

ESS516 ENVIRONMENTAL IMPACT ASSESSMENT

39 hrs.

Course Outcomes:

CO1 Discuss the importance of environmental impact assessment in industrialization and other environmental activities.

CO2 Describe the meaning of sustainable development.

CO3 Learn the methodology of environmental audit in India.

CO4 Learn types of impacts on environment.

CO5 Study the method of Environmental Impact Assessment which influence employability in environmental organizations.

UNIT I (13 hours)

Environmental Impact Assessment - Definition, aim, objectives, components and stages of EIA, methods and significance of impact assessment with case studies - Surveillance and monitoring, environmental conflicts. Preparation of impacts: Negative and positive impacts, primary and secondary impacts; impacts on physical, social and cultural aspects.

UNIT II (13 hours)

Sustainable development, unavoidable impacts, alternative strategies- 'no-go' alternative. Integrated approach for environmental quality. Prediction of changes in the specific environmental components (air, water, noise, cultural, flora and fauna, socio-economic) due to projects, policies and planning, project implementation, national and international agencies involved in impact assessment studies.

UNIT III (13 hours)

Need for environmental impact assessment in industrialization, agricultural activities, urbanization, energy utilization-over exploitation. Environmental auditing - Definition, objectives, types, components, methodology, benefits, environmental audit in India. Environmental Management Plan (EMP).

References:

1. Hosetti, B.B. and Arvind Kumar. 1998. Environmental Impact Assessment and Management, Daya Publishing House, Delhi.
2. Hommadi, A.H. 1990. Environmental and Industrial safety. Indian Bibliographics Bureau, Delhi.
3. Hufschmidt, M.M. 1983. Environment, Natural Systems and Development – An Economic Valuation Guide, John Hopkins University Press, London.
4. Munn, R.E. 1989. Environmental Impact Assessment, Scope 5.
5. Patrick Dixon and Johan Gorecki. 2010. Sustainability, 1st Edition.

6. PetterMoris and RikiTherivel. 2009. Methods of Environmental Impact Assessment, 3rdEd., Taylor & Francis Groups.
7. Rau, J.G. and Woefen, D.C. 1980. Environmental Impact Analysis Handbook.
8. Shrivastava, A.K. 2003. Environment Impact Assessment, A.P.H Publishing Corporation, NewDelhi.
9. ValliManickan and Anjaneyalu, M. 2011. Environmental Impact Assessment – Methodologies, B.S. Publication.

ESS517 HUMAN POPULATION AND ENVIRONMENT

39 hrs.

Course Outcomes:

CO1 Discuss the association between population growth and dissemination of environmental pollutants.

CO2 Understand the role of medicinal plants in the control of human diseases.

CO3 Discuss the role of human society in the conservation of natural resources.

CO4 Understand traditional ecological knowledge.

CO5 Understand the role of women in environmental conservation.

UNIT I (13 hours)

Population status in India and the world, population growth and explosion, family welfare programme. Measurement of population - Natality and Mortality, Population density, pattern of population distribution; population dispersal - Emigration, Immigration and Migration; Environmental problems of population growth.

UNIT II (13 hours)

Environment and human health, human rights, value education, women and child welfare, role of environmental education in the management of environment, Environmental Education Programmes. Global Environmental problems - Ozone depletion, greenhouse gases, eutrophication, their causes and effects. Drug abuse and alcoholism as a threat to environment. Environmental ethics - stewardship ethics and lifeboat ethics of Garret Hardin.

UNIT III (13 hours)

Role of natural resources in the human development, role of human society in the conservation of forest, river, ponds and other natural resources, role of women in environmental conservation; medicinal plants and their role to control human population from disease. Traditional ecological knowledge.

References:

1. Agrawal, K.C.2001. Fundamentals of Environmental Biology, Nidhi Publishers, Bikaner, India.
2. Agarwal, K. M. Sikdar, P. K. and Deb, S. C. 2002. A text book of Environment, MacMiller India Ltd., Calcutta.
3. Botkin, D.B. 1989. Changing the Global Environment, Academic Press, San Diago.