Course title: Infrastructure Development: Issues and Options

Course code: PPS 121	**No. of credits:** 2	**L-T-P:** 24-6-0	**Learning hours:** 30
Department: Policy and Management Studies			
Course coordinator(s): Mr. Shri Prakash	**Course instructor(s):** Mr. Shri Prakash		
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Course Type: Core	**Course offered in:** Semester 1		
Pre-requisite course code and title (if any): None			

Course Description

The Course is designed to familiarise the students with the issues and challenges of developing infrastructure in India. The course, *inter alia*, includes a critical analysis of the development of four vital infrastructure sectors namely transport, energy, telecommunication and water. Infrastructure sector considered a prerequisite to achieve social and economic development faces several challenges like scarcity of public funds, land and other resources, environmental issues, governance, and regulatory issues etc. The innovative measures adopted to overcome current difficulties will be discussed through case studies.

Course objectives

- Review the existing status of infrastructure as a whole, and the extant polices relating to infrastructure development in India and other developing countries
- Identify the inadequacies in different infrastructure sectors and the policy changes required to facilitate rapid infrastructure development.
- Discuss new methods employed in addressing issues particularly relating to sustainability and regulatory practices
- Discuss the role of public private participation in financing of infrastructure.

Course content

Module	Topic	L	T	P
1.	**Infrastructure Development: Emerging issues** • Definition of infrastructure • The inter-relationship between the infrastructure and economic and social development. • Typical problems in infrastructure development such as designing appropriate projects, funding the projects, identifying and obtaining the human resources required for implementing the project efficiently, then ensuring the delivery of infrastructure services in a cost-effective manner. • The importance of appropriate public policy and governmental involvement in infrastructural development. • Role of central, state and local governments for infrastructure development. • The role of private investment (foreign and domestic) in the development of infrastructure. • International experience in development of major infrastructure.	6	2	0
2.	**Funding of Infrastructure**	6	2	0

	• Funding of infrastructure • Public Private Participation • Establishment of specific companies (SPVs) to develop and implement projects. • Development of debt markets. • Role of multilateral and bilateral agencies in infrastructure growth in developing countries			
3.	**Regulation of Infrastructure services.** • The need for independent regulation of infrastructure to ensure equity, quality, cost effective pricing, a level playing field for investors and consumer satisfaction. • The evolution of independent regulation in India. • The framework of independent regulation in different sectors in India and the variation of important legal provisions relating to the scope of regulation and the independence of the regulators. • The impact of regulation on performance of the utilities.	6	2	0
4.	**Infrastructure and Sustainability** • Sustainability issues in infrastructure development • Land, forest and other environmental concerns • Green growth, judicious use of natural resources • Low carbon technologies in transport and energy • Incorporation of SDGs in infrastructure policies	6	0	0
	Total	**24**	**6**	**0**

Evaluation Criteria:

The evaluation will be done based on individual and group assignments and a major examination:

- **Test-1:** *Individual Assignment (40%)*

These assignments are designed to assess students' understanding, evaluating, and writing based on individual research pertaining to public policy perspectives on a wide range of infrastructure sectors better understand critical issues and policy alternatives to sustainable infrastructure development

- **Test-2**: *Group Project Work (20%)*

Group projects help students better learn course concepts and applications, develop and engage in cooperative processes to tackle real world problems affecting sustainability. The learning outcome include higher-level reasoning skills, increased willingness to take on and accomplishing more difficult tasks. Furthermore, these benefits extend beyond the classroom as the practices and skills are put into practice for the community, career, and personal aspects of their lives.

- **Test-3**- *Major Examination (40%)*

There will be a final examination at the end of the semester covering the whole syllabus and contents discussed under each module. Course instructor has the freedom to draft the questions based on contemporary practical issues on sustainability law and governance and its relevance in the various infrastructure sectors.

Learning outcomes

The expected learning outcome is enhanced critical and informed understanding of infrastructure development in India and other developing countries. At the end of the course, the participants would be able to

- Critically reflect on the challenges in the development of sustainable infrastructure (Evaluation: Tests 1, 2&3)
- Achieve a level of well-informed professional so that he contributes to the delivery of infrastructure development and management (Evaluation: Tests 1, 2 &3)

Pedagogical approach
Instructions will be facilitated through lectures, interactive sessions based on cases studies and critical readings. The sessions will be based on relevant policy perspectives where lectures will be followed by case study-based discussions and group presentations by the participants.

Materials:

Required text:

Main readings:
Compulsory:

1. Piyush Joshi, (2003). Law relating to Infrastructure Projects (Second edition) LexiNexus Butterworths India New Delhi (Module 1)
2. Delmon, Jeffrey. (2011) Public Private Partnership projects in Infrastructure: An essential guide for policy makers, Cambridge University Press (Module 2)
3. Mehta, Pradeep S, (2009). Developing infrastructure through an ideal regulatory framework, CUTS Institute for regulation and Competition (Module 3)
4. Fay, Marianne and Toman, Michael (2010). Infrastructure and Sustainable development, World Bank (Module 4)

Suggested:

5. Shilling, John D (2007). The Nexus between Infrastructure and Environment, Evaluation brief World Bank
6. Hawkesworth, Ian (2015), Towards Framework for the governance of Infrastructure, OECD

Case Studies: Will be selected based on the professional background of the students and relevance of the case studies for them.
Websites: Ministry of Finance, Department of Economic Affairs; Niti Aayog; World Bank
Journals: The Economic and Political Weekly, The Economist
Other readings: Policy Papers of Government of India and other relevant reports published from time to time

Additional information (if any): None

Student responsibilities:

1. Active participation in the processes of Learning
2. Critical reflections for discourse creation
3. Punctuality (according to the Course criterion)

Course reviewers

1. Mr. S. Sundar, Distinguished Fellow Emeritus, TERI, New Delhi and former Secretary Transport, Government of India.
2. Dr Ashwani Kumar, PhD, Chief Operations Manager, Northern Railway, Baroda House, New Delhi