

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY

(Formerly West Bengal University of Technology)

B.PHARM Syllabus

(Effective from 2017-2018 Admission Session)

HU 282 ENVIRONMENTAL SCIENCES (Theory)

30 hours

Scope: Environmental Sciences is the scientific study of the environmental system and the status of its inherent or induced changes on organisms. It includes not only the study of physical and biological characters of the environment but also the social and cultural factors and the impact of man on environment.

Objectives: Upon completion of the course the student shall be able to:

1. Create the awareness about environmental problems among learners.
2. Impart basic knowledge about the environment and its allied problems.
3. Develop an attitude of concern for the environment.
4. Motivate learner to participate in environment protection and environment improvement.
5. Acquire skills to help the concerned individuals in identifying and solving environmental problems.
6. Strive to attain harmony with Nature.

Course Content:

Unit-I

10 hours

The Multidisciplinary nature of environmental studies
Natural Resources

Renewable and non-renewable resources:

Natural resources and associated problems

a) Forest resources; b) Water resources; c) Mineral resources; d) Food resources; e) Energy resources; f) Land resources: Role of an individual in conservation of natural resources.

Unit-II

10 hours

Ecosystems


- Concept of an ecosystem.
- Structure and function of an ecosystem.
- Introduction, types, characteristic features, structure and function of the ecosystems: Forest ecosystem; Grassland ecosystem; Desert ecosystem; Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit-III

10 hours

Environmental Pollution: Air pollution; Water pollution; Soil pollution




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Recommended Books (Latest edition):

1. M.P. Poonia & S.C. Sharma, Environmental Studies, Khanna Publishing House, New Delhi (AICTE Recommended Textbook – 2018)
2. Y.K. Sing, Environmental Science, New Age International Pvt, Publishers
3. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd.Bikaner.
4. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd.,
5. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc.480p
6. Clark R.S., Marine Pollution, Clanderson PressOxford
7. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmen
Mumbai, 1196p
8. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
9. Down of Earth, Centre for Science and Environment
10. O.P. Gupta, Elements of Environmental Pollution Control, Khanna Publishing
House, New Delhi (2018)



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