

HUMANS, ENVIRONMENT, AND SUSTAINABLE DEVELOPMENT

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The course starts with introducing the history of human-environment relation over the past 500,000 years. Next the root causes of modern environmental degradation that need to be tackled, different economic sectors (agriculture, forestry, urban, rural, industrial, energy, transportation, manufacturing, service sector) and their impacts, and the major global and regional environmental problems of 21st century are taught. Further, the course explains the concept of sustainable development and what is being done in the fields of technology, policy making and human behaviour to achieve it at the international and national (India) level. Here the emerging topics such as Ecological economics, Payment for ecosystem services, Agricultural and dietary sustainability, Sustainable construction and smart cities, International policies and national missions on sustainable development goals (SDGs) will be taught. The students will also learn upcoming quantitative tools such as life cycle assessment (LCA) that can be used to calculate or compare the impact of different product, process and activities on different domains of the environment such as air, water, land, resources, climate, biodiversity etc. Overall, the course will explore how daily human activities impact the environment and how environmental degradation affects human health, society and economic growth in return.