices and areas needing improvement.
- ✓ Technological Innovations in Sustainability: Examine emerging technological trends in sustainability and their potential impact on environmental conservation.
- ✓ Challenges in Promoting Sustainable Practices: Identify and analyze the major challenges faced in implementing sustainable practices in a specific industry or region.
- ✓ Role of Education in Sustainability: Investigate the role of education and awareness programs in promoting sustainability among different age groups.
- ✓ Future Career Opportunities in Sustainability: Explore the future prospects and career opportunities in the field of sustainability, including the skills required and potential job roles.

Readings:

Text Books (Latest Editions):

● Poonia, M.P. Environmental Studies , Khanna Book Publishing Co.
● Bharucha, E. Textbook of Environmental Studies, Orient Blackswan Private Ltd.
● Dave, D., & Katewa, S. S. Text Book of Environmental Studies. Cengage LearningIndia Pvt Ltd.

● Rajagopalan, R. Environmental studies: from crisis to cure, Oxford UniversityPress.
● Miller, G.T. & Spoolman S. Living in the Environment. Cengage.
● Basu, M., & Xavier Savarimuthu, S. J. Fundamentals of environmental studies.Cambridge University Press.
● Roy, M. G. Sustainable Development: Environment, Energy and Water Resources.Ane Books.

● Pritwani, K. Sustainability of business in the context of environmental management. CRC Press.
● Wright, R.T. & Boorse, D.F. Environmental Science: Toward A Sustainable Future(13thed,). Pearson.

References

Web links:

● https://www.ourplanet.com

●https://www.undp.org/content/undp/en/home/sustainable-developmentgoals.html

●www.myfootprint.org

●https://www.globalchange.umich.edu/globalchange1/current/lectures/kling/ecosystem/ecosystem.html

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