

## **Semester I**

### **Subject: Socio-Economic Aspects for Planning**

To cover basic sociological aspects and theories and its application in the field of planning and development. The focus will be on social issues and problems in the contemporary Indian society, particularly the urban India. The course will be delivered mainly through class lectures. Open discussions and seminars will be held for detailed analysis and case study analysis and discussion.

### **Subject: Urban and Regional Planning**

To introduce the students to the various theories of planning and city design with relevant details of population projection etc. It also exposes the students to the importance of transportation planning and its interface with land use planning.

### **Subject: Housing and Environmental Planning**

To introduce the concepts of Environmental Planning and the various emerging issues, also to provide an understanding and relevant techniques formulating urban housing strategies

### **Subject: Elective**

#### **Quantitative Research Methods**

To provide understanding of the application of quantitative research methods and techniques to analyze planning problems. Data collection, Analysis and interpretation are focused on. The course also highlights the various types of data available for planners and its sources in India.

### **Subject: Colloquium I**

To inculcate research techniques, report writing techniques and presentation techniques. The student will choose any topic of interest i.e. subjects covered in the first semester and present a colloquium

### **Subject: Climate, Building Physics and Sustainable Design Studio**

The aim of the course is to introduce the students to climate as an important aspect of sustainable design, to understand in depth the factors affecting comfort and creation of comfort conditions and the building physics associated with it.

## **Semester II**

### **Subject: Environmental Laws & Legislations**

The aim is to introduce the students to the various policies and programs existing in India as well as around the world and to familiarize the students with the existing environment laws and legislations in India.

### **Subject: Sustainable Building Materials and Technology**

To introduce alternative design approach that is environment sensitive. Concepts of green buildings with respect to Planning Process and Design Process. To introduce alternative methods of building construction and energy efficient construction. Use of Eco friendly building materials.

### **Subject: Elective**

*The students have a choice to take up any one subject of interest. The subjects offered are as follows*

#### **GIS and Remote Sensing**

The course will introduce overview of remote sensing, aerial photography etc. The main objective of this course is to create an awareness and interest among the students in recent remote sensing techniques and working knowledge in application of GIS.

#### **Software simulation tools for energy efficient buildings**

The aim is to introduce software simulation tools for design decisions. Students explore the capabilities as well as understand the limitations of software to analyze building performance.

### **Subject: Environmental management & Ecological Land Planning**

The aim of this course is to make the students understand the various environmental management systems. To make the students understand the importance of land planning for sustainability, resource planning and allocation and protection of natural resources and their use for sustainability.

### **Subject: Climate Responsive Building Design Principles**

This course will introduce the day lighting and artificial lighting environment and its integration in the built form. Empirical measurements with luxmeters form a part of the methodology. Students are exposed to various performance rating systems and standards.

### **Subject: Sustainable Design Studio**

This studio is conceived as a planning studio. Students are exposed to survey and analysis methods used in the planning process. Approach towards land use planning, feeding of ESR into the development plan or urban scale environment management plan is explored.

## **Semester III**

### **Subject: Renewable Energy Systems and Environmental Technologies**

Renewable energy sources (RES) such as wind, hydro, solar and biomass are gaining an increasingly important role in assisting in environmental protection and improving security of energy supply. Also green technologies like waste water, water harvesting and waste to energy technologies will need to be integrated in the site and the building. This course aims at introducing the students to various forms of renewable energy sources, appropriate technologies for harnessing them as well as green technologies that could be integrated in the design for our benefit.

### **Subject: Environmental Impact Assessment**

The aim of the subject is to introduce the students to techniques for carrying out an assessment of the impact the environment will have on a project or in the planning of a settlement.

### **Subject: Energy Efficient Building Services and Management**

To introduce approaches for energy efficient mechanical and electrical services. To understand its implications on building design and operations

### **Subject: Research Paper**

To study in depth subject related to the individual dissertation. The students can interact with specialized resource persons.

### **Subject: Sustainable Design Studio**

To apply the design principles for energy efficiency and sustainable development.

## **Semester IV**

### **Subject: Dissertation**

To undertake detailed research and analysis of design or planning area on a subject of the students' choice related to environmental architecture.

### **Subject: Professional training**

6 weeks full time or 12 weeks part time professional training should enable the students to understand the scope and practical applications of the developed knowledge base.