



## Course structure: Elective II: Sustainable Planning Practices - MURP310

**Course Title: Elective II: Sustainable Planning Practices**

**Credit Units: 03**

**Course Level: PG Level**

**Course Code: MURP310**

### Course Objectives:

- The objective of this course is to familiarize students with the concept of sustainable development and develop skills to understand emerging aspects of sustainable planning practices. The course is aimed at making the students aware of different planning and management practices adopted worldwide for minimizing the adverse impacts of human actions on environment and society, as also understand strategies that seek to proactively manage these issues.

**Pre-requisites:** The students must possess fair understanding of the concept of sustainable development

### Course Contents/Syllabus:

	Weightage (%)
<b>Module 1: Introduction of Sustainable Development</b>	
<b>Descriptors/Topics</b> Overview of Sustainable Development Concept - Definitions, Concepts and Parameters in Sustainable Development with Particular Reference to Brundtland Commission and Agenda 21; Eco-City Approach; United Nations Framework Convention on Climate Change; Conference of Parties: Kyoto Protocol, Intergovernmental Panel on Climate Change, National Communication Process, Indian Network of Climate Change Assessment, Global Environment Facility, Clean Development Mechanism. Application of Ecological Principles in Sustainability; Carrying Capacity Based Planning: Concept, Parameters and Indicator Measures, Models and Case Studies in Urban and Regional Development	30%
<b>Module 2: Impacts of Climate Change</b>	
<b>Descriptors/Topics</b> Basics of Climate Change: Greenhouse Gases, Anthropogenic Causes, Carbon Cycle, Global Warming; Inventory of GHGs; Urban Heat Islands; Climatic Change and Human History, Economy, Energy and Environment. Impacts of Climate Change: Climate as Forcing Variable, Location Attributes, Sensitivity and Vulnerability of Different Sectors, Extreme Events and their Effects	30%
<b>Module 3: Settlement Planning and Environmental Impact and Strategic</b>	
<b>Descriptors/Topics</b> Settlement Planning: Urban Environmental Management and Planning; Human Activities and Energy in Cities; Contribution to GHGs; Sectoral Contributions; Urban Environmental Simulators. Environmental Impact and Strategic Environmental Assessment for Urban Areas (through Case Studies); Ecological Footprint Analysis of Cities; Sustainable Lifestyle Assessment and Behavioral Modifications at Household Levels. Concept of 3-Rs: "Recycle-Reuse and Recovery"; Concepts of Industrial Symbiosis and Ecology; Case Study of Waste Recycling: Its Cost Effectiveness and Options; Examples of Best Practices	20%
<b>Module 4: Land Capability and Suitability Analysis and its Measures</b>	
	20%

**Descriptors/Topics**

Land Capability and Suitability Analysis in Locating and Planning for Urban Land Uses. Compact City Concept - Implications of Urban Form, Density, Land Use Pattern and Transportation System in Land and Energy Conservation; Use of Non-Conventional Energy Sources in Urban Development. Urban Interference in Hydrological Cycle with Particular Reference to Water Pollution, Water Resources, Drainage and Natural Ecosystems; Urban Water Treatment, Recycling and Harvesting. Pollution Control Measures for Industrial Wastes, Hazardous Wastes, Biomedical Wastes, Domestic Waste Water, Air Pollutants and Noise. Cleaner Production Concepts and Practice through Case Study of a Functional Industrial Estate

**Student Learning Outcomes:**

- The outcome of this course is to familiarize students with the concept of sustainable development and develop skills to understand emerging aspects of sustainable planning practices.

**Pedagogy for Course Delivery:**

- The course will use a mix of theory, presentations and literature study with hands on exercises of housing layout. Participants are encouraged to engage in active interaction through classroom participation.

**Assessment/Examination Scheme:**

Components	Mid-Term	Assignment	Attendance	End Term (EE)
Weightage (%)	20	25	5	50

**Suggested Readings:**

1. Eco-City Planning: Policies, Practice and Design, Tai-Chee Wong and Belinda Yuen, Springer
2. Green Cities, Growing Cities, Just Cities? Scott Campbell, Urban Planning and the Contradictions of Sustainable Development, Journal of The American Planning Association
3. Cities and Climate Change, OECD Publishing OECD (2010)
4. The Economics of Low Carbon Cities: A Mini-Stern Review for the Leeds City Region, Andy Gouldson et al., The Centre for Low Carbon Futures Partnership, University of Hull, University Of Leeds
5. AITP Reader on Ecology & Resource Development, AITP
6. AITP Reading Material on Environmental Planning and Design, Prof A. K. Maitra , SPA Delhi
7. Best Practices Environment, The Economist, Intelligence University Press