

Program	BS Environmental Sciences	Course Code	ENSC-101	Credit hours	03
Course Title	INTRODUCTION TO ENVIRONMENTAL SCIENCE				
COURSE INTRODUCTION					
This course offers a foundational understanding of environmental science, exploring the relationships between humans and the natural environment. Students will study the basic principles of ecology, earth systems, biodiversity, energy flow, and natural resource management. The course also examines contemporary environmental issues such as climate change, pollution, deforestation, and sustainability. Emphasis is placed on scientific methods, critical thinking, and the role of environmental policy and ethics in addressing ecological challenges. Through lectures, discussions, and practical activities, students will gain the knowledge and tools needed to make informed decisions and take responsible actions concerning the environment.					
LEARNING OUTCOMES					
By the end of this course the students will learn:					
1 The importance of Environmental Science as an academic discipline					
2 About natural renewable and non-renewable resources of earth					
3 To understand the basic components and processes of environment, analyze human and environment interactions					
4 To evaluate the sources and consequences of water, air, land and soil pollution and their preventive measures					
COURSE CONTENTS					
Unit-I:	Importance of environmental science and different aspects of environment				
1.1.	History, Nature and scope of Environmental Science and its contribution to society				
1.2.	Different aspects of environment: Physical, Ecological, Socio-economic, Ethical and Philosophical				
1.3.	Human environment and its problems				
1.4.	Across the globe-environmental issues, national and regional				
Unit-II:	Types of environmental pollution				
2.1.	Environmental pollution				
2.2.	Air Pollution (outdoor and indoor)				
2.3.	Global Warming, Ozone Depletion; Acid Rain, Solutions,				
2.4.	Water Pollution; Rivers, Lakes, Groundwater, Solutions,				
2.5.	Water use and management				
2.6.	Soil Pollution, Fertilizers, Pesticides and Pest Control, Solutions				
2.7.	Solid and Hazardous Waste, Solutions				
2.8.	Noise and Noise pollution				
2.9.	Environment of Cities, Light pollution and visual pollution, Solutions				
2.10.	Global Problems of Deforestation and loss of Biodiversity, Mangroves and their disappearance				
Unit--III:	Environmental education and sustainable development				
3.1.	Environmental education				
3.2.	Sustainable Development, Environmental challenges for sustainable development				
3.3.	Population Dynamics and Control, Current and future trends in population growth				
3.4.	Development in industry and agriculture				
3.5.	Urbanization, poverty and resource depletion				
Unit--IV:	Food and alternate energy sources				
4.1.	Food Resources and World Hunger				
4.2.	Energy concepts in environment				
4.3.	Fossil Fuels, Alternate Energy Sources and Environment				
4.4.	Nuclear energy and Environment				

TEACHING – LEARNING STRATEGIES

- Lecture based examination
- Presentation/seminars
- Class discussion
- Quizzes

ASSIGNMENTS – TYPE AND NUMBER WITH CALENDAR

It is continuous assessment. The weightage of Assignments will be 25% before and after midterm assessment. It includes:

- classroom participation,
- attendance, assignments and presentation,
- homework
- attitude and behavior,
- hands-on-activities,
- short tests, quizzes etc.

TEXT BOOKS AND READING MATERIAL

1. Liboiron, M. (2021). *Pollution is colonialism*. Duke University Press.
2. Harper, C. L., & Snowden, M. (2017). *Environment and society: Human perspectives on environmental issues*. Routledge.
3. McKinney, M. L., Schoch, R. M., Yonavjak, L., & Mincy, G. (2017). *Environmental Science: Systems and Solutions: Systems and Solutions*. Jones & Bartlett Learning.
4. Miller, G. T., & Spoolman, S. (2015). *Living in the environment: concepts, connections, and solutions*. Brooks/Cole.
5. Miller, G. T., & Spoolman, S. (2015). *Environmental science*. Cengage Learning.
6. Botkin, D.B. (2014). *Environmental Science: Earth as a Living Planet*. John Wiley & Sons.
7. Harris, F. (Ed.). (2012). *Global environmental issues*. John Wiley & Sons.
8. Botkin, D. B., & Keller, E. A. (2010). *Environmental science: Earth as a living planet*. Wiley Global Education.

Further Reading: As suggested by the Instructor.