

Rajiv Sethi
AC file



**DARBARI SETH BLOCK, INDIA HABITAT CENTRE,
LODHI ROAD, NEW DELHI**

**SUB: FIFTEENTH MEETING OF THE ACADEMIC COUNCIL
AGENDA NOTES**

Date : 3rd January '07
Venue : Conference Room, TERI
Time : 10:00 am

Item No.	Particulars
Item No. 1	To confirm the minutes of the thirteenth meeting of the Academic Council held on 12 July 2006
Item No. 2	Matters for information
Item No. 3	To report the decisions taken by the Executive Committee of the Academic Council on behalf on the Academic Council.
Item No. 4	To consider and approve courses of the second semester for the M.B.A (Infrastructure) programme.
Item No. 5	To consider and approve initiation of a new master's programme – M.Sc. (Water Resources Management) programme.
Item No. 6	Any other item with the permission of the Chair.



UNIVERSITY

RESEARCH IN THE FIELD OF HUMAN DEVELOPMENT
AND SOCIAL BEHAVIOR

THE UNIVERSITY OF THE STATE OF NEW YORK
AT BINGHAMTON

DEPARTMENT OF PSYCHOLOGY
BINGHAMTON, NEW YORK

1970

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The following information is provided for the purpose of identifying the source of the material and for the purpose of identifying the author of the material. The information is provided for the purpose of identifying the source of the material and for the purpose of identifying the author of the material. The information is provided for the purpose of identifying the source of the material and for the purpose of identifying the author of the material.

Item No. 1 To confirm the minutes of the thirteenth meeting of the Academic Council held on 12 July 2006

The minutes of the fourteenth meeting of the Academic Council held on 12 July 2006 were circulated to the members. No comments have been received so far.

The Academic Council may, therefore, consider confirming the minutes, as circulated.

Item No. 2 Matters for information

- (i) The name of the TERI School of Advanced Studies was formally changed to “TERI University” with effect from 05 October 2006 after approvals from Board of Management, UGC and the Ministry of Human Resource Development.
- (ii) The first convocation of the TERI University was held on 16th October 2006. 8 students received their doctoral degree and 36 received the masters’ degree. Mr Nandan M Nilekani, CEO and MD, Infosys Technologies who was the Chief Guest, was awarded a honorary doctoral degree.
- (iii) The MBA (Infrastructure) programme commenced on 17th July ’06 with an intake of 14 students – 5 in Stream I and 9 in Stream II. All 14 students have successfully completed Semester I of the programme.
- (iv) 17 students of the MA (Public Policy and Sustainable Development) programme have successfully completed their II Semester. They have all now returned to their parent unit where they would continue doing their major project during the III and IV semesters of the programme.
- (v) 31 students of the M.Sc (Environmental Studies) and M.Sc. (Natural Resources Management) have successfully completed semester I of the programme.
- (vi) The placement cell of the University is in the process of helping students with placements for their major projects (Jan –May 2007) and for their final placements. A status report is placed at Annexure 2.1.
- (vii) The construction work for the University’s campus at Vasant Kunj is continuing. It is expected that it will be ready for occupation by May-June 2007.

Item No. 3 To report the decisions taken by the Executive Committee of the Academic Council on behalf on the Academic Council.

- (i) **Approval of course outline PPS 164 – Urban and transport infrastructure: Policy and Management.**
The Executive Committee, on behalf of the Academic Council, had approved the course outline for the above course. The approved outline is enclosed as Annexure 3.1.

The Academic Council is requested to approve.

- (ii) **To recommend names of outside experts to be included in the panel of experts to sit on the Selection Committee for faculty interviews.**

The Executive Committee, on behalf of the Academic Council, recommended names for inclusion in the existing panel of outside experts to sit on the Selection Committees for faculty members at the University.

Sociology /Anthropology	Anthropology
Prof V K Srivastava Professor Department of Anthropology Delhi University Delhi	Dr Avanish Kumar Associate Professor Management Institute of Technology Gurgaon Haryana

The Academic Council is requested to concur with the recommendations.

- Item No. 4 To consider and approve courses of the second semester for the M.B.A (Infrastructure) programme.**

The course outlines for three courses which will be offered in the second semester of the MBA (Infrastructure) programme are placed at Annexure 4.1, 4.2 and Annexure 4.3.

The Academic Council is requested to consider and approve the course outlines.

- Item No. 5 To consider and approve initiation of a new master's programme – M.Sc. (Water Resources Management) programme.**

The Department of Natural Resources intends to offer an M.Sc ((Water Resources Management) programme.

The Head of the Department will present the proposal for the consideration of the Academic Council.

- Item No. 6 Any other item with the permission of the Chair.**

TERI University
Status Report on placements
 26 December 2006

Major Project & Final Placements M Sc 2006:

SN	Name of Student	Major Project	Final Placement
1	Ms Sumedha Basu	Senergy Global	Senergy Global
2	Mr Vishal Kumar	Emergent Ventures (I) Pvt. Ltd.	Emergent Ventures (I) Pvt. Ltd.
3	Ms. Rajshwari M	Eco Securities	Eco Securities
4	Ms Shilpi Mishra	SGS	SGS
5	Ms Divya Mohan	Yale University	WWF
6	Ms Prachi Prakash	-	-
7	Mr Sah Jimmy Rajdeo	SGS	SGS
8	Ms. Taruna Tomar	Senergy Global	Senergy Global
9	Ms. Tanushree Bagh	Eco Securities	Eco Securities
10	Ms Himani Bisht	-	-
11	Mr Anjan Katna	Yale University	-
12	Ms Yamini Panchaksharan	Yale University	WWF
13	Ms Ramya Parijat	CO2E	(Likely at CO2E)
14	Ms. Neha Rao	Yale University	Emergent Ventures (I) Pvt. Ltd.
15	Ms. Swati Singh	CO2E	(Likely at CO2E)

THE UNIVERSITY OF CHICAGO
STATE REPORT ON RESEARCH
IN PHYSICS

STATE REPORT ON RESEARCH IN PHYSICS

The following is a list of the research projects supported by the State of Illinois during the year 1954. The projects are listed in alphabetical order of the principal investigator's name. The names of the principal investigators are given in full, and the names of the institutions where the research was conducted are given in full. The names of the principal investigators are given in full, and the names of the institutions where the research was conducted are given in full. The names of the principal investigators are given in full, and the names of the institutions where the research was conducted are given in full.

The following is a list of the research projects supported by the State of Illinois during the year 1954. The projects are listed in alphabetical order of the principal investigator's name. The names of the principal investigators are given in full, and the names of the institutions where the research was conducted are given in full. The names of the principal investigators are given in full, and the names of the institutions where the research was conducted are given in full. The names of the principal investigators are given in full, and the names of the institutions where the research was conducted are given in full.

Course No.:	PPS 164
Course title:	Urban and transport infrastructure: policy and management
Number of credits:	3 (2-1-0)
No. of lectures-tutorial-practical:	27-15-0
Course coordinator:	Dr Vinod Tewari Mr Talat Munshi

Course outline

The provision of infrastructure facilities and services, required to support large concentrations of population in the country, is lagging far behind the pace of urbanisation. In many cities, urban infrastructure facilities built decades ago are now reaching or exceeding their design lifetimes. Availability of capital investments for augmenting and renovating the infrastructure is extremely inadequate. The institutions responsible for operations and maintenance lack both capacity as well as revenue resources for effective and efficient management of the infrastructure. As a consequence, the urban environment, particularly in large cities, is deteriorating rapidly. All the cities and towns in the country suffer from serious shortage of housing and water supply, lack of sewerage system, poor management of solid waste, distortions in land market, and fast deteriorating traffic and transportation situation.

Evaluation procedure

- Assignments (3) : 60%
- 1 major test (end semester) : 40%

Details of course content & allotted time

The course has been designed in two major components: one focusing on urban environmental infrastructure and housing and the other on urban transportation. The issues addressed will include the evolution, implementation and evaluation of the policies related to urban infrastructure development and financing, roles, responsibilities and finances of urban local bodies, para-statal and other stakeholders providing and managing the infrastructure, and the requirement and availability of funds. It will discuss policy and management strategies including systems improvement such as accounting and financial reporting, building appropriate management and spatial information systems, e-governance, urban sector reforms, and human resources development to improve the levels of infrastructure and services that will lead to an improved quality of life of urban inhabitants.

The transport component of the course will give an overview to transport policies and practices in the sector both within the country and also internationally. The course will also look at the principles and theory of transport demand management and of transport assets management and relevance of these in the Indian context.

The teaching methodology will include class lectures, tutorials/seminars, and case studies based analysis and discussions.

The details of the topics to be covered in the course:

Topic	Time allotted (hours)	
	Lectures	Tutorials/ Seminars
Overview of urban infrastructure, housing situation in urban areas in the country	1	0

Topic	Time allotted (hours)	
	Lectures	Tutorials/ Seminars
Evolution of urban infrastructure policies - Mega City Scheme, IDSMT, UIDSSMT, Water Supply, Housing and basic services for the poor etc)	2	0
A critical Assessment of major policies and their implementation	0	2
Recent urban sector policy initiatives at the central government level (decentralisation -74 th Amendment, Housing and Habitat Policy, Model Municipal Act, Integrated townships, EWS housing, Tax-free municipal bonds etc	2	2
Policy initiatives and reforms at state and local levels (municipal and other acts, state housing policies, enabling public-private partnerships etc)	2	1
Institutional structures for provision and management of infrastructure and housing (case studies of select municipal bodies and parastatal) including organisation structures, fiscal assessment, SWOT etc.	2	1
Strategies for improving infrastructure management (development of information systems including GIS, service delivery, bringing in accountability and transparency, e-governance etc.); case studies	2	1
Management strategies for resources mobilisation (cost recovery, property tax reforms, tax free municipal bonds, credit-rating of municipal bodies, public-private partnerships, accounting and financial management reforms etc.) case studies	2	2
Jawaharlal Nehru Urban Renewal Mission: a reform linked strategy for urban infrastructure development and financing	2	0
The way forward – making the states adopt the policies and associated reform agenda	1	0
Overview of transport situation in urban areas in India	1	0
Appraisal of transport issues relevant in Indian context and critical appraisal of the reforms in the sector.	2	0
Urban transport demand Management– Theory Transport Demand Management models, Land-use transport interaction models.	2	3
Transport demand management – Indian Context Practices followed and scope for change	1	0
Predicting Transport Demand Application of Discrete Choice Theory.	2	3
Sustainable transport policies. Critical review of clean air policies, policies promoting non-motorized transport and public transport and sustainable transport indicators.	3	0
Total	27	15

Suggested readings

1. C. A. Brebbia and L. C. Wadhwa (2004) Urban Transport X: Urban Transport and the Environment in the 21st Century (Advances in Transport, 16) by, and Germany) 10th International Conference on Urban Transport and the Environment: 2004: Dresden
2. Bannister, D. (2002) Transport, development and sustainability, London: Spon.
3. Government of India, Report of the National Commission on Urbanisation, Ministry of Urban Affairs and Employment, New Delhi
4. Government of India, Constitution (Seventy-fourth) Amendment Act, 1992
5. Government of India, Jawaharlal Nehru Urban Renewal Mission, Ministry of Urban Development and Ministry of Housing and Urban Poverty Alleviation, <http://jnnurm.nic.in>
6. D.A. Henschel (editor), K.J. Button, K.E. Haynes, P.R. Stopher (2004) Handbook of transport geography and spatial systems. – Amsterdam, Elsevier, ISBN 0-08-044108-4
7. National Institute of Urban Affairs, India Urban Information Resource Centre, <http://www.niua.org/indiaurbaninfo/>
8. Ortuzar J D, Willumsen L.G,(2001), Modelling Transport, Willey and Sons, England, ISBN: 0-47186110-3(H/B)
9. Pugh C (1990) Housing and Urbanisation, A Study of India, Sage Publishers, New Delhi.
10. TERI (2000), Cleaner air and better transport: making informed choices, TERI, New Delhi, ISBN: 81-89419-69
11. World Bank (2002), Indian Transport Sector, The Challenges Ahead, World Bank, Washington, www.worldbank.org
12. Zuidgeest, M.H.P. (2005) Sustainable urban transport development: a dynamic optimisation approach, PhD Thesis, University of Twente, ISBN: 90-365-2174-2

1. The first part of the document is a letter from the author to the editor, dated 10th March 1954. It discusses the author's interest in the subject of the journal and the possibility of publishing a paper on the topic.

2. The second part of the document is a letter from the editor to the author, dated 15th March 1954. It acknowledges the author's interest and suggests that the author should submit a paper for consideration.

3. The third part of the document is a letter from the author to the editor, dated 20th March 1954. It responds to the editor's suggestion and states that the author will submit a paper on the topic of the journal.

4. The fourth part of the document is a letter from the editor to the author, dated 25th March 1954. It acknowledges the author's submission and suggests that the author should submit a paper for consideration.

5. The fifth part of the document is a letter from the author to the editor, dated 30th March 1954. It responds to the editor's suggestion and states that the author will submit a paper on the topic of the journal.

6. The sixth part of the document is a letter from the editor to the author, dated 5th April 1954. It acknowledges the author's submission and suggests that the author should submit a paper for consideration.

7. The seventh part of the document is a letter from the author to the editor, dated 10th April 1954. It responds to the editor's suggestion and states that the author will submit a paper on the topic of the journal.

8. The eighth part of the document is a letter from the editor to the author, dated 15th April 1954. It acknowledges the author's submission and suggests that the author should submit a paper for consideration.

9. The ninth part of the document is a letter from the author to the editor, dated 20th April 1954. It responds to the editor's suggestion and states that the author will submit a paper on the topic of the journal.

10. The tenth part of the document is a letter from the editor to the author, dated 25th April 1954. It acknowledges the author's submission and suggests that the author should submit a paper for consideration.

Course No.:	PPM 132
Course title:	Operation and Management of restructured power systems
Number of credits:	4 (2.5-1.5-0)
Number of lectures-tutorial practicals:	38-18-0
Course coordinator:	Puneet Chitkara

Course Outline:

The course will enhance the understanding of the operations of Electricity Supply Industry in the conventionally vertically integrated environment vis-à-vis the restructured environment.

The class will build on a background of undergraduate economics and undergraduate electric power or circuit theory and continuous and mixed-integer optimization theory. Strong background in the last two areas is not expected and the course will revise some of these fundamentals.

In this course the students are exposed to several complexities involved in restructuring and the new issues that have surfaced. Chapter – I is an introduction to undergraduate electric power and circuit theory. Chapter – II introduces the students to dispatch philosophy and its implementation in vertically integrated and restructured power markets. The dispatch decisions also incorporate the network characteristics and chapter – III introduces the students to this concept and its modeling in a centralized power system. Chapter – IV introduces power wheeling and the technical and commercial concerns in using the transmission network as a third party network. Chapter – V introduces the students to the concerns of various stakeholders in markets where generation and power trading market is oligopolistic. This chapter brings out various ways in which strategic conduct by various players manifests itself given the peculiarities of electricity networks.

Evaluation procedure

Assignment-1 on Fundamentals of Power Systems Analysis (Weightage 5%)

Assignment-2 on Application of Linear Programming, Dynamic Programming and Mixed Integer Programming in Power Systems (Weightage 25%)

Assignment-3 on Application of Non-Linear Programming in Power Systems (Weightage 10%)

Assignment-4 on Transmission Price Modelling on IEEE Test Systems (Weightage 20%)

Assignment-5 on formulation and modeling of MCP (Weightage 20%)

Final Examination (Weightage 20%)

All Assignments in this course are take home. The Final Examination will be Computer Based and will be held in the Computer Lab.

Details of course contents and allotted time

S. No.	Topics	Lectures	Tutorials
1.	Elements of Power System	8	2
	<ul style="list-style-type: none"> ▪ Electrical Circuits ▪ Resistance, Inductance and Capacitance ▪ DC Circuits, Ohm's Law ▪ AC Circuits ▪ Power in Single Phase AC Circuits ▪ Complex Power ▪ The Power Triangle ▪ Direction of Power Flow ▪ Voltage and Current in Balanced Three Phase Circuits ▪ Power in Balanced three phase circuits ▪ Per-Unit Quantities ▪ Node Equations ▪ One Line Diagram ▪ Impedance and Reactance Diagrams 	6	2
	Characteristics of Power Generation Units		
	<ul style="list-style-type: none"> ▪ Characteristics of Steam Units ▪ Variations in steam unit characteristics ▪ Hydroelectric Units 	2	
2.	Economic Dispatch of Thermal Units	6	6
	<ul style="list-style-type: none"> ▪ The Economic Dispatch Problem ▪ Dispatch with network losses considered ▪ Economic Dispatch with piece-wise linear cost functions ▪ Economic Dispatch Using Dynamic Programming ▪ Unit Commitment Problem: Objective Function, Constraints and Solutions 	1 1 1 1 2	1 1 1 1 2
3.	Power Flows	6	6
	A. Current and Voltage Relations on a Transmission Line (i) Use of pi-equivalent model of a transmission line to make power flow calculations (ii) Identify the influence of angular difference and voltage magnitude on real and reactive on real and reactive power flow across a transmission line (iii) Identify limitations of Power Flow across a transmission line (iv) Formulation of power-flow problem (v) Power Flow Solution	4	4
	Optimal Power Flow: Objective Function, Constraints, Solution and Interpretation of Results	2	2
4.	Transmission Open Access and Pricing Issues	7	4
	<ul style="list-style-type: none"> ▪ Power Wheeling ▪ Types of Transmission Services ▪ Cost Components in Transmission 	1 1 1	

S. No.	Topics	Lectures	Tutorials
	<ul style="list-style-type: none"> ▪ Pricing of Power Transactions (Postage Stamp, MW-Mile, SRM(1)C, LRM(1)C) ▪ Congestion Management: Market Splitting, Transmission Rights – Physical and Financial 	2	2
		2	2
5.	Strategic Bidding on Electricity Networks	11	
	<ul style="list-style-type: none"> ▪ Contract for Differences ▪ Hedging transmission price risk ▪ Financial Transmission Rights ▪ Revenue Adequacy ▪ Option, Contingent and Flowgate Rights 	1	
		2	
		1	
		2	
	Market Power in Power Markets		
	<ul style="list-style-type: none"> ▪ Equilibrium Models: Cournot, Stackelberg and Supply Function Equilibrium ▪ Market Power Mitigation 	4	
		1	
		38	18

Main Readings:

1. Power System Analysis, Granger and Stevenson, Tata McGraw Hill, 2003)
2. Wood and Wollenberg, Power Generation Operation and Control, John Wiley and Sons, 2003)
3. Bhattacharya, K., Bollen, H.J. Math, Daadler, Jaap E.; *Operation of Restructured Power Systems*, Kluwer Academic Publishers (2001).
4. Steven Stoft, Power System Economics, Designing Markets for Electricity, IEEE Press, Wiley-Interscience, 2002
5. Linear Complementarity Models of Nash-Cournot Competition in Bilateral and POOLCO power markets, IEEE Transactions on Power Systems, Vol. 16, No. 2, May 2001
6. Electricity Market Equilibrium Models: The Effect of Parameterization, IEEE Transactions on Power Systems, Vol. 17, No. 4, November 2002
7. Oligopolistic Competition in Power Networks: A Conjectured Supply Function Approach, IEEE Transactions on Power Systems, Vol. 17, No. 3, August 2002
8. Oligopolistic Equilibrium Analysis for Electricity Markets: A Nonlinear Complementarity Approach, IEEE Transactions on Power Systems, Vol. 19, No. 3, August 2004
9. Network Constrained Cournot Models of liberalized electricity markets: the devil is in the details, Neuhoff et. al., Energy Economics 27, 2005, 495-525

Suggested readings:

1. Merchant Transmission Investment, Paul Joskow and Jean Tirole, 2004, Cambridge-MIT Institute
2. Transmission Market Design, William W. Hogan, Center for Business and Government, JF Kennedy School of Government
3. Financial Transmission Right Formulations, W.W. Hogan, 2002, Center for Business and Government, JF Kennedy School of Government
4. Stoft S, Using Game Theory to Study Market Power in Simple Networks, IEEE Winter Power Meeting, H. Singh Ed., 1999
5. Stoft S, "Financial Transmission Rights Meet Cournot: How TCC's curb market Power," The Energy Journal, 20: 1-23, 1999

Interested student may also refer

1. Sheble, Gerald B.; *Computational Auction Mechanisms for Restructured Power Industry Operation*, Kluwer Academic Publishers (1999).
2. Chao, Hung-po, Hungtington, Hillard G. (Eds), *Designing Competitive Electricity Markets*, Kluwer Academic Publishers (1998)
3. M. Ilic, F. Galiana and L Fink: *Power System Restructuring: Engineering and Economics*, Kluwer Academic Publishers 1998.
4. M. Shahidehpour and M. Alomoush, *Restructured Electrical Power Systems: Operation, Trading and Volatility*, Marcel Dekker Inc. 2001.
5. L.L. Lie, *Power System Restructuring and Deregulation*, John Wiley & Sons, UK, 2002
6. L. Philipson and H.L. Willis, *Understanding Electric Utilities and Deregulation*", Marcel Dekker Inc. 1999.

Course No.:	PPM 136
Course title:	Urban transport infrastructure management
Number of credits:	4 (3.5-0.5-0)
No. of lectures-tutorial-practical:	46-7-0
Course coordinator:	Mr Talat Munshi

Course outline

Transport plays a very important role in the overall development of a nation's economy and an efficient transport system forms a prerequisite for sustained economic growth. In India transportation is a critical infrastructure having backward and forward linkages for connectivity of production centres and markets. However, the provision of Transport facilities and services, required to support large concentrations of population in the country, is lagging far behind the pace more so in the urban areas. In many cities, Transport infrastructure facilities built decades ago are now reaching or exceeding their design lifetimes and also in some cases because changes in activity patterns and individual travel habits the provision is fast losing relevance. The government has initiated measures to ameliorate the condition of transport in Indian cities, policies like the National Urban Transport Policy (NUTP) and Jawaharlal Nehru National Urban Renewal mission (JNNURM) and several other initiatives especially in the Indian aviation sector and railways provide the pathways, but how and if the measures suggested in these and other policy documents can be implemented need to be understood and debated.

Evaluation procedure

Assignments	15%
Paper 1 based on literature review	25%
Paper 2 based on literature review	25%
Final examination	35%

All Assignments in this course are take home. The final exam will be paper based written exam.

Details of course contents and allotted time

The course has been designed in five major components: The first section introduces the transport problem and will give an overview to transport policies and practices in the sector both within the country and also internationally. The following four sections will discuss the technical, theoretical and economic aspects which provide understanding of issues being discussed in the policy document this will give the students a better standing to understand the implication of statements made in the policy documents. Within these sections theory will be discussed, certain case examples will be discussed and forward and backward linkages with the policy documents will be established.

The teaching methodology will include class lectures, tutorials/seminars, and case studies based analysis and discussions.

Topic	Lectures	Tutorials/Seminars
Introduction to the transport problem and policies in India a) Transport scenario in India, supply levels and problems. b) Elements of policies related to transport sector in India.	4	
Understanding of transport models c) Urban transport demand Management- Theory d) Transport Demand Management models e) Land-use transport interaction models. f) Linkage to transport policy scenario in India g) Inter-Urban travel demand management (Focus on Civil Aviation)	5	5

Topic	Lectures	Tutorials/Seminars
Transport Management Strategies a) Improved transport options b) Incentives to use alternative modes and reduce driving c) Parking and Land Use Management d) Policy And Institutional Reforms e) Inter-urban travel issues f) Linkage to transport policy scenario in India	10	
Sustainable Urban Transport Issues a) Sustainable Transportation Performance Indicators b) Implications of Sustainable Transportation c) Demand Management and Sustainable Transportation	12	
Use of discrete choice analysis for improving transport provision	3	2
Financing Urban Transport Infrastructure. a) Pricing (4 Hours) b) Public transit (2 Hours) c) Market reforms (4 Hours) d) Partnership (2 Hours) e) Relevance to policy scenario in India (2 Hours) f) Civil Aviation (2 Lectures)	12	
	46	7

Suggested readings

1. Ben-Akiva and S.R. Lerman (1985), Discrete Choice Analysis, Theory and Application to Travel Demand, The MIT Press, London.
2. C. A. Brebbia and L. C. Wadhwa (2004) Urban Transport X: Urban Transport and the Environment in the 21st Century (Advances in Transport, 16) by, and Germany) 10th International Conference on Urban Transport and the Environment : 2004 : Dresden
3. Bannister, D. (2002) Transport, development and sustainability, London: Spon.
4. D.A. Henscher (editor), K.J. Button, K.E. Haynes, P.R. Stopher (2004) Handbook of transport geography and spatial systems. – Amsterdam, Elsevier, ISBN 0-08-044108-4
5. Ministry of Urban Development (2006), National Urban Transport Policy, <http://urbanindia.nic.in/moud/programme/ut/TransportPolicy.pdf>, accessed on 11/12/2006
6. Teri (2000), Cleaner air and better transport: making informed choices, TERI, New Delhi, ISBN: 81-89419-69
7. World Bank(2002), Indian Transport Sector, The Challenges Ahead, World Bank, Washington, www.worldbank.org
8. Ortuzar J D, Willumsen L.G,(2001), Modelling Transport, Willey and Sons, England, ISBN: 0-47186110-3(H/B)
9. Zuidgeest, M.H.P. (2005) Sustainable urban transport development : a dynamic optimisation approach, PhD Thesis, University of Twente, ISBN :90-365-2174-2

Course No.:	PPM 134
Course title:	Urban infrastructure management and regulation
Number of credits:	4 (2.5-1.5-0)
No. of lectures-tutorial-practical:	38-18-0
Course coordinator:	Dr Vinod Tewari

Course Outline

One of the most important challenges of urbanization in the country is to provide adequate level of infrastructure and services in the rapidly growing urban areas. The provision of urban infrastructure is lagging far behind the pace of urbanization. Inadequate and irregular water supply, improper and partial treatment of sewage, uncollected solid waste and its unscientific disposal, poor drainage system, unauthorized development of commercial and other land uses in the absence of proper planning, and grossly inadequate housing that forces about half of the population in some metropolitan cities to live in slums, all these severely decrease the quality of life in urban areas. At the same time the cities have been growing rapidly in a haphazard manner and the real estate development is taking place without the required infrastructure. The main reasons for the deteriorating urban infrastructure situation include poor management and regulation of the existing infrastructure and lack of planning and financial resources for augmenting it. It is widely recognized now that our budgetary resources are totally inadequate and the private sector will have to be roped in to improve the urban infrastructure situation in the country. This requires that proper regulatory mechanisms are put in place for ensuring that the public-private partnerships are successful and achieve the desired outcomes. Further, the institutions responsible for managing and governing the urban areas need to be strengthened by implementing the urban reforms agenda being advocated by Government of India and other agencies in a time bound manner.

Evaluation procedure

Assignments (2) and their presentations	: 60%
End semester test	: 40%

Details of course contents and allotted time

The Urban Infrastructure Management and Regulation course provides an understanding of the urban scenario in the country including infrastructure and services, institutional structures, financing, management systems, and regulation of urban development and infrastructure provision. Emphasis is placed on analyzing the key management issues, approaches, strategies and regulatory frameworks. Identification of roles and responsibilities of various stakeholders in the planning, management and regulation of the infrastructure provision is a key component of the course.

The teaching methodology includes lectures, seminars and discussions of case studies. A visit to an urban local body that has developed some best practices in urban infrastructure provision and management is a part of the learning process in this course.

The details of the topics to be covered in the course are:

Topic	Time allotted (hours)	
	Lectures	Seminars/case studies discussions
Overview of urbanization process, city structure and urban activity and infrastructure systems	3	0
Economic and social significance of urban infrastructure systems	1	0
Urban scenario (growth, economic base, settlements systems, spatial patterns, regional imbalances, inequalities, etc) in the country	4	0
Urban infrastructure (housing, real estate, water, sewerage and waste disposal systems, solid waste management, roads, street lights etc) demand-supply status and growth – case studies of selected cities	2	2
Environmental impacts and issues and methods of monitoring urban environment	2	0
Institutional structures and governance issues in the provision and management of urban infrastructure; access of urban poor to basic infrastructure and services	4	0
Benchmarking performance of urban local bodies with regard to urban infrastructure management; citizens' report cards	2	0
Urban legislations (municipal acts, building bye-laws, SWM rules and other legislations) that facilitate and regulate urban planning, development and infrastructure provision and management, case studies of selected states/cities	2	2
Judicial interventions in improving urban infrastructure management in the country, case studies	2	2
Policy initiatives and legislative reforms at state and local levels (decentralization, reforms guidelines, enabling public-private partnerships and their regulation etc) case studies	2	2
Financing of urban infrastructure including special schemes and incentives designed for urban infrastructure development	4	0
Management strategies for resources mobilisation (cost recovery, property tax reforms, tax free municipal bonds, credit-rating of municipal bodies, public-private partnerships, accounting and financial management reforms etc.)	4	2
Urban reforms and strategies for improving infrastructure management and service delivery (systems for improving transparency and accountability, community participation, e-governance etc.); case studies	2	4
Case studies of public-private partnerships in urban infrastructure development including regulation	0	4
Visit to a municipal corporation to study the practice of urban infrastructure management and regulation	Equivalent to 4 hr lectures	0
Total	38	18

Suggested Readings

1. Government of India, Tenth Five Year Plan, Planning Commission 2002
2. Government of India Towards Faster and More Inclusive Growth, An Approach to the 11th Five Year Plan, Planning Commission, November, 2006
3. Government of India, Constitution (Seventy-fourth) Amendment Act, 1992
4. Government of India, Jawaharlal Nehru Urban Renewal Mission, Ministry of Urban Development, <http://urbanindia.nic.in/moud/programme/ud/jnnurm.htm>, 2005
5. Government of India, Model Municipal Law, Ministry of Urban Development, New Delhi 2002
6. Government of India, Model Building Byelaws, Ministry of Urban Development, New Delhi 2006
7. Government of India, Tejendra Khanna Committee Report on Unauthorized Construction in Misuse of Premises in Delhi, Ministry of Urban Development, 2006
8. Government of India, Guidelines for Sector Reform and Successful Public-Private Partnership in Urban Water and Sanitation Services, Ministry of Urban Development, 2004
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