

B. A. I Semester**Environment Science (Ability Enhancement Compulsory Course-AECC)**

S. No.	Department/ Day	Syllabus
01	Botany (Monday)	Unit 1: Introduction to Environmental Sciences (2 lectures) <ul style="list-style-type: none">• Multidisciplinary nature of Environmental Sciences;• Scope and importance; Concept of sustainability and sustainable development. Unit 2: Ecosystems (5 lectures) <ul style="list-style-type: none">• What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems : a. Forest ecosystemb. Grassland ecosystemc. Desert ecosystemd. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)
02	Zoology (Tuesday)	Unit 4: Biodiversity and Conservation (7 lectures) <ul style="list-style-type: none">• Levels of biological diversity : genetic, species and ecosystem diversity; Bio-geographic zones of India; Biodiversity patterns and global biodiversity hot spots• India as a mega--biodiversity nation; Endangered and endemic species of India• Threats to biodiversity: Habitat loss, poaching of wildlife, man--wildlife conflicts, biological invasions; Conservation of biodiversity: In--situ and Ex--situ conservation of biodiversity.• Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.
03	Anthropology (Wednesday)	Unit 7: Human Communities and the Environment (6 lectures) <ul style="list-style-type: none">• Human population growth: Impacts on environment, human health and welfare.• Resettlement and rehabilitation of project affected persons; case studies.• Disaster management: floods, earthquake, cyclones and landslides.• Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan.• Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.• Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

04	Geology (Thursday)	<p>Unit 3: Natural Resources: Renewable and Non-renewable Resources (6 lectures)</p> <ul style="list-style-type: none"> • Land resources and land use change; Land degradation, soil erosion and desertification. • Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. • Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state). • Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.
05	Geography (Friday)	<p>Unit 5: Environmental Pollution (7 lectures)</p> <ul style="list-style-type: none"> • Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution • Nuclear hazards and human health risks • Solid waste management: Control measures of urban and industrial waste. • Pollution case studies.
06	Economics (Saturday)	<p>Unit 6: Environmental Policies & Practices (7 lectures)</p> <ul style="list-style-type: none"> • Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture • Environment Laws: Environment Protection Act 1986; Air (Prevention & Control of Pollution) Act 1981; Water (Prevention and control of Pollution) Act 1974; Wildlife Protection Act 1972; Forest Conservation Act 1980. International agreements: Montreal protocol, Kyoto protocol and Convention on Biological Diversity (CBD). • Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.
07	Zoology Botany Geology Geography	<p>Unit 8: Fireworks: Impact on Environment and Human Health (5 lectures)</p> <ul style="list-style-type: none"> • Various products of fireworks • Occasions for fireworks • Composition of crackers • Emission by bursting of firecrackers • Possible impacts of fireworks on environment: noise, air, water & soil pollution, waste generation • Impacts of fireworks on human health : safety risk, accidents, respiratory, cardiac and other health problems • Impact of fireworks on animals and plants • Public awareness/campaigns for firework safety <p>Unit 9: Field work (Equal to 5 lectures)</p> <ul style="list-style-type: none"> • Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc. • Visit to a local polluted site--Urban/Rural/Industrial/Agricultural. • Study of common plants, insects, birds and basic principles of identification. • Study of simple ecosystems--pond, river, lake, forest patch, grassland, Delhi Ridge, etc.