Environmental Studies (ENV121)

Yashwantrao Chavan Maharashtra Open University

Course Name : Environmental Studies
Course No : ENV121

Course Details :

Unit 1. Multidisciplinary Nature Of Environmental Studies :
Definition, Scope And Importance – Definition, Scope, Importance, Need For Public Awareness - Institutions in Environment, People in Environment

Unit 2. Natural Resources :
Introduction,
Renewable And Non-Renewable Resources - Natural resources and associated problems, Non-renewable resources, Renewable resources,
Forest Resources: Use and overexploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people,
Water Resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams – benefits and problems.
Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. Food Resources: World food problems, Changes in land use by agriculture and grazing, Effects of modern agriculture, Fertilizer/ pesticide problems, Water logging and salinity.
Energy Resources: Increasing energy needs, Renewable/ nonrenewable, Use of Alternate energy sources, Case studies,
Land resources: Land as a resource, land degradation, man-induced landslides, soil erosion and desertification. Role Of An Individual In Conservation Of Natural Resources, Equitable Use Of Resources For Sustainable Lifestyles

Unit 3. Ecosystems :
Concept of an ecosystem, Understanding ecosystems, Ecosystem degradation, Resource utilization, Structure and functions of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, The water cycle, The Carbon cycle, The Oxygen cycle, The Nitrogen cycle, The energy cycle, Integration of cycles in nature, Ecological succession, Food chains, Food webs and Ecological pyramids, The food chains, The food webs, The ecological pyramids, Introduction, Types, Characteristic features, Structure and functions, Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, lakes, streams, rivers, estuaries, oceans)

Unit 4. Biodiversity And Its Conservation :

Introduction – Definition: Genetic, Species, Ecosystem Diversity, Genetic diversity, Species diversity, Ecosystem diversity, Biogeographic Classification Of India, Value Of Biodiversity: Consumptive, Productive Use, Social, Ethical, Aesthetic And Option Values, Consumptive value, Productive value, Social value, Ethical value, Aesthetic value, Option value, Biodiversity At Global, National And Local Levels, India As A 14 Mega Diversity Nation, Hotspots Of Biodiversity,

Threats To Biodiversity: Habitat Loss, Poaching Of Wildlife, Man-Wildlife Conflicts, Endangered And Endemic Species Of India, Common Plant species, Common Animal species, Conservation Of Biodiversity: In-Situ And Ex-Situ, In-situ conservation, Ex-situ conservation

Unit 5. Environmental Pollution :

Definition, Causes, Effects And Control Measures of, Air Pollution, Water Pollution, Soil Pollution, Marine Pollution, Noise Pollution, Thermal Pollution, Nuclear hazards, Solid Waste Management: Causes, Effects And Control Measures, Urban And Industrial Waste, Role Of Individuals In Pollution Prevention, Pollution Case Studies, Disaster Management: Floods, Earthquakes, Cyclones, Landslides

Unit 6. Social Issues And The Environment :

From Unsustainable To Sustainable Development, Urban Problems Related To Energy, Water Conservation, Rain Water Harvesting, Watershed Management, Water conservation, Rain water harvesting, Watershed management, Resettlement And Rehabilitation Of People; Its Problems And Concerns. Case Studies, Environmental Ethics: Issues And Possible Solutions, Resource consumption patterns and the need for their equitable utilization,

Equity – Disparity in the Northern and Southern countries,

Urban – rural equity issues, The need for Gender Equity, Preserving resources for future generations, The rights of animals, The ethical basis of environment education and awareness, The conservation ethic and traditional value systems of India, Climate Change, Global Warming, Acid Rain, Ozone Layer Depletion, Nuclear Accidents And Nuclear Holocaust. Case Studies, Climate change, Global warming, Acid rain, Ozone layer depletion, Nuclear Accidents and Nuclear Holocaust, Wasteland Reclamation, Consumerism And Waste Products, Environment Protection Act, Air (Prevention And Control Of Pollution) Act, Water (Prevention And Control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues Involved In Enforcement of Environmental Legislation, Environment Impact Assessment (EIA), Citizens actions and action groups, Public Awareness, Using an Environmental Calendar of Activities, What can I do?

Unit 7. Human Population And The Environment :
Population Growth, Variation Among Nations, Global population growth, Population Explosion – Family Welfare Program, Methods of sterilization, Urbanization, Environmental And Human Health, Environmental health, Climate and health, Infectious diseases, Water-related diseases, Risks due to chemicals in food, Cancer and environment, Human Rights, Equity, Nutrition, health and human rights, Intellectual Property Rights and Community Biodiversity Registers, Value Education, 15 Environmental Values, Valuing Nature, Valuing cultures, Social justice, Human heritage, Equitable use of Resources, Common Property Resources, Ecological degradation, HIV/AIDS, Women And Child Welfare, Role Of Information Technology In Environment And Human Health

Unit 8. Field Work :
Visit To A Local Area To Document Environmental Assets (River/ Forest/ Grasslands/ Hill / Mountain), Visit To A Local Polluted Site, Study Of Common Plants, Insects, Birds, Study of Simple Ecosystems