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

SUB: SEVENTEENTH MEETING OF THE ACADEMIC COUNCIL
AGENDA NOTES

Date	:	10 January 2008
Venue	:	Conference Room, TERI
Time	:	10:00 am

Item No.	Particulars
Item No. 1	To confirm the minutes of the sixteenth meeting of the Academic Council held on 31 July 2007
Item No. 2	Matters for information
Item No. 3	To report decisions taken by the Executive Committee
Item No. 4	To consider and approve lowering of the minimum academic criteria for continuation as a student in respect of MBA programme
Item No. 5	To consider and approve a new programme in Geoinformatics.
Item No. 6	To recommend guidelines for re-designation of Associate Professors to Professors.
Item No. 7	To consider and approve courses of the MBA (Infrastructure) programme.
Item No. 8	To consider and approve courses of the M.Sc programme.
Item No. 9	To consider and approve courses of the MA (Public Policy and Sustainable Development) programme.
Item No. 10	Any other item with the permission of the Chair.

Item No. 1 **To confirm the minutes of the sixteenth meeting of the Academic Council held on 31 July 2007**

The minutes of the sixteenth meeting of the Academic Council held on 31 July 2007 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) 31 students of M.Sc (Environmental Studies) and (Natural Resources Management) programmes have successfully completed the III semester of their studies. They have all been placed for their major projects. They will be joining on 15 January 2008

(ii) All 55 students of the M.Sc. (Environmental Studies), (Natural Resources Management) and (Water Resources Management) programmes have successfully completed the I semester of their studies.

(iii) 21 students of the MA (PP&SD) programme have successfully completed the II semester of their studies, and are returning back to their work places, where they will continue working on their major project.

(iv) 5 students of the MBA (Infrastructure) - Stream I have successfully completed III semester of their studies and will now be proceeding for their major project.

(v) The next MA (PP&SD) programme is scheduled to commence on 14 January 2008.

(vi) A Post Graduate Diploma programme on Regulations in Biotechnology commenced on 19 November 2007. Five students are undergoing this programme.

(vii) The new campus is in the final stages of completion and the move will be done in this semester itself.

Item No. 3 **To report decisions taken by the Executive Committee**

The Executive Committee on behalf of the Academic Council has approved the following names of experts from TERI for inclusion in the panel of experts to sit on the selection committee for faculty interviews for TERI University.

1	**Transport Infrastructure**
	Dr Ranjan Bose Senior Fellow, TERI

2	**Energy and Environment Technologies**
	Dr V V N Kishore Senior Fellow, TERI
3	Dr Suresh Babu Director, Technology Development, TERI
4	**Biotechnology & Management of Bioresources**
	Dr Alok Adholeya Senior Fellow, TERI
5	**Oil and Gas Business/ Energy Security**
	Mr R K Batra, TERI
6	**Economics/Regulatory Studies**
	Mr Prabir Sengupta Distinguished Fellow, TERI
7	**Urban Infrastructure**
	Vinod Tewari, Consultant, TERI
8	**Climate Change**
	Dr Prodipto Ghosh Distinguished Fellow, TERI

Item No. 4 **To consider and approve lowering of the minimum academic criteria for continuation as a student in respect of MBA programme**

The MBA (Infrastructure) programme was initially designed keeping in mind requirements of working professionals. As such, the minimum academic criteria for award of the degree was fixed at a CGPA of 7.0. In addition, the SGPA at the end of the I semester is required to be greater than 6.0 and the CGPA at the end of II semester is required to be greater than or equal to 6.0.

From the batch of 2007 onwards a number of fresh graduates have been inducted into the MBA programme 20 out of a total of 25.

It is put up for discussion and approval of the Academic Council that the minimum academic criteria be revised to match with the existing criteria laid down for the M.Sc programmes and be as follows:

(a) First semester SGPA should be greater than 4.0 at the end of the I semester and the student must have earned at least 12 valid credits.

(b) The cumulative grade points earned at the end of the II and subsequent semesters should be greater or equal to 5.0. The valid credits in each semester should not be less than 80% of the credits registered in the semester.

(c) A student must obtain a minimum CGPA of 5.0 to be eligible for award of an MBA degree

Item No. 5 **To consider and approve a new programme in Geoinformatics.**

The University proposes to offer a new programme in Geoinformatics from the next academic year. Details of the programme are placed at Annexure 5.1.

The programme coordinator will present the proposal for the programme to the Academic Council.

Item No. 6 **To recommend guidelines for re-designation of Associate Professors to Professors.**

A Committee headed by the Dean, Faculty of Policy and Planning had recommended the criteria for re-designation of Lecturers to Assistant Professors and Assistant Professors to Associate Professors. These have earlier been approved by the Board of Management. The same Committee has now drawn up the criteria for re-designation of Associate Professors to Professors. A copy of this is attached as Annexure 6.1 to these agenda notes.

The Academic Council is requested to discuss and recommend the proposed criteria to the Board of Management.

Item No. 7 **To consider and approve courses of the MBA (Infrastructure) programme.**

The course outlines of a course which will be offered in the second semester of the MBA (Infrastructure) programme is placed at Annexure 7.1.

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

Item No. 8 **To consider and approve courses of the M.Sc programmes.**

The course outline for three courses which will be offered in the second semester of the M.Sc programmes are placed at Annexure 8.1, 8.2 and Annexure 8.3.

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

Item No. 9 **To consider and approve courses of the MA (Public Policy and Sustainable Development) programme.**

The course outlines for two courses which will be offered in the first semester of the MA (PP&SD) programme are placed at Annexure 9.1 and Annexure 9.2.

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

Item No. 10 **Any other item with the permission of the Chair.**

Annexure 5.1

MASTER OF SCIENCE/ POST GRADUATE DIPLOMA in GEOINFORMATICS

	1st Year			2nd Year	
	Semester I	Semester II		Semester III	Semester IV
MSc (92)	Core Courses (Jul-Dec)	Core Courses (Jan-May)	**Minor Project** (Jun-Jul)	Core Courses (Jul-Dec)	**Major Project** (Jan-Jun)
Post Graduate Diploma (50)	Core Courses (Jul-Dec)	Core Courses (Jan-Mar)	**Pilot Project** (Apr-Jun)		

S.No.	Course	PGD	MSc	Credits			
				L	T	P	TT
	SEMESTER I						
1.	Principles of Cartography	4	4	2	1	1	4
2.	Principles of Remote Sensing	4	4	3	0.5	0.5	4
3.	Principles of GIS and GPS	4	4	2	0.5	1.5	4
4.	Fundamentals of computers and Programming	4	4	2.5	0.5	1	4
5.	Elementary Statistics	4	4	3	1	0	4
6.	Project Management and Communications	4	4	2	2	0	4
	Total	**24**	**24**				
	SEMESTER II						
1.	Photogrammetry	4	4	2.25	1	0.75	4
2.	Land, Map and Remote Sensing Law and Policy	4	4	3	1	0	4
3.	Digital Image Processing and Information Extraction	4	4	1.5	0.5	2	4
4.	GIS (Spatial data modeling & Applications)	4	4	2	0.5	1.5	4
5.	Advanced Statistics	4	4	3	1	0	4
6.	Pilot project (*PG Diploma students only*) – 3 months	6					6
7.	Minor Project (*M.Sc. students only*) – 2 months		4				4
	Total	**24**	**24**				
	SEMESTER III						
1.	Research Methodology		4	4	0	0	4
2.	Advances in Remote Sensing (SAR, Thermal, LiDAR, Radar, InSAR, Hyper-spectral)		4	2	1	1	4
3.	Advances in GIS and Current Trends (Participatory GIS, Spatial data quality, uncertainly, WebGIS (XML, GML), ArcSDE, Oracle, Visualisation)		4	2	1	1	4
	Any two from S.No. (4, 5, 6)						
4.	Landscape Ecology (Optional)		4	2	1	1	4
5.	Integrated Impact Assessment (Optional)		4	3	1	0	4
6.	Environmental Modeling (Optional)		4	3	1	0	4
7.	Independent Study		4				4
	Total		**24**				
	SEMESTER IV						
	Major Project		**20**				**20**
	GRAND TOTAL	**50**	**92**				

CC-Certificate Course, PGD-Post Graduate Diploma, MSc- Master of Science, L-Lectures, A-Assignment/Tutorials, P-Practical, TT-Total; Optional – Any two

Criteria for re-designating Associate Professors to Professors

A Professor in the TERI University is expected to have made significant contributions to the advancement of knowledge and should be acknowledged as an individual with academic excellence by his/her peers. He/She should have an outstanding record and reputation at the national/international level.

Candidates applying for re-designation from an Associate Professor to the rank of a Professor would be expected to have made a broad and sustained contribution to their field and discipline nationally and internationally and should also hold promise for the future. It is also expected that he/she would have contributed significantly to research and to the development of the university – both financially and academically.

Apart from contributions in international peer reviewed journals, such candidates are expected to have supervised at least 3 PhD candidates successfully. Other parameters that would influence the decision on re-designation would center around: quality of teaching; design and implementation of innovative pedagogical tools and academic programmes; and contributions to national policy or to academic debate.

A Committee comprising of the Chancellor, Vice Chancellor and the Deans of Faculties would evaluate each application for re-designation at this level. In evaluating a candidate, the Committee would look for:

- Positive evidence of actual and sustained academic achievement and future promise
- Evidence of national/international peer esteem (Eg. Invited presentations, roles in professional bodies, committee memberships, awards etc.)
- Leadership qualities
- Contribution to research/consultancy assignments or to policy developments
- Evidence of publications – numbers, periodicity, quality etc
- Quality of the application made and evidence presented
- Ability to raise research funds

If desired, the Committee may seek a specific feedback from current or past students.

Annexure 7.1

Proposed Course

Course Title: Company Law and Corporate Restructuring
Credits: 2
Faculty: Mr Thomas Philippe
Course Coordinator: Mr M P Ram Mohan

Course outline:
Company law and corporate restructuring course will expose students to the basics of company law, then go on to explain the company restructuring procedures and process. This course is a law course that will equip students to understand the nuances of Indian company law, how companies are run, the duties and obligations of the company management, how and when companies are wound-up and the process and procedures in restructuring of companies on specific situations. The course will be taught through case studies as decided by the relevant courts, and also provide wherever required other relevant laws that are linked towards the constitution, restructuring and winding up of companies.

Evaluation

Major Exam:	**30 Marks**
Class Participation/assignment:	**20 Marks**
Total:	**50 Marks**

Course Reviewers
1. Prof Chandrashekran Pillai, Director, Indian Law Institute, New Delhi
2. Dr Bindu Ronald, Associate Professor, Symbiosis Law College, Pune
3. Ms Jasmine Joseph, Lecturer, National University of Juridical Sciences, Kolkata

Company Law and Corporate Restructuring

Sl No	Topics	Lectures	Tutorials
1.	Formation of Companies, Different Types of companies, Concepts of limited liability, distinct legal entity and lifting of corporate veil. Regulatory authorities for company affairs, their duties	4	
2	Memorandum of association and articles of association, Concept of Ultra vires (indoor management and constructive notice doctrines)	2	
3	Share capital and debt financing (equity shares, preference shares, debentures, hybrid instruments, issue of shares, IPO, preferential allotment, transfer of shares, reduction of share capital, buyback of shares).	4	
4	Shareholders (Rights and liabilities) and Dividends	2	
5	Management of companies (board of directors - powers, duties and liability, board and shareholder	2	1

	meetings)		
6	Oppression and mismanagement, Equitable remedies available to minority shareholders under common law	2	1
7	SEBI, -its role as a regulator- listing agreement- takeover code guidelines	2	
8	Arrangements, reconstructions, mergers and amalgamations, Competition Law issues.	4	1
9	Winding up	2	
10	Corporate Social Responsibility, Consumer protection laws and companies.	1	

Relevant judicial and regulatory decisions shall be circulated in the class

Readings

1. Ramaiya's Company Law, Wadhwa & Co, 3 Vols.
2. Palmer's Company Law, Sweet & Maxwell.
3. Robert R. Pennington, Company Law, LexisNexis.
4. Avatar Singh, Company Law, Eastern Book Company. (This would be one of the basic text books)
5. A.K. Majumdar & G.K. Kapoor, Company Law and Practice, Taxmann.
6. Avatar Singh, Introduction to Company Law, Eastern Book Company. (This is a shorter version and highly recommended for easy reading and as a ready reckoner for all basic concepts)
7. Halsbury's Laws Of India - Vol 4 – Bills Of Exchange And Other Negotiable Instruments, Business Associations

8. Halsbury's Laws Of India - Vol 10 – Competition Law And Trade Practices, Conflict Of Laws, Courts

9. Adrian Cadbury, Corporate Governance and Chairmanship, Eastern Book House (2003)

Annexure 8.1

Proposed Course

Course No: NRS 142
Course title: Water quality management and public health
Number of credits: 4 (3-0.5-0.5)
No of lectures-tutorial-practical: 42-7-14
Faculty: Dr. Ram Karan Singh

Course Description

The course focuses on cause and effects of water pollution and water quality degradation from a range of sources. Topics include; key chemical and biological processes, quality issues for drinking, irrigation and industrial use, the impacts on ecosystem pollution control strategies, wastewater treatment, industrial and hazardous wastewater management. The course concludes with section on water quality improvement and water quality monitoring.

Evaluation procedure

Minor tests I: 15% Minor test II: 15% Quizzes (surprised/announced): 10 %	Term paper presentation: 10% Field investigations: 10 % Major test: 40%

Details of course content & allotted time:

Topic	*Allotted time (h)*		
	L	*T*	*P*
Introduction: Linking water quality & health, indicators of health, objectives and goals, planning cycle management methods & techniques, global health pattern, health programmes in India, physiological responses of man to different environmental stresses role of international bodies in health planning & management i.e. WHO, UNICEF, UNDP, FAO, ILO, WORLD BANK, RED CROSS ETC.	3	0	0
Water Borne Diseases: Pollution in water bodies due to domestic, industrial and agricultural wastes, water borne diseases: jaundice & diarrhea, toxic chemicals in the environment and their effects, heavy metals-Pb, Cd, Hg; pesticides DDT, HCH, eldrin, dieldrin, malathion, carbaryl. Mode of entry of toxic substances, biotransformation of xenobiotics, detoxification, indices of toxicology. Trace element deficiency and disorders, occupational health hazards, biogeochemical factors in governing health, epidemiological issues - goitre, fluorosis, arsenic poisoning.	4	0	0
House Sanitation: Construction of hygienic housing, sanitary provisions such as internal plumbing and sanitation of buildings, problem of indoor pollution.	1	0	0

Annexure 8.1

Proposed Course

Topic	Allotted time (h)		
	L	T	P
Water Treatment: **Sedimentation:** Principle of sedimentation and sedimentation process and design. **Coagulation:** Coagulation process, the constituents of coagulation-sedimentation plant. **Flocculation:** process, methods for determining optimum coagulation dose.	5	1	0
Filtration: Slow sand filter, rapid sand filter, pressure filter, filter media, components, filter operation, cleaning & backwashing process, the under drain system and filter control.	5	2	0
Color, Taste & odor Control: Sources of color, taste and odor - natural and synthetic and their removal.	2	0	0
Disinfections: Introduction, objectives, primary disinfections technologies; chlorination, chloramination, chlorine dioxide, ozone ion, potassium permanganate, ultraviolet radiation, advanced oxidation process.	4	1	0
Miscellaneous techniques: Water softening, demineralization, deflurodation, iron, manganese & arsenic removal.	3	1	0
Waste water treatment: Introduction, objective, classification of waste water treatment, primary treatment: screening, sedimentation and chemical.	4	1	0
Secondary treatment: Aaerobic & anaerobic processes: objective, design of the activated sludge process, trickling filter, rotating biological contactors, up flow anaerobic sludge blanket (UASB), stabilization ponds & aerated lagoons.	5	1	0
Tertiary treatment: Description in brief the following processes: removal of dissolved inorganic, ion exchange, membrane processes, reverse osmosis, ultra filtration, electro-dialysis, removal of nitrogen and phosphorus	3	0	0
Sludge treatment & disposal: Digestion process, composting, thickening, dewatering, drying beds, management and disposal of residues	3	0	0
	42	7	14

Text Books:

1. Water Supply Engineering Vol-I by **S.K.Garg**, Khanna Publisher, New Delhi, 18th Edition (2007) and Sewage Disposal and Air Pollution Engineering, Vol-II by **S.K.Garg**, Khanna Publisher, New Delhi, 20th Edition (2007).

2. Wastewater Engineering: Treatment, Disposal, Reuse by **Metcalf and Eddy**, Tata Mc Graw Hill, Third Edition (1997).

Reference Books:

1. Water supply and Sewerage by Terence J.Mc.Ghee
2. Industrial Water Pollution Control by W.Wesley, Eckenfelder, Jr.
3. Water works engineering by Qasim, S.R., Motley, and E.M. Zhu.G.
4. Water supply and sanitary Engineering by G.S.Birde and J.S.Birde
5. Water supply, Waste disposal and Environmental Engineering by A.K.Chatterjee.
6. Basic Environmental Technology, Jerry, A. Nathan son.

Annexure 8.2

Proposed Course

Course No: **NRS (Elective Course)**
Course title: **Landscape Ecology**
Number of credits: **4 (2-0.75-1.25)**
No. of lectures-tutorial-practical: **28-10-35**
Course coordinator: **Dr P K Joshi**

Course outline

This course will synthesize the dominant themes of landscape ecology; familiarize students with current research trends in the field and explore applications of the landscape approach. The course will be offered to M.Sc. Natural Resource Management/Environmental Studies/Water Resource Management and pre-Ph.D. students. The course work expected to be useful to students perusing career in natural resources, ecology, conservation biology, landscape architecture, land use planning etc.

Evaluation Procedure

2 minor tests: 20%
Tutorials: 15%
Practical: 25%
Major exam: 40%

Details of course content and allotted time

No.	Topic	Duration (hr)		
		L	T	P
1	**Introduction and Concepts** (Introduction to Landscape Ecology, Landscape elements: patch pattern, resolution, extent, etc., Causes of pattern, Abiotic constraints to landscape pattern and processes, Scale and Hierarchy)	6	3	5
2	**Landscape Data and Analysis** (RS & GIS, Quantifying scale, patterns and change, Introduction to Models, Landscape Matrices)	6	2	14
3	**Causes and Consequences of Landscape Pattern** (Introduction to Land Use Change, Social and cultural Processes, Disturbances, Connectivity, fragmentation, edge effects, Communities on the landscape, Ecosystem processes, Land/Water Interactions, Historical landscapes and legacies, matrix and heterogeneity)	8	2	10
4	**Prediction and Management** (Landscape equilibrium and Management, Biodiversity and Landscape Management, Fragmentation (roads, edges), Landscape Restoration/Rehabilitation, Scaling Up Models – Predictive/ Projective Models, Global change and landscapes, Applications, Operational level initiatives)	8	3	6
		28	10	35

Practical

P1-P5 – Studying different features in data and patch characteristics
P6-P19 – Interpretation (habitat/vegetation characterization)
Calculation of Landscape Matrices
P20-P29– LULCC analysis
Ecological Impact on Landscape Heterogeneity

P30-P35 – Spatial modeling

Suggested Readings
(Available with TERI University Library)

Text Books

1. Busi, J.D. and Turner, LR. 1977. Landscape Ecology in theory and practices: pattern and process. Springfield, NTIS.
2. Forman R., and Gordon, M. 1986. Landscape Ecology. New York, J. Wiley 619 pp.
3. Frohn, Robert. C. 1998. Remote Sensing for Landscape Ecology: New Metric Indictors for Monitoring, Modeling and Assessment of Ecosystems. Lewis Publishers, Florida.
4. Jensen, J.R. (2000). *Remote sensing of the environment: an Earth resource perspective.* Prentice Hall. ISBN 0-13-489733-1.
5. Longley, P.A., Goodchild, M.F., Maguire, D.J. and Rhind, D.W. (2005) *Geographic Information Systems and Science.* Chichester: Wiley. 2nd edition.
6. Roy, P.S. 2003. Geoinformatics for Tropical Ecosystems. Bishen Singh Mahendra Pal Singh, Dehradun.
7. Sanderson Jim and Harris, Larry D 2000. Landscape Ecology: a top down approach. Lewis Publishers. USA.
8. Turner, G Monica, Gardner, H Robert, O'Neill, V Robert 2001. Landscape Ecology in Theory and Practice: Pattern and Processes. Springer, New York.

Magazines

1. GIS@development
2. Goespatial today
3. GIS World
4. GIM International

Journals

1. Agriculture, Ecosystems & Environment
2. Basic and Applied Ecology
3. Ecological Modeling
4. Forest Ecology and Management
5. Landscape and Urban Planning
6. Landscape Ecology
7. Remote Sensing of Environment
8. Trends in Ecology & Evolution

Course No.: NRS 123
Course title: ***Biodiversity assessment and conservation***
Number of credits: 4 (2.5-1.0-0.5)
*No. of lectures-tutorial-practical:*38-14-8
Faculty: Dr Neeraj Khera

Course outline:

The course aims at providing students with detailed knowledge of the extent of the world's biodiversity and a critical awareness to the threat to biodiversity posed by human activities and current levels of extinction; an advanced level of knowledge of the biological principles underlying biodiversity assessment, conservation and management. The emphasis would be given to utilize analytical and communication skills of the students for analyzing and discussing real life problems related to biodiversity conservation.

Evaluation procedure (*Percentage of marks* to be allotted to each type of test):

- 2 minor tests : 10 + 10
- Assignment : 20
- Group discussion : 10
- Field visit : 5
- 1 major test (end semester) : 45

Details of course content & allotted time

No	*Topic*	*Allotted time (hours)*		
		L	*T*	*P*
1	**Introduction:** Defining biodiversity; Fundamental principles of genetic, species and ecosystem diversity; Introduction to taxonomic and systematic principles	1		
2	**Magnitude and Distribution of biodiversity** An overview of the variety of life forms; Global distribution of biodiversity, factors affecting species distribution, number of species worldwide, estimates and examples of recently discovered communities, abundance of species in different ecosystems of the world; concept of diversity Hot-spots; Biodiversity of India including medicinal plants and NTFPs	2	2	
3	**Assessment and monitoring of biodiversity** Methods of assessing and measuring biodiversity; Comparison of different sampling techniques; Diversity indices; tools for biodiversity data analysis like PCA etc; mapping distribution of species; techniques for monitoring plant, bird, insect, mammals, reptiles and fish biodiversity Use of Remote sensing and other advanced tools like GIS, GPS etc for biodiversity assessment Genetic diversity	5 2 1	2	8 (Feb 10)
4	**Value of Biodiversity** Direct and indirect values; total economic value; ethical values; valuation techniques	2		

No	*Topic*	*Allotted time (hours)*		
		L	*T*	*P*
5	**Status, Causes and consequences of biodiversity Loss:** ***Status:*** Estimates of extinction rates worldwide and in India; local extinctions, Red Data Books **(Self study-Reading material will be provided)** ***Causes:*** Vulnerability to extinction; Endemic species and island biogeography; rare and threatened species; Habitat destruction, fragmentation; overexploitation; Invasive species; Commercialization of agriculture and forestry; Impact of pollution and global climate change on biodiversity ***Consequences:*** Food and economic security, livelihood	1 2	3 (Group discussion)	
6	**Conservation strategies:** • **Theoretical background:** overview of genetic variability; population biology of endangered species; conservation genetics; wildlife biology • ***Ex-situ* conservation**: Zoo; Gene bank; seed bank; aquaria; botanical gardens • Establishment of new populations, Captive breeding, reintroduction • **Conservation of biodiversity within ecosystems-*In situ* conservation:** Wild populations; community conservation; Gap analysis; Establishment of protected areas; Design and management of protected areas; Protected areas in India; Connectivity and corridors	5 5 2 6		
7	***Case study: Visit to a protected area*** (Tentative date: April 9-13, 2007)			3 days
8	**Conservation and society:** community involvement; indigenous knowledge system, restoration through peoples movement, sustainable resource use, Environment education and communication, biodiversity for livelihoods	2		
9	**Legal and political scenario:** Legislations; international agreements for the protection of species and habitats; Biodiversity act; Biodiversity register, Emerging International Policies	2		
10	**Case study: Tiger conservation in India**		7 (Work shop)	
	Total	31	14	8

Assignment (Full semester): *Submission deadline: May 11, 2007*
Students will be made into 5 groups of 6 students each. Each group will be given a species to work on. The groups and the species will be decided by lottery method. For the year 2007, following species/groups are proposed:

1. Chiru
2. Olive-ridley sea turtle
3. *Butea monosperma*
4. *Taxus baccata*
5. Vultures

The students will be required to study the selected group under following heads:

1. Current classification
2. Distribution: present and historical distribution – Global and India
3. Assessment and monitoring techniques
4. Economic value, threats, and conservation status
5. conservation methods

The assignment will be in the form of a analysis report of approx. 1000 words stating the type (direct/indirect, habitat/species/genetic level) of threats to the species, identifying the key factors responsible for the decline in habitat/population, gaps in the current conservation practices, suggestions to improve the current conservation practices, identifying social/policy level/economic constraints for implementation of the proposed conservation strategies. The analysis report will be duly supported by the documents, mentioned above in Sr. no. 1-6, as appendix.

Essential readings:

1. Richard B. Primack. 1998. *Essentials of conservation biology* Sinauer Associates Inc., USA.
2. Hunter, M. L. 2001. *Fundamentals of conservation biology*, second edition. Blackwell Science, Cambridge, UK
3. Meffe, G. K. and Carroll, R. L. 1997. *Principles of conservation biology*. Second edition. Sinauer Associates Inc., USA.

Other important Readings:

1. Hunter, M. L. 1999. *Maintaining biodiversity in forest ecosystems.* Cambridge University Press. ISBN 0-521-63104-1.
2. Rodgers, W.A.1991. *Techniques for Wildlife Census in India: A Field Manual.* Wildlife Institute of India
3. Sutherlans, W, J. 2000. *The conservation handbook: Research, Management and Policy*. Blackwell Science, Oxford
4. Ildos and Bardelli. 2001. *The Great National Park of the World.* ISBN 81-87107-06-5. Om Book Service, New Delhi.
5. Singh and Singh. *A Pocketbook of Indian Pheasants*. Wildlife Institute of India, Dehradun.
6. V. B. Saharia. 1998. *Wildlife in India.* Natraj Publishers, Dehradun.
7. Salim Ali. 2002. *The Book of Indian Birds.* (13th edition). Bombay Natural History Society.
8. MacKinnon et al. 1996. *Managing Protected Areas in the Tropics.* Natraj Publishers, Dehradun.
9. David Black. 1981. *Animal Wonders of the World.* Orbis Publishing, London.

Papers:

Topic 1:

1. Andelman, S J and Fagan, W F. Umbrellas and flagships: Efficient conservation surrogates or expensive mistakes? (2000).PNAS, vol 97 (11): 5954–5959

Topic 2:

2. Lauren F. Howard, Thomas D. Lee. Temporal patterns of vascular plant diversity in southeastern New Hampshire forests. *Forest Ecology and Management* 185 (2003) 5–20

Topic 5:

3. Francisco Kelmo a,b, Martin J. Attrill a, Rilza C.T. Gomes c, Malcolm B. Jones a. El Nino induced local extinction of coral reef bryozoan species from Northern Bahia, Brazil. *Biological Conservation* 118 (2004) 609–617
4. Palmer et al. (2004). Correlational patterns between invertebrate species composition and the presence of an invasive plant. *Acta Oecologica*. 26: 219-226.
5. Reading material provided by the instructor

Topic 6:

6. Schelhas et al (2002). Linking community and national Park development: A case from the Dominican Republic. *Natural resources Forum*. 26: 140-149

Topic 8:

7. Damodaran, A. Conflict of Trade-Facilitating Environmental Regulations with Biodiversity Concerns: The Case of Coffee-Farming Units in India. *World Development* Vol. 30, No. 7, pp. 1123–1135, 2002

Topic 9:

8. Gokhale et al. People's biodiversity register: Documenting biodiversity for natural resource management. In: Verma et al (eds). Perspectives on Biodiversity: A vision for mega diverse countries *Government of India* pp. 375–396, 2006

Annexure 8.3

Proposed Revised Course

covering note

Course Title: Biodiversity Conservation and Governance
Number of credits: 4
Number of Lectures-Tutorial-Practicals: 35-14-8
Course coordinator: Dr. Neeraj Khera

Course outline:
The course aims at providing students with knowledge of the extent of the World's biodiversity, its value, and threats to it; a critical awareness of the consequences of the biodiversity loss; an advanced level of knowledge on the biological principles underlying biodiversity assessment, conservation and management; and induction into the governance of biodiversity conservation at global, regional and national level. The course proceeds with a balanced mix of classroom teaching and practical field experience. The overall emphasis is to help students in utilizing the theoretical and field knowledge, and their own analytical and communication skills for analyzing real life problems related to biodiversity conservation.

The course draws upon the knowledge and information provided in some other courses of the same program. Section on Value of biodiversity is covered in detail in the courses on Resource Economics and Environmental Economics. In the section on assessment and monitoring of biodiversity, use of GIS and remote sensing for assessing habitat diversity is covered in depth in the course in Geomatica for NRM, and measuring genetic diversity is covered in detail in the course on Biotechnology. Thus, for the purpose of efficient utilization of the available time, these topics will not be taught in this course.

Evaluation procedure (Percentage of marks to be allotted to each type of test):

- 2 minor tests : 10 + 10
- Assignment/Presentation : 25
- Field visits : 10
- 1 major test (end semester) : 45

Details of course content & allotted time

No	*Topic*	*Allotted time (hours)*		
		L	*T*	*P*
1	**Introduction:** Defining biodiversity; Fundamental principles of genetic, species and ecosystem diversity; Introduction to taxonomic and systematic ~~principles~~	*1*		
2	**Magnitude and Distribution of biodiversity** An overview of the variety of life forms; Global distribution of biodiversity, factors affecting species distribution, number of species worldwide, estimates and examples of recently discovered communities, abundance of species in different ecosystems of the world; concept of diversity Hot-spots; Biodiversity of India including medicinal plants and NTFPs		*2*	
3	**Assessment and monitoring of biodiversity** Methods of assessing and measuring biodiversity; Comparison	*5*	*2*	*8*

	of different sampling techniques; Diversity indices; tools for biodiversity data analysis like PCA etc; mapping distribution of species; An overview of the monitoring methods for plant, bird, insect, mammals, reptiles and fish biodiversity Indicators for monitoring progress in biodiversity conservation			
4	**Value of Biodiversity** Direct and indirect values; total economic value; ethical values	*1*		
5	**Status, Causes and consequences of biodiversity Loss:** ***Status:*** Estimates of extinction rates worldwide and in India; local extinctions, Red Data Books **(Self study-Reading material will be provided)** ***Causes:*** Vulnerability to extinction; Endemic species and island biogeography; rare and threatened species; Habitat destruction, fragmentation; overexploitation; Invasive species; Commercialization of agriculture and forestry; Impact of pollution and global climate change on biodiversity ***Consequences:*** Food and economic security, livelihood	*2*	*3* (Group discussion)	
6	**Conservation strategies:** • **Theoretical background:** overview of genetic variability; population biology of endangered species; conservation genetics; wildlife biology • ***Ex-situ* conservation**: Zoo; Gene bank; seed bank; aquaria; botanical gardens • Establishment of new populations, Captive breeding, reintroduction • **Conservation of biodiversity within ecosystems-*In situ* conservation:** Wild populations; community conservation; Gap analysis; Establishment of protected areas; Design and management of protected areas; Protected areas in India; Connectivity and corridors	*5* *5* *1* *4*		
7	***Case study: Visit to a protected area***			*3 days*
9	**Biodiversity Governance:** Biodiversity related conventions and agreements at global and regional levels, related international organizations Biodiversity 2010 target Civil society involvement in biodiversity conservation; Environment education and communication; Business and biodiversity Integration of biodiversity into cross-sectoral policies	*7*		

since 1992

focus on changes

	Biodiversity governance at National level: Case study of India			
10	**Concluding workshop**		*7*	
	Total	*31*	*14*	*8*

Assignment (Full semester): Detailed study of various conventions on biodiversity

1. Students will select a convention from the following list, and work on group assignments:

- CBD
- Ramsar
- CMS
- CITES
- WHC
- ITPGR

Basic Reading:

1. Richard B. Primack. 1998. ***Essentials of conservation biology*** Sinauer Associates Inc., USA.
2. Hunter, M. L. 2001. ***Fundamentals of conservation biology***, second edition. Blackwell Science, Cambridge, UK
3. Meffe, G. K. and Carroll, R. L. 1997. ***Principles of conservation biology***. Second edition. Sinauer Associates Inc., USA.
4. Hunter, M. L. 1999. ***Maintaining biodiversity in forest ecosystems***. Cambridge University Press. ISBN 0-521-63104-1.
5. Sutherland, W, J. 2000. ***The conservation handbook: Research, Management and Policy***. Blackwell Science, Oxford

Other important Readings:

Books:

1. Rodgers, W.A.1991. ***Techniques for Wildlife Census in India: A Field Manual.*** Wildlife Institute of India
2. Ildos and Bardelli. 2001. ***The Great National Park of the World***. ISBN 81-87107-06-5. Om Book Service, New Delhi.
3. Singh and Singh. ***A Pocketbook of Indian Pheasants***. Wildlife Institute of India, Dehradun.
4. V. B. Saharia. 1998. ***Wildlife in India***. Natraj Publishers, Dehradun.
5. Salim Ali. 2002. ***The Book of Indian Birds.*** (13th edition). Bombay Natural History Society.
6. MacKinnon et al. 1996. ***Managing Protected Areas in the Tropics***. Natraj Publishers, Dehradun.
7. David Black. 1981. ***Animal Wonders of the World***. Orbis Publishing, London.
8. RLEK. ***Community Forest Management In Protected Areas***. Natraj Publishers, Dehradun

Annexure 9.1

Existing Course

Course no. and title: PPS 141 – Economic analysis of Public Policy
Number of credits: 4
Number of lectures-tutorial-practicals:44-12-0
Faculty Name: Dr Surender Kumar, Dr Arabinda Mishra

Course Outline:

This course is intended to acquaint students with the ways in which economic analysis bears on public policy issues. Students learn to identify the relevant economic analyses for their strengths and weaknesses in relation to the economic principles involved, and to comprehend and assess what professional economists can contribute to the public sector. The first portion of the course covers microeconomic theory with particular emphasis on determining price and output under perfect competition and other forms of market structure; general equilibrium and welfare theory; and the concept of market failure, including public goods, externalities, and imperfect market structure. It is not sufficient simply to learn the principles; the course is intended to learn how and when the principles may be applied to issues of policy. To achieve this, many principles are developed in the context of particular policy issues that we hope are of interest to intended group for their own sake. The second portion of the course covers macroeconomic theory with particular emphasis how aggregates such as inflation and unemployment are determined in the economy and how monetary and fiscal policies work in a developing country like India.

Evaluation Procedure: *

- 2 Minor tests: 50% (25% each, one in Microeconomics and one in Macroeconomics)
- Major test: 50% (Combined for Micro- and Macroeconomics)

Details of course content and allotted time

S.No.	Topic	Allotted time (Hours)		
		Lectures	Tutorials	Practical
1.	**Introduction to economics**	1		
Microeconomic Theory				
2.	**Theory of the Consumer** Demand Analysis: basics of supply and demand; market equilibrium; determinants of supply and demand Theory of Consumer Behaviour: Indifference curve analysis; utility maximization; revealed preference analysis; indirect utility function; income and substitution effects; policy implications. *Examples: Willingness to pay studies.*	5	1	
3.	**Theory of the firm** Production Theory: production functions; profit maximization; returns to scale; cost functions; short run versus long run; factor demands; policy implications. *Examples: studies related to estimation of production, cost and profit function and policy climate.*	6	1	
4.	**Theory of pricing** Perfect competition and efficiency;	6	2	

Annexure 9.1

Existing Course

S.No.	Topic	Allotted time (Hours)		
		Lectures	Tutorials	Practical
	Monopoly; Price discrimination; Monopolistic competition; Oligopoly (classical and collusive oligopoly); Average Cost Pricing. *Examples: Studies related to the pricing of agricultural produce, industrial produce, public utilities (water, electricity, transport facilities) etc.*			
5.	**Public goods, externalities and welfare analysis** Pareto optimality conditions, the compensation principle and benefit-cost analysis; Introduction to public goods; Provision of a public good; Externalities: positive and negative; Solutions to problems of externalities. *Examples: Studies related to the provision of infrastructure; subsidies for merit goods such as education, health (positive externalities) and alternative mechanisms to control pollution problems (negative externalities)*	4	2	
Macroeconomic Theory				
6.	**National income accounting** Concepts of national income (GDP, GNP etc), SNA framework, preparation of National Income Accounts in India	6	2	
7.	**IS –LM model** The goods market and the IS curve; The assets market and the LM curve; Equilibrium in the goods and the assets market	5	1	
8.	**Monetary and fiscal policy** Monetary policy; Fiscal policy and crowding out; Policy mix	5	1	
9.	**International linkages** The balance of payments and exchange rates; Trade in goods, market equilibrium and the balance of trade; Capital mobility and the Mundell Fleming Model	6	2	
	Total	44	12	

***The course will be completed in the first half of the current semester; therefore each week will consist of eight hours of course delivery (four hours for microeconomics and four hours for macroeconomics). The minor tests will be held separately for micro- and macroeconomics during Feb 5-9 2007 and the combined major exam will take place during March 5-9, 2007.**

Basic textbooks:

A. Microeconomics

1. Hal R. Varian, Intermediate Microeconomics: A Modern Approach, 6th Edition, 2003, Affiliated East-West Press.

2. Pindyck, R. S. and B. L. Rubinfeld, Microeconomics, 5th Edition, 2001.

B. Macroeconomics

3. Raghavendra Jha, Macroeconomics for developing countries, Routledge, 2003

4. Mankiw, Macroeconomics 5th edition, 2003.
   Or
   Dornbusch, Fischer, Startz, Macroeconomics, Mc Graw Hill, 8th Edition, 2001.

(Relevant reference material will be distributed during the course of the lectures)

Proposed Revised Course

PPS 141: Economic Analysis of Public Policy
Credits: 4
Faculty: Surender Kumar

Course Description

This course is designed to familiarize the student with the ways in which microeconomic analysis can be brought to bear on public policy issues. Students will learn (1) to identify the relevant economic questions concerning policy issues of interest to you, (2) to comprehend the economic arguments that bear on these issues, and (3) to evaluate these arguments in terms of their strengths and weaknesses. The course is organized around key microeconomic concepts and their application to concrete policy issues. To analyze specific public policy problem, it is important to assess which of the concepts are relevant and what weight should be given to each of them. This and other information should then be used to formulate policy options, implementation strategies and assessment of outcomes. Problem sets will be assigned and discussed to help develop these skills.

Evaluation Process

Term Paper: 40%
Two Minor Exams: 15% each
Major Exam: 30%

Course Outlines

	Contents	Lectures/ Tutorials
1.	**Introduction: Public Policy and Micro Economics**	**02**
2	**Microeconomics** • Consumer Behaviour: Demand analysis- Marshall and Hicks, Revealed preference theory, income and substitution effects • Producer Behaviour: Laws of production (laws of returns to scale and laws of diminishing returns), Theory of costs • Theory of the Firm: Perfect competition, Monopoly, Price discrimination, Monopolistic competition, Oligopolistic markets: classical and collusive oligopoly, Average cost pricing, Limit pricing	**24** 10 06 08
3	**Rationale for Public Policy** a) Market Failure • Public Goods: Introduction, Provision, Financing • Externalities: Negative and positive externalities, Solutions • Natural Monopoly • Information asymmetry b) Other limitations of Competitive Framework • Thin Markets • Problem of Uncertainty c) Distributional and other goals	**14** 08 04 02

4	**Limits to Public Intervention: Government Failure**	**02**
5	**Correcting Market and Government Failures**	**04**
6	**Doing Policy Analysis** • Confronting Policy Problems • Goals/Alternatives Matrices • Benefit Cost Analysis	**10**

Basic Texts

1. Robert S. Pindyck and Daniel L. Rubinfeld, **Microeconomics,** 6th edition (Prentice Hall of India, 2005)
2. L. Friedman, **The Microeconomics of Public Policy Analysis** (Princeton University Press, 2002)
3. David L Weimer and Aidan R Vining, **Policy Analysis: Concepts and Practice** (Prentice Hall, 2004).
4. C.K. Prahalad, **The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits** (Wharton School Publishing, 2005).

Illustrative Articles

- Arrow, K. J., 2000. "Knowledge As a Factor of Production", **Annual World Bank Conference on Development Economics 1999,** pp. 15-20.
- Arrow, Kenneth, Maureen Cropper, George Eads, Robert Hahn, Lester Lave, Roger Noll, Paul Portney, Milton Russell, Richard Schmalensee, Kerry Smith, and Robert Stavins, "Is There a Role for Benefit-Cost Analysis in Environmental, Health, and Safety Regulation?" ***Science***, 1996.
- Blank, Rebecca M., " Selecting among anti-poverty policies: can an economist be both critical and caring?" **Review of Social Economy**, 61, No. 4, Dec. 2003, pp. 447-469
- David Brookshire and Don Coursey, "Measuring the Value of a Public Good: An Empirical Comparison of Elicitation Procedures," **The American Economic Review**, *77*, No. 4, Sept. 1987, pp. 554—566
- Friedman, Lee and Rob Letzler, "The Theory and Practice of Public Good Selection: The Case of Legal Aid," draft presented at the Annual Research Conference of the Association for Public Policy Analysis and Management, Fall 2005 (available online at https://webfiles.berkeley.edu/~lfried/Public Good Selection.pdf)
- John McMillan, "Market Design: The Policy Uses of Theory," **The American Economic Review**, *93*, No. 2, May 2003, pp. 139-144
- Kelman, Steven. "Cost-Benefit Analysis: An Ethical Critique." *Regulation*, 1981
- Megginson, W. L. and Netter, J. M., 2001. "From state to Market: A Survey of Empirical Studies on Privatization", **Journal of Economic Literature,** 34, 2, June, pp. 321-389
- Norregard, J. and Reppelin-Hill, V., 2000. "Controlling Pollution: Using Taxes and Tradable Permits", IMF, Economic Issues, 25. The full text is available at the following website: http://www.imf.org/external/pubs/ft/issues/issues25
- Stern Review, **The Economics of Climate Change**, October 2006, Executive Summary (long), available on the website of HM Treasury, United Kingdom (http://www.hm-

treasury.gov.uk/independent reviews/stern review economics climate change/sternreview summary.cfm)

- Stern, P., "Blind Spots In Policy Analysis: What Economics Doesn't Say About Energy Use," **Journal of Policy and Management**, 5, No. 2, Winter 1986, pp. 200-227.
- U.S. Environmental Protection Agency. *Guidelines for Preparing Economic Analyses*. Washington, D.C.: U.S. Environmental Protection Agency 2000
- "The Use and Abuse of Economics", **The Economist,** November 25, 1995, pp. 15-16
- "The Human Factor" **The Economist,** December 24, 1994-January 6, 1995, pp 92-94.
- "Putting A Human Face on Economics", **Business Week,** July 31, 2000, pp. 65-66. Full text available at the following website: http://myphlip.pearsoncmg.com/cw/mpviewce
- Moore, T. (2005), "State of Joy", **FT magazine**, August 6.
- Bunting, M. (2005), "Trouble in Store", **The Guardian**, August 1
- "Surely not rent controls?" **The Economist,** April 8, 1995.
- Harkin, J (2007), "An unhappy marriage of love and tax', *The Financial Times*, March 7
- Easterly, W. (2005), "The Utopian Nightmare", http://www.foreignpolicy.com/
- Sayson,I. C. "Benpres and Suez give up on Manila", **International Herald Tribune**, December 10,2002.
- Kay,J." Privatisation: Chapter Two", **Financial Times (London),** February 7, 2001.

Students are also encouraged to read business and economic news on a regular basis. They may also want to follow the relevant stories in the *Financial Times*, *Business Week*, *The Economic Times, Economic and Political Weekly, The Economist* etc.

Proposed Course

Course no. and title: Macroeconomic analytics and the Indian economy
Number of credits:3
***Number of lectures-tutorial-practicals:* 42-0-0**
Faculty Name:
Course coordinator: Dr. Arabinda Mishra

Course Outline:
This course covers macroeconomic theory with particular emphasis how aggregates such as inflation and unemployment are determined in the economy and how monetary and fiscal policies work in a developing country like India.

Evaluation Procedure:

- Minor test: 25%
- Term paper: 25%
- Major test: 50%

Details of course content and allotted time

S.No.	Topic	Allotted time (Hours)		
		Lectures	Tutorials	Practical
Introduction				
1.	**The basic macroeconomic framework** Concepts of national income (GDP, GNP etc), SNA framework, preparation of National Income Accounts in India, national income estimates of India	6		
2.	**Basic model of the closed economy** The goods market and the IS curve; The assets market and the LM curve; Equilibrium in the goods and the assets market	8		
3.	**Open economy macroeconomics** Capital mobility and the Mundell Fleming Model International linkages The balance of payments and exchange rates; Trade in goods, market equilibrium and the balance of trade	8		
4.	**Macroeconomic policy in the closed and the open economy** Monetary and fiscal policy Fiscal policy and crowding out; Policy mix; Trade policy;	10		
5.	**Issues in the Indian context**	10		

S.No.	Topic	Allotted time (Hours)		
		Lectures	Tutorials	Practical
	Macroeconomic performance in the different phases; Analysis of policy in the pre and post liberalization phases; Current issues (seminar based)			
	Total	42		

Basic textbooks:

1. Mankiw, Macroeconomics 5th edition, 2003.
2. Dornbusch, Fischer, Startz, Macroeconomics, Mc Graw Hill, 8th Edition, 2001.
3. Relevant EPW articles

Advanced text

Raghavendra Jha, Macroeconomics for developing countries, Routledge, 2003

Proposed Course

Course Title: Development Studies
Number of Credits: 3
Course Coordinator: Saon Ray, Jeevan Mohanty, Mala Narang Reddy

Course Outline
This course is designed to familiarize the students with different perspectives on development. Beginning with the evolution of the concept of development, the course takes the students through how the notion of development has changed from economic growth to human development. The main focus is on theories of modernization and dependency, issues of poverty and population growth, human development, rural development, the people-centred development and international linkages.

Evaluation Procedure (% of aggregate marks):
Minor Test 20 %
Assignment 20 %
Final Exam 60 %

No	Topics	Allotted time (hrs.)		
		Lectures	*Tutorials*	*Practicals*
1.	**Introduction and overview** Concepts of development & underdevelopment; history of development – imperialism and colonialism; geopolitics of development (north-south divide); development in contemporary world; development and inequality	4 JM		
2.	**Dependency Theories**: Andre Gunder Frank, Samir Amin, and their critique; present status of development theories	4 JM / MNR		
3.	**Economic Development** – Smith, Ricardo, Marx; Rostow's Theory – Development Models; Trickle Down Theory i) income and growth ii) income distribution iii) faces of underdevelopment	6 SR		
4.	**Economic Growth** i) economic growth – Harrod, Solow, ii) technical progress - New growth theories Arrow iii) convergence iv) human capital –Lucas trade and growth	6 SR		
5.	**Population and Development**: Demographic transition theory; the idea of 'population bomb' and its effect on resources; population growth and development	4 MNR		
6.	**Poverty and deprivation**; under-nutrition and malnutrition; culture of poverty	4 JM		
7.	**Human Development** Theory and Sustainable Development	4 MNR		
8.	**Agricultural and Rural Development** • Robert Chambers: People-oriented approach and PRA • Markets in agriculture; Rural urban linkages; Issues of land, labour, capital, credit, and insurance.	6 SR / MNR		
9.	**International linkages**	4 JM		

Proposed Course

No	Topics	Allotted time (hrs.)		
		Lectures	*Tutorials*	*Practicals*
	Role of UN; Bretton Woods system; Foreign aid and development; Globalisation and liberalisation; Political economy of development			

Faculty

JM- Dr. Jeevan Mohanty
MNR- Dr. Mala N. Reddy
SR- Dr. Saon Ray

Text Books

1. Ray, Debraj. 1998. *Development Economics*. Oxford University Press.
2. Chambers, Robert. (1997), *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology Publications.

Other Readings

1. Adam Szirmai. *The Dynamics of Socio-Economic Development: An Introduction.* Cambridge University Press.
2. Chambers, Robert. (1997), *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology Publications.
3. Rural Development: Putting the Last First Robert Chambers - 1983
4. Clark, Garcia. (2002), "Culturally Sustainable Development." In *Economic Development: An Anthropological Approach*. New York: Altamira Press.
5. *Farmer First. Farmer Innovation and Agricultural Research* edited by Robert Chambers , Arnold Pacey , Lori Ann Thrupp
6. Population and Development: A Critical Introduction (Paperback) by Frank Furedi (1997) Polity Press
7. Cooke, Bill and Uma Kothari. (2001), "The Case for Participation as Tyranny." In *Participation: The New Tyranny?,* edited by Bill Cooke and Uma Kothari, London: Zed Books.
8. Crewe, Emma and Elizabeth Harrison. (1998) *Whose Development?: An Ethnography of Aid.* New York: Zed Books.
9. Danaher, Kevin. (ed.) (1994) *Fifty years Is Enough: The Case Against the World Bank and International Monetary Fund.* Boston: South End Press.
10. Freedman, Jim. (ed.) (2000), *Transforming Development: Foreign Aid for a Changing World.* Toronto: University of Toronto Press.
11. Escobar, Arturo. (1995), *Encountering Development: The Making and Unmaking of the Third World.* Princeton: Princeton University Press.
12. Patnaik, Prabhat, 1995, Whatever Happened to Imperialism?, Tulika Publications, New Delhi
13. Haynes, Jeffry (edt.) (2007), the Palgrave Advances in Development Studies, New Delhi: Palgrave.
14. Pieterse, Jan ederveen, Development Theory: Deconstructions/Reconstructions, New Delhi: Vistar Publication
15. Dirks, N (ed.) (1992) Colonialism and culture, Anna Arbor: University of Michigan Press
16. Schuurman, Frans.J (ed.) (1993) Beyond the Impasse: New Directions in Development Theory
17. Evans, Peter. (1995) Dependent Development. Princeton: Princton University Press
18. Sen, Amartya (2000) Development as Freedom, New Delhi: OUP.
19. Kofman and Young (eds) (2007) Globalisation: Theory and Practice, Continuum Press.
20. Bardhan, Pranav (1984) The Political Economy of Development in India, Delhi: OUP.
21. Frank, A.G. (2002) ReOrient: Global Economy in the Asian Age, Berkely: University of California Press.