

GREEN DENTISTRY

Objective: *To create awareness among students about environment protection.*

Course Outcomes:

CO1: Based on this course, the graduate will understand / evaluate / develop technologies on the basis of ecological principles and environmental regulations which in turn help in sustainable development.

CO2: Understanding that it is an approach to tooth care that reduces the environmental impact of dentistry and creates a caring environment for patients.

Course Content:

Unit I (Lectures 08)

Definition and Scope of environmental studies, multidisciplinary nature of environmental studies, concept of sustainability & sustainable development.

Ecology and Environment: Concept of an Ecosystem- its structure and functions, Energy Flow in an Ecosystem, Food Chain, Food Web, Ecological Pyramid & Ecological succession, Study of following ecosystems: Forest Ecosystem, Grass land Ecosystem & Aquatic Ecosystem & Desert Ecosystem.

Unit II (Lectures 06)

Natural Resources: Renewable & Non-Renewable resources; Land resources and land use change; Land degradation, Soil erosion & desertification. Deforestation: Causes & impacts due to mining, Dam building on forest biodiversity & tribal population. Energy Resources: Renewable & Non-Renewable resources, Energy scenario & use of alternate energy sources, Biodiversity: Hot Spots of Biodiversity in India and World, Conservation, Importance and Factors Responsible for Loss of Biodiversity, Biogeographical Classification of India

Unit III (Lectures 06)

Environmental Pollutions: Types, Causes, Effects & control; Air, Water, soil & noise pollution, Nuclear hazards & human health risks, Solid waste Management; Control measures of urban & industrial wastes, pollution case studies.

Unit IV (Lectures 06)

Environmental policies & practices: Climate change & Global Warming (Greenhouse Effect), Ozone Layer - Its Depletion and Control Measures, Photochemical Smog, Acid Rain
Environmental laws: Environment protection Act; air prevention & control of pollution act, Water Prevention & Control of Pollution Act, Wild Life Protection Act, Forest Conservation Acts, International Acts; Montreal & Kyoto Protocols & Convention on biological diversity, Nature reserves, tribal population & Rights & human wildlife conflicts in Indian context

Unit V (Lectures 06)

Human Communities & Environment: Human population growth; impacts on environment, human health & welfare, Disaster Management; Earthquake, Floods & Droughts, Cyclones & Landslides, Environmental Movements; Chipko, Silent Valley, Vishnoi's of Rajasthan, Environmental Ethics; Role of Indian & other regions & culture in environmental conservation, Environmental communication & public awareness.

Unit VI (Lecture 01)

Gender equality.

Unit VII (Lectures 02)

Where stands entrepreneurship today?

Unit VIII (Lectures 02)

Ethics in Dentistry.

Unit IX (Lectures 02)

Hospital waste management.

Unit X (Lecture 01)

Address to local community needs.

Text Books:

1. "Environmental Chemistry", De, A. K., New Age Publishers Pvt. Ltd.
2. "Introduction to Environmental Engineering and Science", Masters, G. M., Prentice Hall India Pvt. Ltd.
3. "Fundamentals of Ecology", Odum, E. P., W. B. Saunders Co.

Reference Books:

1. "Biodiversity and Conservation", Bryant, P. J., Hypertext Book
2. "Textbook of Environment Studies", Tewari, Khulbe & Tewari, I.K. Publication

***Latest editions of all the suggested books are recommended.**