

Course Code. :	<b>HS 225002</b>
<i>Course Title</i> :	<b>Infrastructure Planning and Management</b>
Credits:	L T P C 3 0 0 3
Prerequisites (if any)	Completed introductory course in Economics
Course Coordinator	Dr. Pravin Jadhav

### **Course description and contents:**

The course '**Infrastructure Planning and Management**' focuses on the planning and management of infrastructure system with a case analysis of a few infrastructure projects in India. In this course infrastructure will be understood in a broad socio economic sense- the basic structure needed for the operation of a society or enterprises or the services and facilities necessary for an economy to function. The course module includes basics of infrastructure such as meaning, types of infrastructure and the role of infrastructure in an economy; Issues and challenges regarding the provision of infrastructure system, supply and demand for infrastructure, Evaluation of infrastructure investment, risk and risk management for infrastructure project and finally the smart infrastructure through the case studies in India. It is assumed that after completing this course, the students will appreciate how disciplines of social sciences can effectively contribute the current discourse of infrastructure development and the effective planning and management of its provision.

#### **Evaluation scheme for the course**

Case study Discussions: 25

Mid semester examination – 25

End semester examination – 50

Lecture #	Prospective contents
1	<p><b>Basics of Infrastructure</b></p> <p>Understanding of Infrastructure, Types of Infrastructure, Role of Infrastructure, Infrastructure scenarios in India and problems of Infrastructure Development in India</p>
2	<p><b>Urban Infrastructure in India</b></p> <p>An overview of Urban Infrastructure in India, Models of Urban Governance, Municipal Finances, Major municipal reforms, Framework for Urban Infrastructure Delivery, Quality of water supply and services, Models of Urban governance, Municipal governance, Urban renewal projects</p>
3	<p><b>Rural Infrastructure in India</b></p> <p>Road development scenario in India, The state of rural infrastructure in India, Infrastructure and rural growth, Characteristics of rural India, Strategies to improve infrastructure in rural areas, Government initiatives for rural infrastructure improvement, Role of private sector in infrastructure development.</p>
4	<p><b>Key Issues of provision of Infrastructure system</b></p> <p>Leadership and strategy issues in the funding, financing, development and delivery of new infrastructure in the country</p> <p>Issues regarding the design and technology to be used, priority of location of infrastructure development, cost and level of risks that we have to tolerate</p>
5	<p><b>Infrastructure Investment and Finance</b></p> <p>Background behind investment and funding required for the financial planning of the infrastructure</p> <p>Various forms of funding available for infrastructure ( public, private and combined)</p>
6	<p><b>Privatization in Infrastructure Projects</b></p> <p>Overview of history of privatization, The Benefits of Infrastructure Privatization, Problems with Infrastructure Privatization, Privatization of road Transportation Infrastructure in India</p>
7	<p><b>Supply and Demand for Infrastructure</b></p> <p><b>Issues of demand and supply management</b></p>
8	<p><b>Evaluation of Infrastructure Investments</b></p> <p>Cost- benefit analysis</p> <p>Stages of an infrastructure project Lifecycle</p>
9	<p><b>Risk and Risk management framework for infrastructure project implementation</b></p> <ul style="list-style-type: none"> <li>• Legal contractual Issues in Infrastructure Projects</li> <li>• Environmental issues in infrastructure development</li> <li>• Challenges in Construction and Maintenance of Infrastructure</li> </ul>
10	<p><b>Infrastructure Asset Management</b></p> <p>Management of infrastructure both at individual as well as network/system level</p> <p>Concepts, theory and methods for infrastructure asset management and asset performance requirements</p>

11.	<p><b>Smart Infrastructure</b></p> <p>The will be done via the case studies on smart cities. These case studies will include both Indian and international cases, with emphasis on Indian cases.</p>

## Readings

1. Goodman AS, Hastak M (2006). *Infrastructure Planning Handbook: Planning, Engineering, and Economics*. McGraw Hill/ ASCE Press. Chapter 1
2. World Bank (2012). *Transformation through Infrastructure*. Selected pages handed out in class.
3. World Bank (2006). *Infrastructure at the Crossroads: Lessons from 20 Years of World Bank Experience*.
4. ULI and Ernst & Young (2013) *Infrastructure 2013: Global Priorities, Global Insights*, The Urban Land Institute, Washington DC. Available free: <http://www.uli.org/infrastructure---initiative/infrastructure---2013---explores---global---infrastructure---priorities/>
5. Lee (2009) *New Delhi Water and Power*. Harvard Kennedy School of Government Case Program #1891