



SPAV
Course

11



Human Settlements and Climate Change



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Description of course

Aim:

To study human settlements in climate change perspective and understand strategies for adaptation and spatial planning tools for mitigation of GHG emissions.

Course Objectives:

This course shall pave the way to explore the concepts and theories of human settlement and climate change related studies.

Learning Outcomes:

To estimate urban GHG emissions, risk assessment, vulnerability and adaptation to climate change.



Course Structure

Course Duration:

One semester (15-16 weeks) – 48 hours in total

Course Frequency:

Every Odd Semester of MEPM, II Year - Elective

Course Format:

Course format includes Lectures, Workshops and Short-term Project

Course Content

Prerequisites for Participation:

Pre-registration for the courses before the start of the semester.

Course Syllabus:

1. *Introduction to Climate Change*

Concern, human settlements as a major source of emissions, vulnerability to impacts of climate change, emission paths, strategies, location of settlements, socio-economic characteristics, cultural practices and governance structure, suitable interventions.

2. *Climate Risk and Vulnerability in the City*

Risk due to climate change, risk assessment, impacts due to flooding, cyclones and landslides, impacts on infrastructure, urban governance and participation.

3. *Urban GHG Emissions*

Sectoral emission – residential, industrial, transport, waste disposal, reducing emissions and urban carbon footprints, carbon trading and other alternatives

4. *Climate Change Mitigation and Low-Carbon Cities*

Energy efficient approaches, Urban climate governance, transportation and energy systems for the future, land-use planning and compact cities, future and smart cities, reducing the urban heat islands, protecting urban water systems from climate change risks.

5. *Adaptation – Towards Climate Resilient Cities*

Includes climate change adaptation – migration as adaptation, climate change experiments and alternatives, Climate change, Vulnerable Regions and Groups – Tropics, farmers, gender, children, poor and migrants.

Course Assignments:

Reading materials on energy studies in planning

Expected Time Spent on Course:

Time spent in hours: minimum 48 hours

Time spent in ECTS (European Credit Transfer and Accumulation System): 3 Credits



Course Evaluation

Evaluation Procedure & Criteria:

1. *Student assignments – Presentation by students – 30% weightage*
2. *Mid semester written examination – Theory – 20% weightage*
3. *End Semester written examination – Theory - 50% weightage*