



Bangladesh Sweden Polytechnic Institute

Kaptai, Rangamati Hill Tracts

Automobile Technology

4th Semester

Semester Plan (Probidan-2022)

Environmental Studies (29061)

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Teacher's Name: Md. Foyzullah, Junior Instructor (Tech/Power), Automobile Technology

No. of Week	No. of Class	Theory Class Content	Practical Class	Remarks
01	01	1.1. Define environment, nature, Pollution, pollutant, contaminant. 1.2. Describe the scope of environmental Studies.	Determine physical water quality of water sample.	
	02	1.3. Describe the importance of environmental studies. 1.4. Describe the formation and structure of the Earth. 1.5. Describe the earth's natural system.		
	03	1.6. Describe the changing attitudes of the natural world. 1.7. Mention the main components of environment. 1.8 Distinguish between natural and man-made environment.		
02	01	2.1 Define ecology & eco-system. 2.2 Illustrate the water cycle. 2.3 Illustrate the carbon cycle.	Determine chemical water quality of water sample.	
	02	2.4 Illustrate the nitrogen cycle. 2.5 Illustrate the oxygen cycle. 2.6 Define food chains and food webs		
	03	2.7 Define Biodiversity, biomass, bioconcentration and bio magnification. 2.8 Describe Terrestrial and Aquatic ecosystem. 2.9 Define ecologically critical area (ECA), threatened species, endanger species, extinct species, and exotic species. 2.10 List the ecologically critical areas of Bangladesh.		
03	01	3.1. Define Greenhouse effect, global warming & Ozone depleting substances (ODS). 3.2. Mention the causes of global warming. 3.3. List the greenhouse gases.	Measure total dissolved solids (TDS) present in water sample.	
	02	3.4. State the contribution of greenhouse gases to the greenhouse effect. 3.5. Discuss the effects of global warming on the environment and human life. 3.6. Define acid rain and impact on the environment.		
	03	3.7. Describe the importance of the ozone layer and the effects of ozone depletion. 3.8. Mention different types of natural disaster. 3.9. Discuss the Flood, Cyclone & Earthquake disaster management system of Bangladesh.		
04	01	Quize Test-01	Determine Iron (Fe) & Arsenic (As) level in water sample.	
	02	4.1 Define water pollution, water pollutants and pollution sources. 4.2 Mention the sources of water pollution. 4.3 Mention the quality standards of drinking water and wastewater. 4.4 Define wastewater management.		

	03	4.5 Explain effluents, influent and methods of effluent treatment. 4.6 Draw different schematic diagrams of effluent treatment methods. 4.7 Explain the effects of water pollution on human health and the		
05	01	5.1 Describe the sources, production, and consumption of energy. 5.2 Describe air pollution and sources of air pollution. 5.3 Define Carbon Footprint.	Measure Air Quality	
	02	5.4 Define GHG emission and contribution to the greenhouse effect. 5.5 Discuss the effects of energy consumption on Climate Change. 5.6 Explain the concept of energy efficiency.		
	03	5.7 Discuss Carbon Footprint calculation methods. 5.8 Discuss the importance of reducing Carbon Footprint. 5.9 Discuss the effect of air pollution on human health, vegetation, and animals.		
06	01	Class Test-01	Control of air dust by cyclone separator	
	02	6.1 Define sound & sound wave. 6.2 Mention the scale of measuring sound intensity. 6.3 Define sound pressure & sound power. 6.4 Describe the sound intensity and loudness.		
	03	6.5 Define noise pollution. 6.6 Mention the sources of noise pollution. 6.7 Mention the effect of noise pollution on human health. 6.8 Explain the methods for noise prevention in the industry.		
07		Mid Term Examination		
08	01	7.1. Define soil pollution and soil degradation. 7.2. Classify different types of soil pollution.	Measurement of noise level in different places	
	02	7.3. Mention the sources of soil pollution. 7.4. List the main pollutants in soil.		
	03	7.5. Describe the impacts of soil pollution on the food chain and ecosystem. 7.6. Describe the methods of soil pollution controlling. 7.7. List the agro-ecological zones of Bangladesh.		
09	01	8.1 Define solid waste. 8.2 Identify the sources of solid waste.	Calculate Energy consumption.	
	02	8.3 Categorize different types of solid waste. 8.4 Discuss the solid waste collection methods.		
	03	8.5 Describe 3R and 4R methods of solid waste management. 8.6 Describe the potential method of disposal of solid waste. 8.7 Mention the waste management strategies in Bangladesh. 8.8 Discuss the impact of solid waste on environment and human health.		
10	01	Quiz Test-02	Perform a field visit on Effluent treatment plant (ETP)	
	02	9.1 Define Chemical hazard. 9.2. Discuss different types of chemical hazard and toxicity.		
	03	9.3 State the benefits of chemical management. 9.4 Describe basic concepts of chemical segregation and storage.		

11	01	9.5. Describe chemical label and safety data sheet (SDS) 9.6. Discuss different hazard pictogram and safety signs.		
	02	Class Test-02		
	03	9.7 Describe chemical pesticides. 9.8. Describe the mitigation and control measures of chemical exposure.		
12	01	10.1 Mention environmental act & legislations prescribed for air, noise, water, soil & wildlife protection in Bangladesh. 10.2 Discuss International protocols and agreements related to environmental issues.		
	02	10.3 Define environmental impact assessment (EIA). 10.4 Describe the environmental framework in Bangladesh.		
	03	10.5 Describe environmental conservation act 1995 in Bangladesh. 10.6 Describe the environment conservation rule 1997 in Bangladesh. 10.7 Discuss the steps required to obtain Environmental Clearance certificate in Bangladesh.		

REFERENCE BOOKS:

- Fundamentals of Environmental Studies, Mahua Basu and S. Xavier, Cambridge.
- Ecology and Environment, P.D. Sharma, Rastogi Publications.
- Basics of Environmental Science, Michael Allaby, Routledge.
- Environmental Science, Jonathan Turk and Amos Turk, Saunders golden sunburst series.