teri school of advanced studies

Darbari Seth Block, India Habitat Centre
New Delhi

MINUTES OF THE TENTH MEETING OF THE ACADEMIC COUNCIL HELD ON TUESDAY, 19 OCTOBER 2004, AT 10.00 HOURS IN THE CONFERENCE ROOM

PRESENT:

The following members of the Academic Council attended the meeting:

1.	Dr Vibha Dhawan	Chairperson
2.	Dr Leena Srivastava	Dean, Faculty of Applied Sciences
3.	Dr Y P Abbi	Head, Centre for Energy and Environment
4.	Dr T S Panwar	Head, Centre for Regulatory & Policy Research
5.	Dr Puneet Chitkara	Head, Department of Policy Studies
6.	Dr S R Rao	
7.	Dr P Paradha Saradhi	
8.	Dr Subodh K Sharma	
9.	Dr Brij Gopal	
10.	Dr Indira Rajaraman	
11.	Dr Nutan Kaushik	
12.	Dr M A Khalid	
13.	Mr Rajiv Seth	Secretary

Prof. Subhash Chander attended the meeting as a Special Invitee.

Dr Saon Ray, Mr M P Ram Mohan attended the meeting as course coordinators.

Dr Vivek Kumar, Dr Vishal Narain, Dr Malini Balakrishnan, Dr Alok Adholeya, Dr S Sreekesh and Dr Banwari Lal regretted their inability to attend.

Dr A K Gosain, Prof. N S Kambo, Dr D K Banerjee and Dr S C Adlakha could not attend.

Item No. 1 To confirm the minutes of the ninth meeting of the Academic Council held on 29th June 2004

The minutes of the ninth meeting of the Academic Council held on 29th June 2004 were confirmed, as circulated.

Item No. 2 To report the matters arising from the ninth meeting of the Academic Council held on 29th June 2004

(i) The Council was informed about the new programme on M.A (Regulatory Studies) being offered by the School from 25th October 2004. The semester schedule for this programme will be organised to ensure at least 90 teaching days per semester.

(ii) The Council was informed that M.Sc 2003 batch student Ms Shalini Sangwan has been permitted to withdraw from the second semester and will be required to repeat the courses of that semester.

(iii) The Council was informed that M.Sc 2003 batch student Mr Devi Dayal Sinha has withdrawn from the programme.

(iv) The Council was informed that all Ph.D. students now sign an undertaking at the time of admission to TERI School that they would abide by the TERI School's IPR guidelines.

(v) The Council was informed that the Clause 7 (e) of the M.Sc prospectus has been amended to remove the requirement of informing parents in the event of students having less than 75% attendance.

Item No. 3 Matters for information

(i) The Academic Council was informed that NTPC has in principle agreed to provide a chair for a period of 5 years, in the Department of Policy Studies and that they would be sending 3 students every year for undergoing the M.A (Regulatory studies) programme in the department, as part of the MoU.

(ii) The Council was informed that Ph.D. 2001 batch student Ms Neeti Wilson would defence of her thesis on 27th October 2004. The examined thesis of Mr Priyanshu M Sarma is likely to be received by October end and oral defence of his thesis would be scheduled in the beginning of November 2004.

(iii) The Academic Council was informed that the present academic session commenced on 2nd August 2004. A total of 18 students joined the M.Sc programmes and 9 students have been admitted to the Ph.D. programmes.

(iv) The council was informed that interviews were conducted for faculty positions in four areas. Three faculty members were selected and offered appointments in the School.

Item No. 4 To report the decision taken by the Executive Committee of the Academic Council on behalf on the Academic Council.

The Academic Council noted the decision taken by the Executive Committee on behalf of the council and approved the names of the experts to sit on selection committees for faculty appointment. The names of external members of the Academic Council were also approved for the panel of experts on the selection committees for faculty appointment.

The recommended names would be put up to the Board of Management for its approval as required vide clause 12 (b) (i) (ad) and clause 12 (b) (ii) (ad) of the rules and regulations of the School.

Item No. 5 Amendment to the student handbook (incorporating M.Sc and Ph.D. prospectuses)

The Academic Council noted the amendments incorporated in the student handbook.

Item No. 6 To consider and approve M.A. (Regulatory Studies) Programme courses for the first semester.

Course outlines for the first semester of M.A. (Regulatory Studies) programme in the Department of Policy Studies were discussed and approved by the Council. The following courses were approved:

1) RGS 141- Principles of economics and finance,
2) RGS 143- Introduction to economic infrastructure,
3) RGS 145- Legal framework of infrastructure industries,
4) RGS 147- Economics of regulatory: theory & evidence.

The suggestions given by the members have been noted and will be incorporated in the courses.

Item No. 7 Any other item with the permission of the Chair

The meeting ended with a vote of thanks to the Chair.

Annexure 6.1

Course No.: RGS 141
Course title: **Principles of economics and finance**
Number of credits: 4 (3-1-0)
Number of lectures-tutorial practicals: 42-14-0
Course coordinator: Saon Ray

Course outline

This course would cover the basic concepts of economics and finance. This would include familiarity with different markets structures and their characteristics, principles of costing and revenue, concepts related to demand and supply, etc. Basic principles of finance would include familiarity with financial techniques that would aid understanding and analysis of a utility's financial statement, investment decision making tools, financial ratios, issues related to cost of capital, asset valuation, and basic accounting principles.

Evaluation procedure

- Class discussions: 5%
- Tutorials/assignments: 15%
- 2 Minor tests: 30% (15% each)
- 2 Major test
  - One test at mid semester for economics and one test at the end of the semester
  - 25% weightage for each test

Details of course content & allotted time

Sr. No	Topics	Allotted time (hours)		
		Lectures	Tutorials	Practicals
1.	**Introduction to economic theory**	6	2	
	▪ Concept of industry ▪ Demand analysis o elasticity of demand o income elasticity of demand o total revenue and marginal revenue o quantity demanded o movement along market demand and shift in demand ▪ Laws of production (laws of returns to scale and laws of diminishing returns) o definition and mathematical expression o graphical representation of returns to scale for a homogeneous production o function o reasons for increasing returns to scale o reasons for decreasing returns to scale ▪ Theory of costs o short-run and long-run costs o average and marginal costs o historical and future costs			
2.	**Theory of firm and pricing**	7	2	
	▪ Perfect competition			

Sr. No	Topics	Allotted time (hours)		
		Lectures	Tutorials	Practicals
	▪ Imperfect competition (duopoly) ▪ Monopoly ▪ Price discrimination (definition and types of price discrimination, necessary conditions for the existence of price discrimination, price discrimination and the price elasticity of demand) ▪ Monopolistic competition ▪ Oligopoly (classical and collusive oligopoly) ▪ Average cost pricing ▪ Limit pricing			
3.	**Public goods, externalities and welfare analysis**	6	2	
	▪ Introduction to public goods ▪ Provision of a public good ▪ Private provision of a public good ▪ Demand revealing mechanisms ▪ Negative externalities (public bads) ▪ Positive externalities (public goods) ▪ Solutions to problems of externalities o direct regulation/command and control o market-based solutions - taxes and subsides, and tradable permits o voluntary agreement ▪ Compensation mechanisms ▪ Application: Regulation versus tradeable permits ▪ Information asymmetry (principle-agent problem)			
4.	**Macro economics**	2	1	
	▪ Concepts of national income (GDP, GNP) ▪ Basics of monetary and fiscal policy ▪ Foreign exchange markets ▪ Interest and inflation rates			
5.	**Understanding financial statements**	3	1	
	▪ Basic concepts of financial accounting (balance sheet, assets liabilities, profit and loss account)			
6.	**Introduction to basic finance**	2	1	
	▪ Financial decision ▪ Working capital decisions			
7.	**Financial statement analysis**	4	2	
	▪ Financial ratios, trend analysis, Dupont analysis (operational and financial) ▪ Leverage analysis (concepts, measures) ▪ Valuation of assets			
8.	**Investment decisions and cost of capital**	8	2	
	▪ Nature of investment decisions ▪ Investment evaluation criteria (NPV, IRR, ARR, Profitability index, Payback period, benefit-cost ratio)			

Sr. No	Topics	Allotted time (hours)		
		Lectures	Tutorials	Practicals
	▪ Determining cash flows for investment analysis (cash flows, calculation of depreciation for tax purposes, investment & financing decisions) ▪ Cost of capital (concepts, opportunity cost, cost of debt/equity/preference share, weighted average cost of capital, cost of capital in practice) ▪ Social costs and benefits			
9.	**Basics of derivatives**	3	1	
	▪ Options ▪ Spot markets ▪ Futures ▪ Derivatives			
	Total	**42**	**14**	**0**

Basic textbooks

1. Hal R. Varian, Intermediate Microeconomics: A Modern Approach, 6th Edition, 2003, Affiliated East-West Press
2. Mankiw, Macroeconomics 5th edition, 2003
3. Khan & Jain, Financial Management
4. Prasanna Chandra, Financial Management
5. Pindyck and Rubinfeld, Microeconomics, 5th Edition, 2001
6. Richard A. Brealey and Stweart C. Myers, Principles of corporate finance, Tata McGraw Hill, New Delhi

Suggested readings

1. Kolstad, Charles (2000) Environmental Economics, New York: Oxford University Press
2. Theodore Bergstrom, Regulation of Externalities, Journal of Public Economics, 5 :131-138, 1976
3. Theodore Bergstrom, Laurence Blume, and Hal Varian, Private Provision of Public Goods, Journal of Public Economics, 29:25-49 1986
4. Urs Schweitzer, Externalities and the Coase Theorem: Hypothesis or Result? Journal of Institutional and Theoretical Economics, 144:245-266, 1988

Additional reference material such as copies of journal articles, reports, and lecture notes would be given/made known during the course of study.

Course No: RGS 143
Course Title: **Introduction to economic infrastructure**
Number of credits: 4 (2.5-1.5-0)
No. of lectures-tutorial-practical: (34-22-0)
Faculty: Vishal Narain

Course outline

This is an introductory course in the fundamentals of infrastructure economics and regulation. The course covers issues such as the defining characteristics of economic infrastructure, ownership issues in infrastructure, infrastructure finance, key differences between different infrastructure sectors (network industries such as power and telecom, infrastructure with natural monopoly characteristics such as ports, and infrastructure sectors with a large element of rolling stock such as roads and railways), and an introduction to management and regulatory practices in infrastructure sectors, particularly in South Asia. Students would be introduced to the current practices and changing trends in infrastructure management. The emphasis of the course would be on understanding the application of infrastructure economics principles to real world problems and case studies.

The paper has a Term Paper component. This Term Paper would be linked to Topics 6-10, and the tutorials in those lectures would be used to make presentations on the Term Paper prepared.

Evaluation procedure

- Term Paper: 30%
- 2 Minor Tests: 20%
- 1 Major Test: 50%

Details of course content & allotted time

Sr. No.	Topic	Allotted time (hours)		
		Lectures	Tutorials	Practicals
1	**Features of economic infrastructure** The lectures would introduce students to general features of economic infrastructure such as lumpy investments, long gestation periods, external benefits, etc. Students would be able to characterize and define economic infrastructure and distinguish between economic and non-economic infrastructure, and infrastructure and non-infrastructure sectors.	2	0	0
2	**Politics and economics of infrastructure regulation** These lectures would briefly introduce the institutional and economic rationale for regulation of infrastructure, particularly focusing on the role of agencies in the delivery of infrastructure services, including, government, industry, and civil society groups Students get exposed to different forms of institutional structures for resource allocation and management and changing paradigms in governance: they get introduced to different conceptual models of policy analysis; policy as prescription vs. policy as process, linear and interactive models of policy analysis. These lay the framework for analysis of the politics of infrastructure regulation.	2	2	0

	Students would understand the institutional context of infrastructure regulation that would enable them to appreciate the details of management and regulatory process.			
3	**Ownership and Incentives: Theory and Evidence** This chapter addresses the main issues that need to be considered in the context of ownership of infrastructure. The two terms - privatization and denationalization- are mostly confused and sometimes used interchangeably in the literature. As a matter of fact, denationalization is just one method of privatization. The chapter will briefly discuss other methods of reduction/termination of the role of government such as management contracts, franchising, deregulation and decontrol, giving grants, voucher system, leasing and joint ventures. In the above discussion arguments in favor of and against private participation in infrastructure will be brought out and various organizational models of public and private cooperation in infrastructure. Students also get exposed to different ownership regimes in the management of natural resources, conceptualizations and notions of rights and entitlements, conceptual connotations of decentralization, devolution and participation	4	1	0
4	**Trends in Infrastructure Finance** This chapter will cover procurement, negotiation and management of infrastructure projects, understanding best practices and partnerships in concession rights awards, contract design, and negotiation, examining links between sectoral reforms, technological characteristics and regulatory structures, and the availability of and cost of private finance, gaining a better understanding of the constraints on and the interests of main contracting parties in an infrastructure project transaction.	4	1	0
5	**Role of Regulatory governance in Infrastructure** Stability of regulatory and policy environment is a must to encourage private participation in infrastructure. This chapter will discuss the role of regulatory governance as a major determinant of credibility to investors. The chapter will also develop a conceptual framework for analysis of link between public policy, basic industry conditions and sector performance.	4	1	0
6	**Network type infrastructure industries: Telecom** These lectures would introduce students to the characteristics of network type industries using telecom as an example. The tutorials provided for in these sessions would be used by students for presenting their term papers Students would be able to characterize and define network infrastructure.	2	4	0

7	**Network and rolling stock infrastructure: Railways, Roads** These lectures would introduce students to the characteristics of network and rolling stock type industries using railways and roads as examples. The tutorials provided for in these sessions would be used by students for presenting their term papers. Students would be able to characterize and define services delivered using both networks and rolling stock.	2	4	0
8	**Location specific infrastructure: Ports** These lectures would introduce students to the characteristics of location specific infrastructure using ports as an example. The tutorials provided for in these sessions would be used by students for presenting their term papers. Students would be able to characterize and define services that are location specific.	2	4	0
9	**Public policy issues in infrastructure management: insights from irrigation** Decentralisation and changing role of state, devolution, the politics of decentralization, role of civil societies and NGOs, civil society participation, bottom-up vs. top-down approaches, role of the bureaucracy in reform processes, implications of infrastructure characteristics for decentralization.	6	3	
10	**Infrastructure management issues in the power sector**	6	2	0
	Total	34	22	0

Suggested readings

1. Kenneth E. Train. **Optimal Regulation: The Economic Theory of Natural Monopoly**. MIT Press, 1991
2. Gormley, William T., Jr., **The Politics of Public Utility Regulation**. Pittsburgh, PA: University of Pittsburgh Press, 1983. pp 65-101
3. Shleifer Andrei (1998). State versus Private Ownership. *Journal of Economic Perspectives* 12(4): 133-150.
4. Robert D. Willig (1994). Public versus Regulated Private Enterprise. *Proceedings of the World Bank Annual Conference on Development Economics 1993*. The World Bank: pp 155-159; 167-168; 171-177.
5. William J. Baumol (1993). On The Perils of Privatization. *Eastern Economic Journal*, Vol. 19, No. 4: pp 419-440.
6. Vickers, John and Yarrow, George. 1988. *Privatization: An Economic Analysis*. MIT Press, Cambridge.
7. Boycko, Maxim, Shleifer, Andrei, and Vishny, Robert, W. 1996. "A Theory of Privatization." *The Economic Journal 106*, 309-19.
8. Grossman, Sanford, and Hart, Oliver. 1986. "The Costs and Benefits of Ownership : A Theory of Vertical and Lateral Integration." *Journal of Political Economy 94*, 691-719.
9. William L. Megginson and Jeffry M. Netter (2001). From State to Market: A Survey of Empirical Studies on Privatization. *Journal of Economic Literature* 39(2): 322-328.

10. Mary M. Shirley, Patrick Walsh (2000). Public Versus Private Ownership, The Current State of the Debate. *World Bank Policy Research Working Paper #2420*. Sections 2. (The Role of Competition) pp 4-14; Section 4 (Corporate Governance) pp 28-36.
11. World Bank (2003). Infrastructure Regulation, Promises, Perils and Principles. "Designing Regulatory Mechanisms." *Policy Research Report,* Chapter 2, pp 30-72. Washington, D.C.: The World Bank.
12. World Bank (2003). Infrastructure Regulation, Promises, Perils and Principles. "Restructuring Electric Supply." *Policy Research Report,* Chapter 4, pp 110-143. Washington, D.C.: The World Bank.
13. World Bank (2003). Infrastructure Regulation, Promises, Perils and Principles "Private Participation in Transport." *Policy Research Report,* Chapter 3, pp 73-109. Washington, D.C.: The World Bank.
14. World Bank (2003). Infrastructure Regulation, Promises, Perils and Principles. "The Water Sector." *Policy Research Report,* Chapter 5, pp 144-179. Washington, D.C.: The World Bank.
15. John D. Finnerty (1996). "Introduction" (Ch. 1) and "The Rationale For Project Finance" (Ch. 2) in: *Project Financing, Asset Based Financial Engineering*. John Wiley & Sons, New York, (pp 1-33).
16. Scott L. Hoffman (1998). "An Introduction to Project Finance" (Ch. 1) in: *The Law and Business of International Project Finance*. Kluwer Law International, The Hague, (pp 3-30)
17. Project Financing , Seventh Edition, by Peter K. Nevitt and Frank J. Fabozzi, Euromoney Books, 2000.
18. Alexander, Ian (1995). *Cost of Capital: The Application of Financial Models to State Aid*, The OXERA Press.
19. Baldwin, Robert, and Martin Cave (1999). *Understanding Regulation: Theory, Strategy and Practice*, Oxford University Press.
20. Berg, Sanford (2000). "Developments in Best Practice Regulation: Principles, Processes, and Performance," *Electricity Journal,* July: 11-18.
21. Berg, Sanford (2001). "Deregulation and Re-Regulation: the Role of Basic Industry Conditions," *Infrastructure Journal*, January: 20-28.
22. Berg, Sanford, Ali Nawaz Memon, and Rama Skelton (2000). "Designing an Independent Regulatory Commission," PURC Working Paper.
23. Berg, Sanford (2001). "Infrastructure Regulation: Risk, Return and Performance," Global Utilities 1(May): 3-10, 2001.
24. Stern, Jon, and Stuart Holder (1999). "Regulatory Governance: Criteria for Assessing the Performance of Regulatory Systems," *Utilities Policy* 8: 33-50.
25. Tenenbaum, Bernard (1996). "Regulation: What the Prime Minister Needs to Know," *The Electricity Journal,* March: 28-36.
26. Itven Hank, et al. **Telecommunications Regulation Handbook**. http://www.infodev.org/projects/314regulationhandbook/
27. Deb Kaushik, **Private Investment and Policy Developments in the Transport Sector**. In Economic and Political Weekly. 8 April 2000.
28. Sundar S and Malhotra A. 2000. **Port restructuring in India**. http://www.teriin.org/division/regdiv/docs/ft22.pdf

Course No.: RGS 145

Course title: **Legal framework of infrastructure industries**

Number of credits: 4 (2.75-1-0.25)

Number of lectures-tutorial practicals: 39-14-7

Course coordinator: M P Ram Mohan

Course outline

This course will cover important legislations, legal structures and governance mechanisms related to the overall functioning of the infrastructure sector and regulatory bodies. It will cover the basic legal foundations, concepts and applications. It will introduce legal concepts and techniques that are of importance to regulators, the constitutional and administrative law and checks and balances to the exercise of regulatory power. The course will comprise both background teaching on the range of regulatory approaches and institutions available, and also case studies on the successes and failings of these approaches in their application within various jurisdictions

Evaluation procedure

- Class discussions: 5%
- Tutorials/assignments: 15%
- 2 Minor tests: 30% (15% each)
- 1 Major test (end semester): 50%

Course content & allotted time

Sr. No	Topics	Allotted time (hours)		
		Lectures	Tutorials	Practicals
1.	**Legal and Policy Aspects**	**6**	**1**	
	▪ **Constitutional aspects** Distribution of jurisdiction over infrastructure between the Centre and State-jurisdiction over subjects in the concurrent list-executive-legislative and centre-state relationship- law making power- panchayati raj institutions and local self governance	2 1		
	▪ **Policy Formulation** Directive principles of state policy- policy formulation and the role of executive-nationalisation, requisition and compensation-liberalisation policy- privatisation and disinvestment policy	1		
	▪ **Judicial review - parliamentary control - Formal accountability mechanisms**	1		
	▪ **Legislative reform in the infrastructure industry** Law making process-liberalisation and privatisation- the proactive legislature-consumer interests- joint parliamentary committee	1	1	
	▪ **Private Participation** Basis of private participation- socialism to market driven economy- constitutional conflicts-			

Sr. No	Topics	Allotted time (hours)		
		Lectures	Tutorials	Practicals
	judicial decisions on privatisation-disinvestments HPCL and BPCL case (disinvestment matter)-Balco Judgement (on privatisation)- panna mukta case			
2.	**General legal context of infrastructure business**	**8**	**1**	
	▪ **Contract law** Provisions-obligations-liability-compensations-Force Majeure and Hardship- international contracts	1 1		
	▪ **Consumer Protection** Consumer interest- rationale- benefits-provisions-constitution of tribunals	1		
	▪ **Property law** -Right of use of land-land acquisition-ownership rights – requisition ▪ **Labour Law**- labour reforms – report of the national commission on labour 2002-loss of employment-rights under A 14 and 16	1		
	▪ **Competition Act 2002** Basis of MRTP Act- need for and regulation of competition- post 1992 till new competition Act-prohibited agreements (cartels) - dominant undertakings- mergers and acquisition-competition in a regulatory industry- competition commission	2 1	1	
	▪ **Environmental Aspects** General Framework- environmental regulation and guidelines- judicial activism in environmental regulation and projects-Environmental Impact Assessment- Ratlam Municipality Case- M C Mehta series cases – CNG case ▪ **Provisions related to appeal in the High Court and the Supreme Court**	1		
3.	**Sectoral Studies, legal instruments, agencies and bodies**	**16**	**8**	
	▪ **Power Sector/Electricity law** Introduction-evolution of the electricity law-electricity Act 2003-regulatory authorities and the monitoring agencies- the state electricity boards- licensing framework- transmission and distribution-consumer issues-open access and wheeling- tariff regulation- trading in electricity-power purchase agreements	3 2	1 1	
	▪ **Telecommunications law** Legal framework- the national telecom policies-regulatory agencies-TRAI and TDSAT- guidelines for national long distance service/international long distance service- Internet service – essential requirements of telecom network - "level playing field" "interconnection", frequency allocation, the			

Sr. No	Topics	Allotted time (hours)		
		Lectures	Tutorials	Practicals
	"Right of way", clearances- issues relating to finances- the WILL controversy- agreements regarding bandwidth- broadcasting- new legal framework- The Communication Convergence Bill 2001	2	1	
	▪ **Oil, Petroleum and Natural Gas Law** Regulatory framework-exploration and production- legal framework governing E & P-license –lease- New Exploration Licensing Policy (NELP)- production sharing contracts- LNG Projects- LNG sale and purchase agreements-tolling facility and Hubs- pipeline projects-national and international treaty and agreements- pipeline transportation agreements-the new Petroleum Bill- Controversy with regard to Central or State List	3	1	
	▪ **Water** General Legal framework-territorial waters-interstate rivers- state jurisdiction- customary rights-riparian rights- Inland water transport-national water policy- and Inter linking of rivers	2	1	
	Cauvery Water Dispute- Narmada-teri Dam	2	1	
	▪ **National Highways and Roads** Legal Framework- NHAI- Roads-toll and regulation of traffic- financing of road projects			
	▪ **Airports** Policy on Airport Infrastructure 1997- legal framework- private participation- case studies Airports- new aviation policy			
	▪ **Ports** Types of ports- port facilities- general legal framework-Indian Ports Act-The Major Ports Authority Act-port authority- constitution-functions and powers-tariff determination-private participation in port development-guidelines			
4.	**Dispute resolution**	**9**	**2**	**7**
	▪ **Settlements through the courts** The role of Judiciary-jurisdiction– the High Court and the Supreme Court- important cases	2		2
	▪ **Regulatory Bodies** Need of regulation in the market driven economy- regulatory bodies- agencies- appellate bodies- composition-expertise- jurisdiction-powers- role – state and central commission-independence of regulators- powers of the High Court and the Supreme Court- case studies	3	1	3
	▪ **Alternate Dispute Resolution (ADR)** Lok adalat- Legal Services Authorities Act 1986-Indian Arbitration Act 1996- Arbitration agreement-limitations of arbitration agreements-conciliation-mediation- Jurisdiction – implementation of awards- negotiated	3	1	2

Sr. No	Topics	Allotted time (hours)		
		Lectures	Tutorials	Practicals
	settlements- Enforcement of awards/ judgements- problems and limitations-pros and cons of ADR ▪ **International Dispute settlement mechanisms** International Arbitration – Jurisdiction- Case studies ▪ **Case Studies** Dhabol case- Coca Cola Judgement in Kerala (water rights of the community)- Cricket association case (Air waves)	1	2	

Note:

- Case studies form an important part of the course. The relevant judgement and the cases will be dealt in detail through out the course.
- Additional reference material such as copies of journal articles, reports, and lecture notes would be given/made known during the course of study.

Basic readings

1. Arnab Kumar Hazra, The Law and Economics of Dispute Resolution in India. New Delhi, Bookwell, 2003
2. Baldwin, R. and C. McCrudden. Regulation and Public Law. London: Weidenfeld & Nicolson, 1987
3. D D Basu, The Constitutional Law of India
4. N.D. Basu on Law of Arbitration and Conciliation, Thoroughly Revised by P.K. Majumdar. Reprint. New Delhi, Orient Publishing, 2003
5. Piyush Joshi, Law Relating to Infrastructure Projects, 2nd Butterworths (2003)
6. Ramachandran, V.G. -- Law of Contract (Vols i, ii, iii.), 3rd Edition, 2003
7. Ramaswamy R. Iyer, Water : Perspectives, Issues, Concerns, Sage Publications 2003
8. Rosencranz and Divan, Environmental Law and Policy, Oxford University Press 2001 India Infrastructure Reports

Suggested readings

1. D.D Basu, Constitutional Law of India
2. I P Massey, Administrative Law
3. Baldwin, R. and C. McCrudden. Regulation and Public Law. London: Weidenfeld & Nicolson, 1987
4. D Newberry, Privatisation, Restructuring and Regulation of Network Utilities, MIT Press 2000
5. Ramachandran, V.G. -- Law of Contract (Vols i, ii, iii.), 3rd Edition, 2003
6. Jan Ramberg, International Commercial Transactions, Second Edition, Kluwer, 2000
7. Consumer Protection Act 1986
8. Mulla and Mulla, Property Law of India, 1999
9. G B Pai, Labour Laws in India, Butterworths, 2002
10. Competition Act 2002

11. D Helm & T Jenkinson, Competition in Regulated Industries, Oxford University Press 1998
12. Rosencranz and Divan, Environmental Law and Policy, Oxford University Press 2001
13. Piyush Joshi, Law Relating to Infrastructure Projects, 2nd Butterworths (2003)
14. Reports on India's Power Sector, Academic Foundation 2003
15. Electricy (Supply) Act 1948
16. Electricity Regulatory Commission Act 1998
17. Electricity Act 2003
18. Payal Malik, Indian Telecommunications Policy and Regulation: Impact on Investment and Market Structure, Background paper WDR 0304, in http://www.regulateonline.org/2003/dp/dp0304.htm
19. TRAI Act 1997
20. The Communication Convergence Bill 2001
21. SK Sarkar, Leena Srivastava (ed) Transition to a liberalized environment: experiences and issues in regulation, Teri 1999
22. S K Sarkar, Leena Srivastava (ed) Reforms in the Infrastructure Sectors: Next Steps, TERI 2002
23. The Petroleum Act, 1934 (Act No. 30 OF 1934)
24. The Oilfields (Regulation And Development) Act, 1948 (53 OF 1948)
25. The Petroleum And Natural Gas Rules, 1959
26. Petroleum Regulatory Board Bill
27. Report of the World Panel on Financing Water Infrastructure: Financing Water For All, World Water Council
28. Ramaswamy R. Iyer, Water : Perspectives, Issues, Concerns, Sage Publications 2003
29. India's Transport Infrastructure in http://www.asiatradehub.com/india/roads.asp#4
30. Civil Aviation Policy 2000 in http://civilaviation.nic.in/moca/civ_pol.html#REGULATORY
31. Policy on Airport Infrastructure http://civilaviation.nic.in/moca/airppol.htm#legal
32. THE CIVIL AVIATION ACT, 2000
33. (DRAFT) http://civilaviation.nic.in/moca/min_idx.htm
34. Piyush Joshi, Law Relating to Infrastructure Projects, 2nd Butterworths (2003)
35. D.D Basu Constitutional Law of India
36. Arnab Kumar Hazra, The Law and Economics of Dispute Resolution in India. New Delhi, Bookwell, 2003
37. S K Sarkar, Vivek Sharma (ed) Legal Aspects of Regulation in South Asia, Teri 2002
38. N.D. Basu on Law of Arbitration and Conciliation, Thoroughly Revised by P.K. Majumdar. Reprint. New Delhi, Orient Publishing, 2003
39. J. G. Merrills, International Dispute Settlement, by, Cambridge University Press; 3rd edition.

Supplementary readings

1. Bryan Randolph Bruns and Ruth S. Meinzen-Dick, Negotiating Water Rights, Vistaar and Intermediate Technology Publications, 2000

2. D Helm & T Jenkinson, Competition in Regulated Industries, Oxford University Press 1998
3. D Newberry, Privatisation, Restructuring and Regulation of Network Utilities, MIT Press 2000
4. Civil Aviation Policy 2000 in http://civilaviation.nic.in/moca/civ_pol.html#REGULATORY
5. India's Transport Infrastructure in http://www.asiatradehub.com/india/roads.asp#4
6. Reports on India's Power Sector, Academic Foundation 2003
7. S Breyer, Regulation and its Reform (1982)
8. I.P Massey Administrative Law
9. J. G. Merrills, International Dispute Settlement, by, Cambridge University Press; 3rd edition
10. Jan Dawson, The evolution of regulation: repercussions for wholesale, (2003)
11. Jan Ramberg, International Commercial Transactions, Second Edition, Kluwer, 2000
12. L Hancher & M Moran, Capitalism, Culture and Regulation (1989)
13. Report of the World Panel on Financing Water Infrastructure: Financing Water For All, World Water Council
14. S k Sarkar, Leena Srivastava (ed) Reforms in the Infrastructure Sectors: Next Steps, TERI 2002
15. S K Sarkar, Leena Srivastava (ed) Transition to a liberalized environment: experiences and issues in regulation, Teri 1999

Course No.:	RGS 147
Course title:	**Economics of regulation: theory & evidence**
Number of credits:	4 (3-1-0)
Number of lectures-tutorial practicals:	42-14-0
Course coordinator:	Puneet Chitkara

Course outline

The focus of this course is to familiarize students with the rationale for regulation, goals of regulation and theories of regulation. The course will discuss the type of industries that are typically regulated and their economic characteristics. Students will also be introduced to the concepts of allocative and productive efficiency in the context of ownership. The course will familiarize students with the perverse incentives created by the Rate of Return (RoR) Regulation. The concepts of information asymmetry and uncertainty are introduced and impacts of RoR regulation studied in their light. Optimal regulatory mechanisms under uncertainty and asymmetric information, such as those based on "incentives" are introduced. The course will further introduce the students to bidding for natural monopolies through auctions. As the theory is developed in the course, the links between theory and practice of regulation will also be explored.

Evaluation procedure

- Two minor tests : 25% each
- Final examination : 50%

Details of course content and allotted time

No.	Topics	Allotted Time (hrs.)		
		Lectures	Tutorials	Practical
1.	**Introduction to Economic Regulation**	**4**		
	The Regulatory Environment and Institutions. Regulatory Constraints: Informational, Transactional, Administrative and Political. Regulatory instruments and incentive Schemes. Procurement versus Regulation.	2		
	Brief History Of Economic Regulation in India. Trends in Regulation. The Regulatory Process. Independence of Regulators	1		
	Normative Analysis as a Positive Theory, Capture Theory, Economic Theory of Regulation: The Stiglerian Approach, Stigler/Peltzman Model, Becker Model, Taxation by Regulation.	1		
2	**Monopoly Regulation: Static Analysis**	**10**	**4**	
	The Natural Monopoly Problem. Sub-additivity and Multi Product Monopoly, Pricing Solutions: Linear Marginal Cost Pricing, Non-Linear Pricing	2	1	
	Regulation with full information: Averch Johnson Model: RoR Regulation, Limitations of the Model, Concept of Regulatory Lag, Extensions by Baumol and Klevorick	2	1	
	Regulation Under Asymmetric information: Tradeoffs faced by the Regulator: Allocative	6	2	

No.	Topics	Allotted Time (hrs.)		
		Lectures	Tutorials	Practical
	Efficiency, Productive Efficiency and Adverse distributional effect of the excess profit. If the regulator does not accurately know costs, marginal cost pricing becomes problematic. If the firm's effort level is unobservable by the regulator, then the firms needs to be given "incentives" to reduce its costs. This section will deal with this aspect of regulation in the light of papers by Loeb and Magat, Baron and Myerson and Laffont and Tirole.			
3	**Dynamic issues in regulation of Natural Monopolies**	**23**	**8**	
	Case with multi product regulation in static framework with full information: Two Part Tariffs and Peak Load Pricing. Multi Product Pricing: Ramsey Pricing (with special cases: two part pricing and peak load pricing), Complex Multi-product tariffs with cross-dependencies among various products.	3	1	
	Pricing in Telecommunications services and Electricity in India: with reference to the above theoretical discussion	4	2	
	The problem of asymmetric information in the multi-product case. Price Regulation: Cost Pass through, Price Cap Regulation	3		
	Applied Price Cap regulation: Cases from telecommunications and electricity	2	1	
	Regulation of regionally separated regulated utilities: Case for Yardstick Regulation	1		
	Applied Yardstick Regulation	1	1	
	Dynamic issues. Dynamic price caps: Vogelsang and Finsinger, Sappington.	3	1	
	Cross-Subsidization and Cream Skimming	2		
	Cross-Subsidization in Practice (Electricity and Telecom)	2	1	
	Technological Advances and Modifications in Regulatory Policy in the context of Digital Convergence in Telecommunications Industry	2	1	
4	**Bidding for Natural Monopoly**	**5**	**2**	
	Theory of Franchise Bidding, Optimal Auction Design, Theory of Auctions in Procurement	3	1	
	Allocation of Spectrum Rights through Auctions (Application)/Franchise Bidding for Electricity Distribution	2	1	

Suggested readings

1. Viscusi, K., Vernon, J. and Harrington, J. 3rd Edition (2000) *Economics of Regulation and Antitrust.*
2. Kahn, A. (1988) *The Economics of Regulation.*
3. Laffont, J.-J. and Tirole, J. (1993) *A theory of incentives in procurement and regulation*, MIT Press.

4. Spulber, D. (1988) *Regulation and Markets*, MIT Press.
5. Armstrong, M., S. Cowan, and J. Vickers. 1994. Regulatory Reform: Economic Analysis and British Experience. Cambridge, Mass.: MIT Press.
6. Vickers and Yarrow, 1988, Privatization: An Economic Analysis, MIT Press.
7. Baumol and Klevorick, 1970, "Input Choices and Rate-of-Return Regulation," Bell Journal of Economics and Management Science, Vol. 1, No. 1, pp. 162-90 in Paul L. Joskow (ed.), Economic Regulation, Edward Elgar Publishers (2000).
8. Zajac, 1970, "A Geometric Treatment of Averch-Johnson's Behavior of the Firm Model," American Economic Review, Vol. 60, No. 1, pp. 117-125.
9. Averch, H. and Johnson, L. (1962) "Behavior of the firm under regulatory constraint", *American Economic Review*, **52**: 1052-1069.
10. Loeb and Magat, 1979, "A Decentralized Method for Utility Regulation," Journal of Law and Economics, Vol. 22, pp. 399-404.
11. Baron and Myerson, 1982, "Regulating a Monopolist with Unknown Costs," Econometrica, Vol. 50, No. 4, pp. 911-930.
12. Laffont and Tirole, 1986, "Using Cost Observation to Regulate Firms," Journal of Political Economy, Vol. 94, No. 3, pp. 614-641.
13. Vogelsang and Finsinger, 1979, "A Regulatory Adjustment Process for Optimal Pricing by Multiproduct Monopoly Firms," Bell Journal of Economics, Vol. 10, No. 1, pp. 157-71.
14. Sappington, 1980, "Strategic Firm Behavior Under a Dynamic Regulatory Adjustment Process," Bell Journal of Economics, Vol. 11, No. 1, pp. 360-72.
15. Baumol, Bailey, and Willig, 1977, "Weak Invisible Hand Theorems on the Sustainability of Multiproduct Natural Monopoly," American Economic Review, Vol. 67, No. 3, pp. 350-365.
16. Faulhaber, G., 1975, "Cross-subsidization: Pricing in Public Enterprises," American Economic Review, Vol. 65, pp. 966-77.
17. Faulhaber and Levinson, 1981, "Subsidy Free-Prices and Anonymous Equity," American Economic Review, Vol. 71, No. 5, pp. 1083-91.
18. Regulations on Unified Licensing. http://www.trai.gov.in/
19. Demsetz, 1968, "Why Regulate Utilities?" Journal of Law and Economics, Vol. 11, No. 1, pp. 55-65.
20. Williamson, 1976, "Franchise Bidding for Natural Monopolies -- In General and with respect to CATV," Bell Journal of Economics, Vol. 7, No. 1, pp. 73-104.
21. Riordan and Sappington, 1987, "Awarding Monopoly Franchises," American Economic Review, Vol. 77, No. 3, pp. 375-387.
22. Laffont and Tirole, 1987, "Auctioning Incentive Contracts," Journal of Political Economy, Vol. 95, No. 5, pp. 921-937.
23. Pager, 1990, "Firm Behavior in Franchise Monopoly Markets," Rand Journal of Economics," Vol. 21, No. 2, pp. 211-225.
24. Consultation paper on spectrum related issues: Efficient utilization, spectrum allocation, and spectrum pricing. http://www.trai.gov.in/.