

Bangladesh Polytechnic Institute

Technology: **Electricalical**

Semester: 6th

Sub. Name: **ENVIRONMENTAL MANAGEMENT (5840)**

T P C: 2 0 2

Course Outline

Teacher Name: Md. Mominul Islam

Mob.No: 01740 91 87 34

Class No.	Discussion and Explanation of Topics/ Titles	Remarks
Class-1	<ul style="list-style-type: none"> ❖ <u>Understand the basic concepts of environment.</u> ➤ Define: environment, Marine environment, Freshwater environment, Nutrients, Mangrove forest, Photo-chemical oxidant, Pollutant, Receptor, Sink, Pathways of pollutant, Speciation. ➤ Mention the main components of environment. ➤ Mention the functions of environment. ➤ Describe natural environment, man-made environment and social environment. 	
Class-2	<ul style="list-style-type: none"> ❖ <u>Understand ecology and eco-systems.</u> ➤ Define ecology and eco-system. ➤ Mention the range of tolerance in eco-system. ➤ Explain the biotic and abiotic components of eco-system. ➤ Explain briefly how does eco-system work. ➤ Explain the stability of eco-system. 	
Class-3	<ul style="list-style-type: none"> ❖ <u>Understand ecology and eco-systems.</u> ➤ Explain the following ecological terms: Food chain, Food web, Biodiversity, Biomass, Ecological pyramid, Pyramid of biomass, Pyramid of energy, Bio-concentration, Bio-magnification, Restoration ecology. ➤ Narrate the following bio-geochemical cycles of eco-system. ➤ Describe the following global environmental issues: Global environment, Earth and other environmental summits, climate change and ozone layer depletion. 	
Class-4	<ul style="list-style-type: none"> ❖ <u>Understand the air and the atmospheric regions.</u> ➤ Mention different layers of atmosphere. ➤ Mention the average composition of the atmosphere at sea level. 	
Class-5	<ul style="list-style-type: none"> ❖ <u>Understand the air and the atmospheric regions.</u> ➤ Describe the chemical species and particulates present in the atmosphere. ➤ Describe the importance ozone layer. 	

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Class-6	<p>❖ <u>Understand the air pollution and its sources & effects.</u></p> <ul style="list-style-type: none"> ➤ Define air pollution. ➤ Mention the composition of clean dry atmospheric air. ➤ List the air pollutants. ➤ Identify the sources of air pollutions. ➤ List the green house gases. 	
Class-7	<p>❖ <u>Understand the air pollution and its sources & effects.</u></p> <ul style="list-style-type: none"> ➤ Mention the effects of air pollution on human health, animals, plants and non-living things. ➤ Explain the formation of photo-chemical smog and its effect. ➤ List the disasters of major air pollution in the world mentioning location, causes and effects. ➤ Explain the causes of acid rain and its effect on eco-system. 	
Class-8	<p>🚩 <u>Feedback</u></p>	
Class-9	<p>🚩 <u>Class test-1</u></p>	
Class-10	<p>❖ <u>Understand the control of air pollution at the sources.</u></p> <ul style="list-style-type: none"> ➤ Mention the methods of air pollution control. ➤ Describe the following devices: gravitational settling chamber, cyclone separator, wet scrubber, centrifugal scrubber, fabric filter, catalytic converter. 	
Class-11	<p>❖ <u>Understand the sources of water pollution and its effects.</u></p> <ul style="list-style-type: none"> ➤ Define water pollution. ➤ Mention the specification of ideal water as per recommendation of the World Health Organization (WHO). 	
Class-12	<p>❖ <u>Understand the sources of water pollution and its effects.</u></p> <ul style="list-style-type: none"> ➤ List the different types of water pollutants. ➤ Describe the sources of water pollution. ➤ Describe the effects of water pollution on human health, animal, plants and environment. 	
Class-13	<p>❖ <u>Understand the monitoring of water pollution.</u></p> <ul style="list-style-type: none"> ➤ Define the following terms: ➤ Dissolved oxygen (DO). ➤ Biochemical oxygen demand (BOD). ➤ Chemical oxygen demand (COD). 	

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	<ul style="list-style-type: none"> ➤ Total organic carbon (TOC). ➤ Threshold limit value (TLV). ➤ Mention the method of determination of pH value of water. ➤ Mention the method of determination of dissolved oxygen (DO) in a sample of water. 	
Class-14	 Feedback	
Class-15	 Feedback	
	<ul style="list-style-type: none"> ❖ <u>Understand the monitoring of water pollution.</u> ➤ Mention the method of determination of biochemical oxygen demand (BOD) in a sample of water. ➤ Mention the method of determination of chemical oxygen demand (COD) in a sample of water. 	
Class-16	<ul style="list-style-type: none"> ❖ <u>Understand the waste water treatment.</u> ➤ Define the primary treatment, secondary treatment and tertiary treatment of waste water. ➤ Define the following terms; ETP, Oxidation pond, waste stabilization pond, trickling filter, Activated slug. ➤ Mention the methods of primary and secondary treatment of industrial waste water. 	
Class-17	<ul style="list-style-type: none"> ❖ <u>Understand the sound pollution and its control.</u> ➤ Define sound, sound wave and sound pollution. ➤ Mention the scale of measuring sound intensity. ➤ Mention the sources of sound pollution. 	
Class-18	<ul style="list-style-type: none"> ❖ <u>Understand the sound pollution and its control.</u> ➤ Describe the effect of sound pollution on human health. ➤ Describe the methods of control of sound pollution. 	
	 Mid Term Exam	
Class-19	<ul style="list-style-type: none"> ❖ <u>Understand the soil pollution and its management.</u> ➤ Define soil pollution. ➤ List the classification of soil pollution. ➤ Mention the sources of soil pollution. ➤ Describe the effect of soil pollution on human health 	
Class-20	<ul style="list-style-type: none"> ❖ <u>Understand the radioactive pollution and its control.</u> ➤ Define radioactive pollution. ➤ Mention the sources of radioactive pollution. 	

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	<ul style="list-style-type: none"> ➤ List the causes of radioactive pollution. 	
Class-21	<ul style="list-style-type: none"> ❖ <u>Understand the radioactive pollution and its control.</u> ➤ Explain the effect of radioactive pollution on human health. ➤ Describe the method of control of radioactive pollution. 	
Class-22	<ul style="list-style-type: none"> ❖ <u>. Understand the solid waste management.</u> ➤ Define solid waste. ➤ List the sources of solid waste. ➤ Mention the classification of solid waste. ➤ Mention the methods of collection of solid waste. 	
Class-23	<ul style="list-style-type: none"> ❖ <u>Understand the solid waste management.</u> ➤ Mention the waste management strategies in Bangladesh. ➤ Describe the recycling of solid wastes. ➤ Describe the potential method of disposal of solid waste. 	
Class-24	<ul style="list-style-type: none"> ❖ <u>Understand the major environmental issues in Bangladesh.</u> ➤ List the major environmental issues in Bangladesh. ➤ Describe the following disaster management of Bangladesh ➤ flood, cyclone, tidal surge, Cyclone(SIDR, AILA, Nargis, Tsunami), landslide, earthquakes and salinity. 	
Class-25	<ul style="list-style-type: none"> ❖ <u>Understand the arsenic pollution in Bangladesh.</u> ➤ Mention the arsenic pollution of water in Bangladesh. ➤ Explain the effects of arsenic pollution on human health. ➤ Describe the causes of arsenic in ground water. 	
Class-26	<ul style="list-style-type: none"> ❖ <u>Understand the pesticide pollution in Bangladesh and its management.</u> ➤ Define pesticide. ➤ Make a list of pesticides. 	
Class-27	<ul style="list-style-type: none"> ❖ <u>Understand the pesticide pollution in Bangladesh and its management.</u> ➤ Mention the causes of pesticide pollution in Bangladesh. ➤ Describe the effect of pesticide pollution in the 	

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	environment	
Class-28	<p>❖ <u>Understand the national environmental legislations and guidelines environmental frame work and policy in Bangladesh.</u></p> <ul style="list-style-type: none">➤ Define, EA, EIA, IEA, NEMAP, DOE, BELA, GPS, GIS➤ Mention environmental act and legislations prescribed for air and water quality.	
Class-29	<p>❖ <u>Understand the national environmental legislations and guidelines environmental frame work and policy in Bangladesh.</u></p> <ul style="list-style-type: none">➤ Describe environmental act prescribed for industries in Bangladesh.➤ Describe the guide lines of environment prescribed for industries in Bangladesh.➤ Describe the environmental frame work in Bangladesh.	
Class-30	<p>🚩 <u>Feedback</u></p>	
Class-31	<p>🚩 <u>Feedback</u></p>	
Class-32	<p>🚩 <u>Class test-2</u></p>	

REFERENCE BOOKS

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– S. P. Mahajan
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– Peavy, Rowe and Techobanglous
3. Air pollution
– V. P. Kudesia
4. Industrial Noise Control
– Bruce Fader
5. Pesticide Pollution
– Kudecsia and Charaya
6. Water Pollution
– V. P. Kudesia
7. Peoples Report on Bangladesh Environment 2001
Atia Rahman, M. Ashraf Ali and Farooque Choudhury