

COURSE OBJECTIVE:

This course introduces students to environment concerns. Students are expected to learn about environment, factors affecting it, environmental ethics and its protection through lectures, presentations, documentaries and field visits.

COURSE CONTENT:

Introduction: Domestic and Global Environmental concerns, principles of sustainable development, Sustainable agriculture, organic farming, bio-fuels, Threats for sustainability

Environmental Ethics & Legislations: Enforcement of Environment laws in India – The water act, The Air (Prevention and Control of Pollution) Act, 1981, The Environment (Protection) Act, 1986, Environmental Auditing

Environmental Pollution: Air Pollution – sources, types of air pollutants, National Ambient Air Quality Standards, Controlling Air Pollution. Water pollution – sources, types of water pollutants, water quality indicators, water quality standards. Soil Pollution - types of soil pollutants: industrial wastes, pesticides, fertilizers and manures, salination of soil, Controlling Soil Pollution.

Environmental Challenges: Local Challenges - Solid Waste – Impact of solid waste on natural resources, Deforestation; Global Challenges - climate change and global warming, Kyoto Protocol, Greenhouse Gases, Ways to reduce Greenhouse gases emissions, Carbon Footprint, ways to reduce carbon footprint, Carbon Trading.

Sustainable habitat, industrialisation and urbanization: Concept of Green Building, Volatile Organic Compounds (VOC), GRIHA Rating, LEED Rating, HVAC, Hybrid Car Technology, Industrial ecology, India's renewable energy capacity. *Green Technology & Green Business:* Green Business, Green Computing, E-waste management.

COURSE OUTCOMES

Student after successful completion of course must possess an understanding of environment, eco-system and its consequences of unbalancing the environment. After successful completion of this course, student will earn 2 credits.

EVALUATION

Evaluation will be continuous an integral part of the class as well through external assessment.

REFERENCES

R. Rajagopalan, Environmental Studies, Oxford IBH Pub, 2011.

Kogent Learning Solutions Inc., Energy, Environment, Ecology and Society, Dreamtech, 2012.

Rag, R. L, Ramesh, Lekshmi Dinachandran, Introduction to sustainable engineering