

FACULTY OF PHYSICAL PLANNING & ARCHITECTURE

SYLLABUS

for

**Bachelor of Technology (B.Tech.)
(Urban & Regional Planning)
(SEMESTER: I - VIII)**

(Under Credit Based Continuous Evaluation Grading System)

Examinations: 2016–17



**GURU NANAK DEV UNIVERSITY
AMRITSAR**

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Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester System)
(Under Credit Based Continuous Evaluation Grading System)

Semester-I

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
GBL 101	C	Fundamentals of Urban and Regional Planning	2	1	0	3
GBL 102	C	Principles of Construction and Building Structures	2	1	0	3
GBL 103	C	Technical Report Writing and Research Methodology	2	1	0	3
GBL 104	C	Basic Architectural Design	2	1	0	3
GBU 105	C	Map Preparation	0	0	5	2
GBU 106	C	Map Graphics	0	0	5	2
PBL 121	C	Punjabi Compulsory-I OR	2	0	0	2
PBL 122		Basic Punjabi (Mudhli Punjabi)				
ENL 101	C	Communicative English – I	2	0	0	2
TOTAL						20

Semester-II

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
GBL 151	C	History of Planning Thought	2	1	0	3
GBL 152	C	Statistical Methods in Planning	2	1	0	3
GBL 153	C	Techniques of Planning -1	2	1	0	3
GBL 154	C	Elements of Geography	2	1	0	3
GBU 155	C	Survey of Locality	0	0	8	4
GBU 156	C	Computer Aided Design (CAD)	0	0	4	2
PBL 131	C	Punjabi Compulsory-II OR	2	0	0	2
PBL 132		Basic Punjabi (Mudhli Punjabi)				
ENL 151	C	Communicative English – II	2	0	0	2
TOTAL						22

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Semester-III

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
SPL 221	C	Planning Theory -II	2	1	0	3
SPL 222	C	Demography and Urbanization	2	1	0	3
SPL 223	C	Planning for Utilities	2	1	0	3
SPL 224	C	Techniques of Planning -II	2	1	0	3
SPL 225	C	Surveying	2	1	0	3
SPU 226	C	Residential Site Planning	0	0	8	4
SPU 227	C	Geo-Informatics for Planning	0	0	5	2
ESL 220	C	Environmental Studies	2	0	0	Audit Course
Course No. to be added after the student opts for a particular course	I	Student may opt a credit based undergraduate course from any department of the University of minimum 3 credits	Credits to be added after the student opts for a particular course			
TOTAL						24

Semester-IV

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
SPL 271	C	Real Estate	2	1	0	3
SPL 272	C	Transportation Planning – I	2	1	0	3
SPL 273	C	Land Record and Information System	2	1	0	3
SPU 274	C	Transportation Plan	0	0	5	2
SPU 275	C	Study of Town	0	0	8	4
SPL 276	E1	Specifications, Estimation and Valuation	2	1	0	3
SPL 277	E1	Municipal Services Management	2	1	0	3
SPL 278	E2	Sociology of Settlements	2	1	0	3
SPL 279	E2	Sustainable Urban Development	2	1	0	3
Students have to select two elective courses, one each from E1 and E2.						
Course No. to be added after the student opts for a particular course	I	Student may opt a credit based undergraduate course from any department of the University of minimum 3 credits	Credits to be added after the student opts for a particular course			
TOTAL						24

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Semester-V

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
SPL 311	C	Transportation Planning – II	2	1	0	3
SPL 312	C	Planning Legislation	2	1	0	3
SPL 313	C	Urban Renewal and Conservation	2	1	0	3
SPL 314	C	Housing and Community Development	2	1	0	3
SPU 315	C	Master Plan	0	0	5	2
SPU 316	C	Study of Region	0	0	8	4
SPL 317	E	Planning for Informal sector	2	1	0	3
SPL 318	E	Planning for Special Area	2	1	0	3
Students have to select one elective course from E.						
Course No. to be added after the student opts for a particular course	I	Student may opt a credit based undergraduate course from any department of the University of minimum 3 credits	Credits to be added after the student opts for a particular course			
TOTAL						24

SPF 365	C	Educational Tour – I (to be conducted after theory and planning practice classes of V semester and Viva-voce to be conducted in the VI semester)	Audit Course	Viva-voce
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Semester-VI

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
SPL361	C	Project Formulation and Management	2	1	0	3
SPL 362	C	Regional Planning	2	1	0	3
SPU 363	C	Regional Plan	0	0	8	4
SPU 364	C	Village Plan	0	0	5	2
SPF 365	C	Educational Tour – I	Audit Course			
SPL 366	E1	Urban Design	2	1	0	3
SPL 367	E1	Landscape Planning	2	1	0	3
SPL 368	E2	Disaster Management	2	1	0	3
SPL 369	E2	Environment Planning	2	1	0	3
Students have to select two elective courses, one each from E1 and E2.						
Course No. to be added after the student opts for a particular course	I	Student may opt a credit based undergraduate course from any department of the University of minimum 3 credits	Credits to be added after the student opts for a particular course			
TOTAL						21
SPE 413	C	Internship (8 Weeks) (to be conducted after major tests of VI semester and during summer vacations and viva-voce to be conducted in VII semester)	Audit Course			Viva-voce

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Semester-VII

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
SPL 411	C	Project Management	3	1	0	4
SPL 412	C	Regional Planning	3	1	0	4
SPE 413	C	Internship (8Weeks)	Audit Course			
SPU 414	C	Detail Project Report	0	0	5	2
SPU 415	C	Re-Planning of an Area	0	0	7	3
SPL 416	E	Environment Planning	3	1	0	4
SPL 417	E	Freight Transport Planning	3	1	0	4
Students have to select one elective course from E.						
Course No. to be added after the student opts for a particular course	I	Student may opt a credit based undergraduate course from any department of the University of minimum 3 credits	Credits to be added after the student opts for a particular course			
TOTAL						20

SPF 462	C	Educational Tour – II (to be conducted after theory and planning practice classes of VII semester and Viva-voce to be conducted in the VIII semester)	Audit Course	Viva-voce
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Semester-VIII

Course No.	Course Code	Title of the Course	Credits			Total Credits
			L	T	U	
SPD 461	C	Planning Dissertation	0	0	20	10
SPF 462	C	Educational Tour – II	Audit Course			
SPL 463	E1	Governance and Finance	3	1	0	4
SPL 464	E1	Professional Practice	3	1	0	4
SPL 465	E2	Rural Infrastructure	3	1	0	4
SPL 466	E2	Community Participation in Planning	3	1	0	4
Students have to select two elective courses one each from E1 and E2.						
Course No. to be added after the student opts for a particular course	I	Student may opt a credit based undergraduate course from any department of the University of minimum 3 credits	Credits to be added after the student opts for a particular course			
TOTAL						21

Credits to be earned by the students of admitted in 2013-14 for completion of Degree: 180

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GBL 101: FUNDAMENTAL OF URBAN AND REGIONAL PLANNING

Credits: 03 (L=2, T=1, U=0)

Settlement: definition and characteristics, rural, urban settlements as per census and classification of towns, city, metropolis, megalopolis, interaction and interdependence between city-region. Urbanization process: definition, character, function, migration, role of social, economic and demographic aspects on urbanization, major components of a settlement, major urban problems and their solutions, landuses.

Planning process: definition, need and importance, function and type of planning (sectoral and spatial), administrative level of planning (local, block, dist, state and national), role of environment, society, economy, political, administrative and legal system on planning process. Contents of spatial planning for a settlement: Site planning, transport planning, utility planning, landscape planning, master plans.

Regional planning: definition, need and importance, objective, concept of region, types of regions - resource region, agro-climatic region, topographic region, contents of regional planning for block, district, state, national, NCR, major regional problems and their solutions.

Suggested Readings:

1. 2006 S.K. Kulshrestha, 'Dictionary of Urban and Regional Planning', Kalpaz Publications, Delhi.
2. 2005 K.R. Thooyavan, 'Human Settlements – A Planning Guide to Beginners, M.A. Publications, Chennai.
3. 2002 Majid Hussein, Fundamentals of Physical. Geography, Second Edition, Rawat Publications, New Delhi.
4. 1994 Diwan&Kopardekar, 'Urban and Regional Planning-Principles, Practice and Law' S.H. Kopardekar, Talegaon – dabhade.
5. 1982 Madhu Sarin, Urban Planning in third World, the Chandigarh Experience, Mansell Publishing House, London.
6. 1975 Melville Branch, Urban Planning Theory, Dewden, Hutchinson & Ross Inc, Strondsburg Pennsylvirania
7. 1972 L. Keeble, 'Principles & Practice of Town and Country Planning', the Estates Gazette Ltd., London.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-I)
(Under Credit Based Continuous Evaluation Grading System)

GBL 102: PRINCIPLES OF CONSTRUCTION AND BUILDING STRUCTURES

Credits: 03 (L=2, T=1, U=0)

Elements of a building: their functions and characteristics, Common types of foundations for buildings: Walls and columns, Cross sectional components of a single storey and Multi-storeyed building. Characteristics of the common building material used for these elements. Façade elements of Historical and traditional buildings.

Planning Considerations for Building making- Relevance of set-backs: Type and application, Covered areas, Plinth area, floor areas, carpet areas and FAR. Relevance of Court yard in Traditional or old buildings, Climate and traditional building forms, Verandah, roof height and considerations for healthy living environment in old buildings.

Buildings in Hills, Tropical, costal and desert areas- form, design and planning approaches. Buildings for Special Areas and Purposes—Slums, Temporary Structures, General types and Material used.

Suggested Readings:

1. 2014. Gurcharan Singh. Building Construction and Materials. Rajson Publication Pvt. Ltd. New Delhi.
2. 2006. National Building Code. Government of India. New Delhi.
3. 2001. Merritt S. Frederick. Building Design and Construction Handbook, Sixth Edition, McGRAW-HILL. New York.
4. 1996. R.K. Rajput. Strength of Materials. Sultan Chand & Company Ltd. New Delhi.
5. 1994. B.C. Punmia, P.C. Strength of Materials and Theory of Structures. Vol I, Laxmi Publications. Delhi.
6. 1990. R.K. Bansal. Engineering Mechanics and Strength of Materials. Lakshmi Publications. New Delhi.
7. 1990. S. Ramamurtham. Strength of Material. Dhanpatrai & Sons. New Delhi.
8. 1989. W.A. Nash. Strength of Materials - Schaums Series. McGraw Hill Book Co. New York
9. 1982. Callender, John Hancock. Time Saver Standards for Architectural Design Data. McGraw Hill Book Co. New York.
10. 1980. M.E. Bevlín. Design through Discovery. Hercourt School. New York.

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GBL 103: TECHNICAL REPORT WRITING AND RESEARCH METHODOLOGY

Credits: 03 (L=2, T=1, U=0)

Types of reports, difference between technical, scientific, legal and other types of communications; specific characteristics of writing technical reports. English comprehension and oral communication. Presentation techniques in digital and oral format for group discussion in seminars and meetings.

Preface, acknowledgements, contents, indexing, key word indexing, introduction, body terminal section, appendices, references; Literature surveys: Use of libraries, knowledge of indexing and available reference materials

Planning and preparation of technical articles for publications; Popular articles; Formal letters and specifications: Business and official letters, styles and formats; Requests for specifications and other types of business enquiries; Agendas and minutes of official records and meetings

Scientific research, need for scientific approach to research; Research methods; Hypotheses, testing of hypotheses; Observations and Interviews.

Suggested Readings:

1. 2005. Kumar, Ranjit, Research Methodology – An Introduction, Pearsons Education, Baba Balak Nath Printers, New Delhi.
2. 2003. Crotty, Michael, The Foundations of Social Research: Meaning and Perspective in the Research, Sage Publishers, London.
3. 1984. T.S. Wilkiinson and P.L.Bhandarkar, Methodology and Techniques of Social Research, Himalaya Publishers, New Delhi.
4. 1970. Gopal, M.H., An Introduction to Research Procedures in Social Sciences, ASIAN Publication House, Delhi.

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GBL 104: BASIC ARCHITECTURAL DESIGN

Credits: 03 (L=2, T=1, U=0)

Introduction to Architecture – relevance in local and physical environment, Elements of Design; Point, Line, Plane, Colour, Light, Space and Material. Principles of Design – Balance, harmony, rhythm, proportions, scale, contrast, symmetry, variety, unity and diversity.

Objectives of Design; beauty, order, economy. Composition Formal / informal, two dimensional and three dimensional Compositions based upon principles of design. (e.g. preparation of collage, murals, motifs etc.) Anthropometry and circulation area required for various activities.

Design of small spaces such as office, bus-stop, kiosk and single storey residential unit. Design considerations and focus of elements used. Relationship of the building to the site, to time and man i.e. scale setting and citing of a building, streets/roads, landscape etc.

Suggested Readings:

1. 2013. Marco Bussagli. Understanding Architecture. I.B. Tauris. London
2. 2009. Nathan B Winters. Architecture is Elementary: Visual Thinking Through Architectural Concepts. Gibbs Smith Publishers. US
3. 2004. M. David Gann. Building Innovation. Thomas Telford Publishing. London.
4. 1996. Francis D.K. Ching Architecture Form, Space and Order. Van Nostrand Reinhold. New York.
5. 1984. Tom Heath. Method in Architecture. John Willy and Sons. New York.
6. 1983. K.W. Smitnies. Principles of Design in Architecture. Chapman & Publisher. New York.

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GBU 105: MAP PREPARATION

Credits: 02 (L=0, T=0, U=5)

- Basic elements of MAPS, components and presentation
- Scale and type of maps - study of large scale, small scale maps, Land use maps of cities. (tracing of maps and understating of concept of scale)
- Different theme maps—census map series, geographical maps, components of working drawings of a site, buildings.
- Topographical maps – sources, SOI specifications, grid formation, data factors, projection systems- Types, basic concepts, SOI guidelines and assumptions for projection systems, Study of SOI grids.
- Generation of Theme Maps from Base map_ Land Use Types etc. Demonstration of Use of Statistical Data on Maps- Pictographically, Graph etc.
- Preparation of a base of a city :
- Copying an existing map and Generating map from other sources
- Components of a Base map for a city or part of a city
- Map presentation with colours.

Suggested Readings:

1. 2001. A. H. Strahler. and A.N. Strahler, Modern Physical Geography (Fourth Edition), John Wiley and Sons, Inc.1., New York
2. 1999. D.R. Khullar, Essentials of Practical Geography, New Academic Publishing Co., Jalandhar.
3. 1998. R.L. Singh and P.B. Rana, Elements of Practical Geography, Kalyani Publishers, New Delhi.
4. 1996. D.S. Lal, Climatology, Chaitanya Publishing House, Allahabad
5. 1978. H. Robinson, Biogeography, ECBS & Mac Donald and Evans, London
6. 1964. Monkhouse and Willinson, Maps and Diagrams, Methuen & Co., London.

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GBU 106: MAP GRAPHICS

Credits: 02 (L=0, T=0, U=5)

The objective of this exercise is to orient students with the techniques of presentation. The students are required to undertake practical exercises in all the following two categories.

- Various types of grades of lines used in drawing. Meaning and description of plan, elevation and sections using geometrical shapes,
- Free hand sketching of solids, cones, cubes, cylinders, spheres etc. Free hand sketch of various settlement elements – electric poles, street features, trees, shrubs, bus stop physical natural features etc.
- Signs and Symbols used for different types of maps—building materials, landscape elements, land use pattern for a city and regional, common sign conventions adopted for topographical sheets.

Suggested Readings:

1. 2001. A. H. Strahler. and A.N. Strahler, Modern Physical Geography (Fourth Edition), John Wiley and Sons, Inc.1., New York
2. 1999. D.R. Khullar, Essentials of Practical Geography, New Academic Publishing Co., Jalandhar.
3. 1998. R.L. Singh and P.B. Rana, Elements of Practical Geography, Kalyani Publishers, New Delhi.
4. 1978. H. Robinson, Biogeography, ECBS & Mac Donald and Evans, London
5. 1964. Monkhouse and Willinson, Maps and Diagrams, Methuen & Co., London.

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PBL-122: ਮੁੱਢਲੀ ਪੰਜਾਬੀ
(In lieu of Punjabi Compulsory)

Credits: 2-0-0

ਪਾਠ-ਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਭਾਸ਼ਾ,
ਗੁਰਮੁਖੀ ਲਿਪੀ
ਗੁਰਮੁਖੀ ਲਿਪੀ : ਬਣਤਰ ਅਤੇ ਤਰਤੀਬ
2. ਗੁਰਮੁਖੀ ਆਰਥੋਗ੍ਰਾਫੀ
ਸੂਰ ਬਣਤਰ ਅਤੇ ਉਚਾਰਨ
ਵਿਅੰਜਨ ਬਣਤਰ ਅਤੇ ਉਚਾਰਨ
3. ਪੰਜਾਬੀ ਸ਼ਬਦ ਬਣਤਰ
ਸਾਧਾਰਨ ਸ਼ਬਦ
ਇਕ ਉਚਾਰਯੋਗੀ ਸ਼ਬਦ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਨਾਮਕਰਣ ਅਤੇ ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ, ਗੁਰਮੁਖੀ ਲਿਪੀ : ਨਾਮਕਰਣ, ਗੁਰਮੁਖੀ ਵਰਣਮਾਲਾ; ਪੈਂਤੀ ਅੱਖਰੀ, ਅੱਖਰ ਕ੍ਰਮ, ਸੂਰ ਵਾਹਕ (ਓ ਅ ਏ), ਲਗਾਂ ਮਾਤਰਾਂ, ਪੈਰ ਵਿਚ ਬਿੰਦੀ ਵਾਲੇ ਵਰਣ, ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਵਰਣ, ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ।
2. ਗੁਰਮੁਖੀ ਆਰਥੋਗ੍ਰਾਫੀ ਅਤੇ ਉਚਾਰਨ; ਸੂਰਾਂ ਦੀ ਬਣਤਰ ਅਤੇ ਉਚਾਰਨ (ਲਘੂ-ਦੀਰਘ ਸੂਰ); ਸੂਰ ਅਤੇ ਲਗਾਂ ਮਾਤਰਾਂ; ਵਿਅੰਜਨਾਂ ਦੀ ਬਣਤਰ ਅਤੇ ਉਚਾਰਨ; ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਵਰਣਾਂ (ਹ, ਰ, ਵ) ਦਾ ਉਚਾਰਨ ; ਲ ਅਤੇ ਲ਼ ਦਾ ਉਚਾਰਨ; ਭ, ਧ, ਢ, ਝ, ਞ ਦਾ ਉਚਾਰਨ; ਪੈਰ ਵਿਚ ਬਿੰਦੀ ਵਾਲੇ ਵਰਣਾਂ ਦਾ ਉਚਾਰਨ।
3. ਪੰਜਾਬੀ ਸ਼ਬਦ-ਬਣਤਰ : ਸਾਧਾਰਨ ਸ਼ਬਦ; ਇਕੱਲਾ ਸੂਰ (ਜਿਵੇਂ ਆ); ਸੂਰ ਅਤੇ ਵਿਅੰਜਨ (ਜਿਵੇਂ ਆਰ); ਵਿਅੰਜਨ ਅਤੇ ਸੂਰ (ਜਿਵੇਂ ਪਾ); ਵਿਅੰਜਨ ਸੂਰ ਵਿਅੰਜਨ (ਜਿਵੇਂ ਪਾਰ); ਕੋਸ਼ਗਤ ਸ਼ਬਦ (ਜਿਵੇਂ ਘਰ, ਪੀ); ਵਿਆਕਰਣਕ ਸ਼ਬਦ (ਜਿਵੇਂ ਨੂੰ, ਨੇ); ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ-1; ਲਿੰਗ-ਪੁਲਿੰਗ, ਇਕ ਵਚਨ-ਬਹੁ ਵਚਨ; ਨਿੱਤ ਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ-1: ਖਾਣ-ਪੀਣ, ਸਾਕਾਦਾਰੀ, ਰੁੱਤਾਂ, ਮਹੀਨਿਆਂ, ਗਿਣਤੀ, ਮੌਸਮ ਆਦਿ ਨਾਲ ਸੰਬੰਧਿਤ।

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ENL 101: COMMUNICATIVE ENGLISH-I

Credits: 02 (L=2,T=0,U=0)

Objective: To introduce students to the skills and strategies of reading and writing by identifying organizational patterns, spotting classification systems and understanding associations between ideas. This course will prepare students to read a variety of texts and also to communicate more effectively through writing. The course will also pay special attention to vocabulary building.

Prescribed Text books:

1. *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition.
2. *The Written Word* by Vandana R. Singh, Oxford University Press, New Delhi.

Course Contents:

1. Reading and Comprehension Skills:

Students will be required to read and comprehend the essays in Unit 1 and 2 of the book *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition. They will be required to answer the questions given after each essay.

2. Developing Vocabulary and using it in the Right Context:

The students will be required to master “Word List” and “Correct Usage of Commonly Used Words and Phrases” from the Chapter “Vocabulary” in the book *The Written Word*.

3. Writing Skills

Students will be required to learn “Report Writing” and “Letter Writing” as in the book *The Written Word*.

Students will be required to write long essays based on the prescribed text book *Making Connections: A Strategic Approach to Academic Reading*.

Minor 1:

Syllabus to be covered:

1. Unit 1 from *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition.
2. Report Writing from *The Written Word*.

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Suggested Paper Pattern:

1. Report Writing (8 marks)
2. Short answer type questions from Unit 1 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks)
3. Essay type question from Unit 1 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks)

Minor 2:

Syllabus to be covered:

1. “Word List” from the Chapter “Vocabulary” in the book *The Written Word*.
2. Unit-2 from the book *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition.

Suggested Paper Pattern:

1. Word List from the Chapter “Vocabulary” in the book *The Written Word* (8 marks)
2. Short answer type questions from Unit 2 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks)
3. Essay type question from Unit 2 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks)

Suggested Paper Pattern for Major Exam:

1. Letter Writing as prescribed in *The Written Word* /1 out of 2 (10 marks)
2. Short answer type questions from Unit 1,2 of *Making Connections: A Strategic Approach to Academic Reading* (14 marks)
3. “Word List” and “Correct Usage of Commonly Used Words and Phrases” from the Chapter “Vocabulary” present in the book *The Written Word*. (10 marks)
4. Essay type question from Unit 1,2 of *Making Connections: A Strategic Approach to Academic Reading* 1 out of 2 (8 marks)
5. Report Writing from *The Written Word* (8 marks)

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GBL 151: HISTORY OF PLANNING THOUGHT

Credits: 03 (L=2, T=1, U=0)

Place making in History from caves to agrarian society, the historical context of urbanization, Types of towns in different civilizations, Town Planning considerations (Site selection and planning process) in ancient India from ancient texts and treatises, Classification of ancient settlements.

Medieval Town Planning and renaissance in Europe, Medieval Town Planning in India and influence of Indo-Sarsenic culture (Fatehpur Sikri, Shahjahanabad), Post-medieval town planning- Sikh towns- Site selection and characteristics, Colonial settlement planning, Industrial Towns Movement in India, Capital Towns.

Town Improvement and City Beautiful Movements, Planning Thought: Patrick Geddes, Sorya Y. Mata, Tony Garnier, Le Carbusier, Clarence Perry, F.L. Wright, New Towns in India; Chandigarh, Auroville.

Suggested Readings:

1. 2014. Peter Hall, Cities of Tomorrow: An Intellectual History of Urban Planning and Design Since 1880, Wiley and sons, Hoboken.
2. 2012. S. Fainstein, Readings in Planning Theory, 3rd Edition, Blackwell Publishing, Oxford.
3. 2002 Peter Hall, Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the 21st Century, Blackwell Publications, Oxford.
4. 2002. S. Ward, Planning the Twentieth Century City, The Advanced Capitalist World, John Wiley & Sons, Chichester.
5. 1998. P. Hall, Cities in Civilization; Culture, Technology and Urban Order, Weidenfield and Nicolson, London.
6. 1995 R. Nath, Medieval Indian History and Architecture, APH Publishing Pvt. Ltd, New Delhi.
7. 1981. Kevin Lynch, A Theory of Good City Form, Cambridge Publications, London.
8. 1963 A. Gallion, The Urban pattern; City Planning and Design, D.V. Nostrand Company Inc, N.York.

Recommended Journals

1. Planning Theory, Sage
2. Planning Theory and Practice, Taylor and Francis
3. Journal of Planning History, Sage

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-II)
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GBL 152: STATISTICAL METHODS IN PLANNING

Credits: 03 (L=2, T=1, U=0)

Introduction to statistics-meaning, importance, scope, and limitations, collection of data – objectives, scope, sources, methods of classification of data – functions, rules basis, methods of tabulation of data meaning, importance, prerequisites, types. Sampling theory and designing sample surveys – concepts; principles, types, methods, sampling errors

Presentation of Data-methods of presentation, graphic presentation; types of charts; plotting a curve, rules for drawing curves; bar charts, pictography, pie charts, histograms ; Measures of central tendency-meaning and importance, arithmetic mean, median, mode.; Measures of dispersion – measures of dispersion – meaning and importance, range, quartile deviations, mean deviation, standard-deviation, Lorenz curve.

Correlation analysis- methods of studying simple correlation: scatter diagram, Karl Pearson's co-efficient of correlation, Spearman's rank correlation. Multiple and partial correlation, Correlation ratio and intra-class correlation; Regression analysis- meaning and purpose of regression, simple and multiple linear regression using least square principle, coefficient of determination. Time series analysis -meaning and importance, methods, graphs semi-averages, least squares, moving average, ratio to proportion;

Suggested Readings:

1. 2010. S.C. Gupta and V. K. Kapoor, Fundamentals of Mathematical Statistics, 11th Ed., Sultan Chand & Sons, New Delhi
2. 2009. S.P Gupta, Statistical Methods, 38th Ed., Jain Book Agency, New Delhi
3. 2006. S.C. Gupta, Statistical Methods, Sultan Chand & Sons, New Delhi
4. 2002. A. M. Goon, M. K. Gupta and B. Das Gupta, Fundamentals of Statistics, Vol. II, World Press, Calcutta
5. 2001. D.C. Sancheti & V.K. Kapoor, Statistics Theory Methods & Application, Sultan Chand & Sons, New Delhi

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GBL 153: TECHNIQUES OF PLANNING - I

Credits: 03 (L=2, T=1, U=0)

Introduction to data – Data types: spatial and non- spatial data, relevance in urban and regional planning, data sources (non- spatial): census – Types, town Directory, village directory, and data classification of census, Gazetteer, Statistical abstract and other secondary sources. Survey techniques at local, urban, and regional level- Physiographic Surveys – Elements : soil types, underground and surface water vegetation ,topography
URDPFI guidelines, TCPO Landuse classification, Land utilization Surveys, Building condition survey – traditional elements, modern and any other, Socio-economic survey. Methods of conducting survey- interview questionnaire, scheduling. Planning standards – Different sources of Planning standards (TCPO, URDPFI. development authorities), Landuse standards – city size and classification types, standards for commercial, industrial (industrial area, estate, zones etc) open spaces (types, hierarchy and space standards), facilities and services.

Analysis techniques –Identification of planning units at different levels , analysis of spatial data (weightage index method, graphical method), aspect wise analysis, cross-tabular analysis and data tabulation and compilation techniques. Data presentation techniques – diagrams, graphs, cartograms, choropleth, choro-schematic, choro-chromatic, dot method to present level of development (spatial), density pattern and other types of planning analysis.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), Urban & Regional Development Plans Formulation and Implementation Guidelines, ITPI, New Delhi.
2. 2012. Shen Zhenjiang Shen. Geospatial Techniques In Urban Planning. Springer. Oxford
3. 2006. S.K. Kulshrestha, Dictionary of Urban and Regional Planning, Kalpaz Publications, Delhi.
4. 2005. K.R. Thooyavan, K.R., Human Settlements – A Planning Guide to Beginners, MA Publication, Chennai.
5. 1985. Saini & Mahavir, Urban Development Planning Strategies and Techniques, Central Electric Press, Delhi.

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GBL154: ELEMENTS OF GEOGRAPHY

Credits: 03 (L=2, T=1, U=0)

Definition and subject matter, main branches of Geography and their broad coverage, need and importance of geographic considerations in Planning. Physiographic regions and settlement patterns. Geological and hydrological features and their considerations in Planning.

Climate and its determinants and components, Climatic conditioning through planning and design; solar control and wind movement at site and building level. Form and structure of Human settlements and Buildings in warm, humid, hot, dry composite and upland climates (with special reference to India).

Special geographical regions and their planning considerations (e.g. seismic region, flood prone region, cyclone prone areas). Representation of geographical data; relief depiction methods (contours, hachure's and form lines), morph metric analysis (profiles, gradient and slope). Climatic maps and diagrams, geological maps and diagrams.

Suggested Readings:

1. 2012. D. Blig, J.Harm, P.Muller, J. Nilman, Geography realms, regions and concepts, Wiley and sons, Hoboken.
2. 2001. A. H. Strahler and A. N. Strahler. Modern Physical Geography (Fourth Edition), John Wiley and Sons, Inc.1., New York.
3. 1999. D. R. Khullar, D. R. Essentials of Practical Geography, New Academic Publishing Co, Jalandhar.
4. 1998. R. L. Singh and P.B. Singh. Elements of Practical Geography, Kalyani Publishers, New Delhi.
5. 1996. D.S. Lal, D. S. Climatology, Chaitanya Publishing House, Allahabad
6. 1978. H. Robinson, Biogeography, ECBS & Mac Donald and Evans, London.

Journals

1. The Journal of Geography, Taylor and Francis
2. Applied Geography, Elsevier

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GBU 155: SURVEY OF LOCALITY

Credits: 04 (L=0, T=0, U=8)

The purpose of the exercise is to train students in art of conducting surveys and preparing or updating a base maps of city or its part, understand the nature of different activities and preparation of survey questionnaire of data. The aim is to understand the physical, social, visual and environment aspects of an area and data presentation techniques. Following aspects are covered

- Site in relation to the city and surrounding landuse.
- Site inventory, topography, existing land use, site resources and physiographic conditions.
- Data collection –of following aspects: physical, socio-economic, physical and social infrastructure, traffic and transportation, building condition, housing,
- The study shall be suitably presented in form of a report illustrated with necessary drawings, maps charts, diagrams and photographs.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), Urban & Regional Development Plans Formulation and Implementation Guidelines, ITPI, New Delhi.
2. 1999. D.R. Khullar, Essentials of Practical Geography, New Academic Publishing Co., Jalandhar.
3. 1964. Monkhouse and Willinson, Maps and Diagrams, Methuen & Co., London.

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GBU 156: COMPUTER AIDED DESIGN (CAD)

Credits: 02 (L=0, T=0, U=4)

1. Setting up of a drawing – Coordinate system, Limits, Units, Precision, Lines, Poly-lines, Simple modification commands, Simple Dimensioning, Dtext.
2. Layers, Circles, Ellipse, Arc, Polygons, Spline, Advance modification commands.
3. Array, Hatching, Mtext, Advanced Dimensioning, Scale, Concepts of blocks and external referencing, Printing of drawing.

Introduction to 3D in AutoCad

Suggested Readings:

1. 2013. Moss Elise AutoCAD Architecture 2010 Fundamentals. Deep Publishers. New Delhi
2. 2010. George Omura. Mastering AutoCAD. BPB Publications. New Delhi.
3. 2009. Frazer. Understanding AutoCAD. Tata McGraw Hill. New York.
4. 2009. Joseph Goldenberg. AutoCAD Architecture 2008 – Comprehensive Tutorial. Gibbs Smith Publishers. US.
5. 2008. Paul F Aubin. Mastering AutoCAD Architecture. Academy Editions, London

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-II)
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PBL 131 पंचाघी - II (लानगी)

पT-कन EqpT पसक-

Credits: 2-0-0

- (I) 1. E`qm En`qm (s`b. virE`m is`G s`DU Eqy f. sih`rblr is`G, grl`n`nk dy w`hvrstl, E`l`m`qsr) iv`el`h`T- il Kykvl :
- (a) B`el vlr is`G
(E) p`l p`rn is`G
(e) p`l m`hn is`G
(kivq`-s`r, ivS`-vsq` k`iv-kl` , kvl)
2. p`j`l`bl Sbd bxqr: D`q`m`l , vD`qr (Eg`qr, ipC`qr, iv`al`p`q Eqy`p`-qr), sm`is |
- (II) 1. E`qm En`qm (s`b. virE`m is`G s`DU Eqy f. sih`rblr is`G, grl`n`nk dy w`hvrstl, E`l`m`qsr) iv`el`h`T il Kykvl :
- (a) E`l`m`q` p`l`qm
(E) f. hrB`j`n is`G
(e) iSv k`m`r bt`l`vl
(kivq`-s`r, ivS`-vsq` k`iv-kl` , kvl)
2. p`r`l`rcn` : kl`s iv`e 10 iviSE- (siBE`c`rk, D`rimk Eqy`r`j`nlqk) qy p`r`l`rcn` dy EiBE`s krV`axy|
- (III) 1. E`qm En`qm (s`b. virE`m is`G s`DU Eqy f. sih`rblr is`G, grl`n`nk dy w`hvrstl, E`l`m`qsr) iv`el`h`T il Kykvl :
- (a) f. j`sv`l`q is`G n`kl
(E) f. j`gq`r
(e) f. s`r`j`l`q p`qr
(s) p`S
(kivq`-s`r, ivS`-vsq` k`iv-kl` , kvl)
2. m`h`vryqyEK`x (EK`x qym`h`vr` k`S iv`e) 200 m`h`virE- Eqy100 EK`x- n`l`v`k- iv`e vrqx dy EiBE`s krV`axy (kl`s iv`e qyGr l`el)|

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(Under Credit Based Continuous Evaluation Grading System)

PBL-132: ਮੁੱਢਲੀ ਪੰਜਾਬੀ
(In lieu of Punjabi Compulsory)

Credits: 2-0-0

ਪਾਠ-ਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਸ਼ਬਦ-ਬਣਤਰ
ਸੰਯੁਕਤ ਅਤੇ ਮਿਸ਼ਰਤ ਸ਼ਬਦ
ਬਹੁ-ਉਚਾਰਖੰਡੀ ਸ਼ਬਦ
2. ਪੰਜਾਬੀ ਵਾਕ-ਬਣਤਰ
ਸਾਧਾਰਨ-ਵਾਕ : ਕਿਸਮਾਂ
ਸੰਯੁਕਤ-ਵਾਕ : ਕਿਸਮਾਂ
ਮਿਸ਼ਰਤ-ਵਾਕ : ਕਿਸਮਾਂ
3. ਪ੍ਰਕਾਰਜੀ ਪੰਜਾਬੀ
ਚਿੱਠੀ ਪੱਤਰ
ਪੈਰਾ ਰਚਨਾ
ਸੰਖੇਪ ਰਚਨਾ
ਅਖਾਣ ਅਤੇ ਮੁਹਾਵਰੇ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. ਪੰਜਾਬੀ ਸ਼ਬਦ-ਬਣਤਰ : ਸੰਯੁਕਤ ਸ਼ਬਦ; ਸਮਾਸੀ ਸ਼ਬਦ (ਜਿਵੇਂ ਲੋਕ ਸਭਾ); ਦੋਜਾਤੀ ਸ਼ਬਦ (ਜਿਵੇਂ ਕਾਲਾ ਸਿਆਹ); ਦੋਹਰੇ ਸ਼ਬਦ/ਦੁਹਰਰੁਕਤੀ (ਜਿਵੇਂ ਪੂੜ੍ਹ ਧਾੜ੍ਹ/ਭਰ ਭਰ), ਮਿਸ਼ਰਤ ਸ਼ਬਦਾਂ ਦੀ ਬਣਤਰ/ਸਿਰਜਨਾ; ਅਗੇਤਰਾਂ ਰਾਹੀਂ (ਜਿਵੇਂ ਉਪ ਭਾਸ਼ਾ), ਪਿਛੇਤਰਾਂ ਰਾਹੀਂ (ਜਿਵੇਂ ਰੰਗਲਾ), ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ-2: ਪੜਨਾਵੀ ਰੂਪ, ਕਿਰਿਆ/ਸਹਾਇਕ ਕਿਰਿਆ ਦੇ ਰੂਪ; ਨਿੱਤ ਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ-2: ਮਾਰਕੀਟ/ਬਾਜ਼ਾਰ, ਵਪਾਰ, ਧੰਦਿਆਂ ਨਾਲ ਸੰਬੰਧਿਤ।
2. ਪੰਜਾਬੀ ਵਾਕ-ਬਣਤਰ : ਕਰਤਾ ਕਰਮ ਕਿਰਿਆ; ਸਾਧਾਰਨ ਵਾਕ, ਬਿਆਨੀਆ, ਪ੍ਰਸ਼ਨਵਾਚਕ, ਆਗਿਆਵਾਚਕ, ਸੰਯੁਕਤ ਅਤੇ ਮਿਸ਼ਰਤ ਵਾਕਾਂ ਦੀਆਂ ਕਿਸਮਾਂ; ਸੁਤੰਤਰ ਅਤੇ ਅਧੀਨ ਉਪਵਾਕ; ਸਮਾਨ (ਤੇ/ਅਤੇ) ਅਤੇ ਅਧੀਨ (ਜੋ/ਕਿ) ਯੋਜਕਾਂ ਦੀ ਵਰਤੋਂ; ਪੰਜਾਬੀ ਵਾਕਾਂ ਦੀ ਵਰਤੋਂ : ਵਿਭਿੰਨ ਸਮਾਜਕ/ਸਭਿਆਚਾਰਕ ਪ੍ਰਸਥਿਤੀਆਂ ਦੇ ਅੰਤਰਗਤ; ਘਰ ਵਿਚ, ਬਾਜ਼ਾਰ ਵਿਚ, ਮੇਲੇ ਵਿਚ, ਸ਼ੋਪਿੰਗ ਮਾਲ/ਸਿਨੇਮੇ ਵਿਚ, ਵਿਆਹ ਵਿਚ, ਧਾਰਮਿਕ ਸਥਾਨਾਂ ਵਿਚ, ਦੋਸਤਾਂ ਨਾਲ ਆਦਿ।
3. ਇਸ ਯੂਨਿਟ ਵਿਚ ਚਿੱਠੀ ਪੱਤਰ (ਨਿੱਜੀ/ਦਫ਼ਤਰੀ/ਵਪਾਰਕ), ਪੈਰਾ ਰਚਨਾਂ, ਸੰਖੇਪ ਰਚਨਾ ਅਤੇ ਅਖਾਣ ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਰਤੋਂ ਰਾਹੀਂ ਵਿਦਿਆਰਥੀ ਦੀ ਭਾਸ਼ਾਈ ਯੋਗਤਾ ਨੂੰ ਪਰਖਿਆ ਜਾਵੇਗਾ।

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ENL 151: COMMUNICATIVE ENGLISH-II

Credits: 02 (L=2,T=0,U=0)

Objectives: To equip students with the skill of reading and writing dexterously. By the end of the course the students will be skilled in the art of expressing their ideas in short and long compositions, noting information effectively and summarizing and abstracting more efficiently.

Prescribed Text books:

1. *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition.
2. *The Written Word* by Vandana R. Singh, Oxford University Press, New Delhi.

Course Contents:

1. Reading and Comprehension Skills:

Students will be required to read and comprehend the essays in Unit 3 and 4 of the book *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition. They will be required to answer the questions given after each essay.

2. Writing Skills

Students will be required to learn Paragraph and Essay Writing and Note Making, Summarizing and Abstracting as in the book *The Written Word* by Vandana R. Singh, Oxford University Press, New Delhi.

Minor 1:

Syllabus to be covered:

1. Unit 3 from *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition.
2. ABC of Good notes, Sub dividing your Notes and Summarizing and abstracting included in the Chapter “Note Making, Summarizing and Abstracting” from *The Written Word*.

Suggested Paper Pattern:

1. Theoretical questions based on ABC of Good notes, Sub dividing your Notes and Summarizing and abstracting included in the Chapter “Note Making, Summarizing and Abstracting” *The Written Word* (8 marks).
2. Short answer type questions from Unit 3 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks).
3. Essay type question from Unit 3 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks).

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Minor 2:

Syllabus to be covered:

1. Abbreviations and Symbols and Note making in practice from the chapter “Note-Making, Summarizing and Abstracting in the book *The Written Word*
2. Unit-4 from the book *Making Connections: A Strategic Approach to Academic Reading* by Kenneth J. Pakenham, Second Edition.

Suggested Paper Pattern:

1. A practical question on Note making in practice “Note-Making, Summarizing and Abstracting” from the chapter the book *The Written Word* (8 marks)
2. Short answer type questions from Unit 4 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks)
3. Essay type question from Unit 2 of *Making Connections: A Strategic Approach to Academic Reading* (6 marks)

Suggested Paper Pattern for Major Exam:

1. Practical Question on Paragraph and Essay Writing as prescribed in *The Written Word* /1 out of 2 (10 marks)
2. Short answer type questions from Unit 3,4 of *Making Connections: A Strategic Approach to Academic Reading* (16 marks)
3. Essay type question from Unit 3,4 of *Making Connections: A Strategic Approach to Academic Reading* 1 out of 2 (10 marks)
4. Practical Question on Note Making from *The Written Word* (8 marks)
5. Theoretical Question(s) based on the two chapters from the book *The Written Word* (6 marks)

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SPL 221: PLANNING THEORY – II

Credits: 03 (L=2, T=1, U=0)

Chief characteristics of Comprehensive Rational Planning Model and implications for planning practice; Systemic change; Meaning, historical background and purposes of Advocacy Planning Model; Main features of Advocacy Planning Model; Relevance for planning practice.

Equity and its various definitions; Major components of the Equity Planning Model; Implications on the role of planners in planning practice. Defining the term political economy; Role of the state in planning; Contributions of David Harvey, Manuel Castells and others; Richard Foglesong and the property contradiction.

Defining functioning's and capabilities; Exploring relevance of Sen and Nussbaum's capabilities to planning; Role of planning and planners in enhancing capabilities of the poor; Capabilities perspective on slums and squatters; Feminist planning theory; Planning, caste and religion; Planning rights and responsibilities

Suggested Readings:

1. 2014. Ministry of Urban Planning, "Urban and Regional Development Plans Formulation & Implementation Guidelines" Volume – I, 2014
2. 2005. S. Susan Fainstein and J. Lisa Servon, "Gender and Planning A Reader", Rutgers University Press, London.
3. 1995. R. Ernest Alexander, "Approaches to Planning: Introducing Current Planning Theories, Concepts and Issues", Gordon and Breach Publishers.

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SPL 222: DEMOGRAPHY AND URBANIZATION

Credits: 03 (L=2, T=1, U=0)

Demography : definition and subject matter, relevance in Town & country planning, Demographic variables: fertility, mortality, migration; Census : its relevance in Urban & Regional Planning, Source of demographic data; population structure and composition - age sex composition, sex ratio, dependency ratio, child-woman ratio; measures of age-sex structure, age-sex pyramid, population composition and its relationship with Town Planning, population projections and their relevance in occupational structure Planning.

A brief history of urbanization in India ; urbanization and its social implications, Theories of urban growth including Concentric Zone Theory; Sector Theory; Multiple Nuclei Theory migration-causes and consequences of population movement; reasons and types of migration trends; methods of measuring volumes of migration; direct and indirect measures; effect of migration of composition of population.

Urbanization, industrialization and urban development; push and pull factors; migration trends and impacts on urban and rural development; Urbanization policy, basic issues in urbanization policy; role of national and state level policies; salient features of the report of the national commission of urbanization.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), Urban Development Plans Formulation and Implementation Guidelines, ITPI, New Delhi.
2. 2013. Sen, Joy . Sustainable urban planning. TERI Press, New Delhi.
3. 2013. Archer, Kevin. The city; the basics. Routledg, Oxon.
4. 2012. Dasgupta, Samir, ed. Urban Sociology., Dorling kindersley (India), New Delhi.
5. 2012. Dasgupta, Samir, ed. Social demography. Dorling Kindersley(India), New Delhi.
6. 2006. S.K. Kulshrestha, 'Dictionary of Urban and Regional Planning', Kalpaz Publications, Delhi
7. 2005. K.R. Thooyavan, K.R., Human Settlements – A Planning Guide to Beginners, MA Publication, Chennai.
8. 1972. L. Keeble, 'Principles & Practice of Town and Country Planning', the Estates Gazette Ltd., London.

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SPL 223: PLANNING FOR UTILITIES

Credits: 03 (L=2, T=1, U=0)

Utilities- Definition, terminologies and types; Historical perspectives of utilities; Significance of utilities in urban and regional planning; Sources of water: surface water, ground water; Quality of water – impurities and standards of water quality; Quantity of water – types of demand, forecasting population methods; Pumps – location considerations and Conveyance of water; Distribution network; Storage; Norms and Standards; Water treatment processes – Plain Sedimentation, Sedimentation with coagulation, Filtration, Disinfection and Softening .

Concept of hydrology, Precipitation, Rain and Snowfall; Drainage system: determination of intensity of rainfall – frequency relationship, run off and runoff losses; factors affecting storm sewage, determination of maximum runoff of a locality; Quantity of storm sewage; Rain water harvesting; Reuse and recycling of water

Definitions of common terms in sanitary engineering; Systems of sanitation; Methods of collection; Quantity of sanitary sewage, Design of sewers – velocity of flow, sewer grades, Drains and sewers – open drains, drains section; Pumps – location considerations; Characteristics of sewage; Norms and standards; methods of sewage disposal and treatment processes – Filtration, activated sludge process, Screening and Skimming, Sedimentation, other methods; Solid waste generation and disposal

Suggested Readings:

1. 1999. CPHEEO, “Manual of Sewage and Sewage Treatment”, Ministry of Housing & Urban Development, Government of India.
2. 2000. CPHEEO, “Manual of Solid Waste Management System”, Ministry of Housing & Urban Development, Government of India.
3. 2002. G.S. Birdie and JS. Birdie,” Water supply and Sanitary Engineering” Dhanpat Rai Publishers, New Delhi,
4. 2010. B C Punmia, “Waste Water Engineering”, Laxmi Publications, New Delhi
5. 2010. Mackenzie Davis, “Water and Waste Water Engineering,” McGraw Hill education,
6. 2013. CPHEEO, “Manual of Water Supply in Treatment”, Ministry of Housing & Urban Development, Government of India

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SPL 224: TECHNIQUES OF PLANNING- II

Credits: 03 (L=2, T=1, U=0)

Planning approaches – need, importance, objectives, scope of Comprehensive Planning (Master plan, District plan and any other), Perspective Planning, Structure Planning, Action Area Planning, Advocacy Planning and Spatial Planning. City planning – meaning and significance; Dynamism in City planning process; Team approach in City and Regional Planning;

Contemporary city, its nature and structure; City as an organism, physical entity, social entity and political entity; Principles of City planning. Concepts of density; urban structure, neighbourhood planning, development controls, urban-rural relationships, norms and standards, Floor area ratio; Floor space index; Site & plot coverage, third dimension, form and pattern of development.

Site planning defined; Site planning process, site selection – role of environmental, aesthetic and functional aspects; site analysis, site suitability and usability; site characteristics. Principles and considerations for planning the residential, commercial, industrial, institutional, transport, recreational and cultural sites; Related norms and standards; case studies.

Suggested Readings:

1. 2014. Ministry of Urban Affairs and Employment, URDPFI Guidelines, Government of India, New Delhi.
2. 2012. Rafael Cuesta, Christine Sarris, Paola Signoretta, J.C Moughtin. Urban Design: Methods & Techniques. Routledge, Newyork
3. 2005. S.C. Rangwala,S.C., Town Planning, Charotar Publication House, Anand.
4. 2002. Majid Hussein, Fundamentals of Physical. Geography, Second Edition, Rawat Publications, New Delhi.
5. 1985. Partap Rao, Urban Theory and Practice, CBS Publication and Distributors, New Delhi.
6. 1974. Kruecreberg Donald A, Urban Planning Analysis Methods and Models. John Wiley & Sons Inc, Newyork.
7. 1972. L. Keeble, L., Principles and Practice of Town and Country Planning, The Estate Gazette Ltd, London.
8. 1969. Gallion and Eismer, The Urban Patterns, Affiliated East-West Pvt. Ltd, New Delhi.

SPL 225: SURVEYING

Credits: 03 (L=2, T=1, U=0)

Surveying - Definition, Types, Plain and Geodetic Surveying, Principal of Surveying, Precision and Accuracy in Surveying. Chain Surveying: Definition and classification of surveying principles of surveying, Different types and Instruments uses & their functions. Ranging, offsetting, corrections to be applied. Obstacles in chaining. Linear Measurements with Angles: Use of Compass. Bearing system and conversion, Use of prismatic compass.

Plane table Surveying: Study' and' use of' plane table for, surveying, equipment's, used in plane orientation of plane table in field. Different methods of plane tabling. Advantages of plane tabling. Theodolite Surveying: terms used, components of Theodolite, Use of instrument for measurements of Angles.

Levelling: Definition of various terms, Importance of Levelling, Dumpy level components and functioning, L-sectioning, X-sectioning,- preparation of profile and its relevance in Planning. Use of Dumpy level and preparation of L-section. Measurements through electronic instruments, Use and demonstration of TOTAL STATION. Use of EDM. Role of surveying in Preparation of Digital Data. Computation of areas using the surveying data, Imageries and Computation of areas.

Suggested Reading:

1. 2009. Carhart, Daniel, A Treatise on Plane Surveying, Bibliolife, Charleston
2. 2005. Punmia, B.C., Surveying, Luxmi Publication Pvt. Ltd., New Delhi
3. 2004. Duggal, S.K., Surveying, Tata McGraw-Hill, New Delhi
4. 1998. Kouchher, C.L., A Text Book of Surveying, Katson Publishing House, Ludhiana
5. 1991. Rangawala, S.C., Surveying and Leveling, Charotar Publishing House, New Delhi
6. 1998. Sharma, J.L., A Text Book of Surveying, CBS, New Delhi

Note: Examination will be conducted as per Credit Scheme (Theory).

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SPU 226: RESIDENTIAL SITE PLANNING

Credits: 04 (L=0, T=0, U=8)

Each student or group thereof are required to prepare a site plan of a residential area. They are required to identify the various components to be provided within the site in the light of “Target Group” and surrounding development analysis. The students are further required to identify characteristics and users of each of such components, their inter-relationships and most appropriate locations.

The students are required to do preliminary site investigation like topography, soil characteristics, slope, physiographic conditions, existing land use and analysis, site suitability for development, site in relation to the city and surrounding land use.

Various aspects to be covered in this exercise are: literature review encompassing definitions, concepts, components, development of objectives, site planning and design considerations, norms and standards; The students are required to collect relevant data and work out requirements for the given site and prepare various plans, i.e., layout plans, circulation plan, utility plan and landscape plan etc.

The students are expected to show creativity in their layouts while keeping norms and standards, target group, relationship of the site with surroundings and physical constraints in considerations.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), Urban & Regional Development Plans Formulation and Implementation Guidelines, ITPI, New Delhi.
2. 2013. Bauer, Kurt W. City planning; for civil engineers, environmental engineers and surveyors. CRC Press, Boca Raton.
3. 1964. Monkhouse and Willinson, Maps and Diagrams, Methuen & Co., London.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-III)
(Under Credit Based Continuous Evaluation Grading System)

SPU 227: GEO-INFORMATICS FOR PLANNING

Credits: 02 (L=0, T=0, U=5)

The students are required to understand the basic concepts of GIS and to represent geographical features in GIS. Concept of digital maps and its advantages, raster and vector maps, spatial and attributes data, various types of spatial and non-spatial analysis in urban planning using GIS. The students are required to learn about various data input methods in the ArcView of ArcGIS software, which includes geo-referencing, digitization, query building, spatial and non-spatial analysis, and final production of maps using GIS. For the purpose of digitization and data existing data source may be used. Exercises undertaken by the students will be submitted in the form of soft copy of problems, hard copy of some problems, and reports / assignments.

Suggested Readings:

1. 2015. ESRI. ESRI MAP Book 2015. ESRI Press California.
2. 2009. Roger F. Tomlinson Thinking about GIS: Geographic Information System Planning for Managers, ESRI Press California.
3. 2003. Martin P. Ralphs, Peter Wyatt. GIS in Land and Property Management. SPON Press. New York
4. 2000. Said Easa, Yupo Chan. Urban Planning and Development Applications of GIS. American Society of Civil Engineers,

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ESL 220 Environmental Studies (Compulsory Paper)

Credit 3-0-0

1. **The Multidisciplinary Nature of Environmental Studies:** Definition, scope & its importance, Need for public awareness.
2. **Natural Resources:** Natural resources and associated problems.
 - a) **Forest Resources:** Use of over exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
 - b) **Water Resources:** Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
 - c) **Mineral Resources:** Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
 - d) **Food Resources:** World food problems, change caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problem, salinity, case studies.
 - e) **Energy Resources:** Growing of energy needs, renewable and non-renewable energy resources, use of alternate energy sources, case studies.
 - f) **Land Resources:** Land as a resource, land degradation, soil erosion and desertification.
 - g) Role of an individual in conservation of natural resources, Equitable use of resources for sustainable lifestyles.
3. **Ecosystem:**
 Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, Ecological succession, Food chains, food webs and ecological pyramids.
 Introduction, types, characteristic features, structure and function of the following ecosystems:
 - a. Forest ecosystem
 - b. Grassland ecosystem
 - c. Desert ecosystem
 - d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).
4. **Biodiversity and its Conservation:**
Definition: Genetic, species and ecosystem diversity, Biogeographical classification of India.
Value of Biodiversity: Consumptive use; productive use, social, ethical, aesthetic and option values.
 Biodiversity of global, National and local levels, India as mega-diversity nation "Hot-spots of biodiversity."
Threats to Biodiversity: Habitat loss, poaching of wild life, man wildlife conflicts
 Endangered and endemic species of India.
Conservation of Biodiversity: In situ and Ex-situ conservation of biodiversity.

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5. Environmental Pollution:

Definition, Causes, effects and control measures of:

- a) Air Pollution
- b) Water Pollution
- c) Soil Pollution
- d) Marine Pollution
- e) Noise Pollution
- f) Thermal Pollution
- g) Nuclear Hazards

Solid Waste Management: Causes, effects and control measures of urban and industrial wastes.

Role of an individual in prevention of pollution.

Pollution case studies Disaster Management: Floods, Earthquake, Cyclone and Landslides

6. Social Issues and Environment:

- * From unsustainable to sustainable development
- * Urban problems related to energy
- * Water conservation, rain water harvesting, watershed management
- * Resettlement and rehabilitation of people; its problems and concerns. Case studies
- * Environmental ethics: Issues and possible solutions.
- * Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- * Wasteland reclamation
- * Consumerism and waste products
- * Environmental Protection Act
- * Air (prevention and Control of Pollution) Act
- * Water (prevention and Control of Pollution) Act
- * Wildlife Protection Act
- * Forest Conservation Act
- * Issues involved in enforcement of environmental legislation
- * Public awareness

7. Human Population and the Environment

- * Population growth, variation among nations
- * Population explosion-Family welfare programme
- * Environment and human health
- * Human rights
- * Value education
- * HIV / AIDS
- * Women and child welfare
- * Role of information technology in environment: and human health
- * Case studies
- * **Road Safety Rules & Regulations:** Use of Safety Devices while Driving, Do's and Don'ts while Driving, Role of Citizens or Public Participation, Responsibilities of Public under Motor Vehicle Act, 1988, General Traffic Signs
- * **Accident & First Aid:** First Aid to Road Accident Victims, Calling Patrolling Police & Ambulance

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8. National Service Scheme

- **Introduction and Basic Concepts of NSS:** History, philosophy, aims & objectives of NSS; Emblem, flag, motto, song, badge etc.; Organization structure, roles and responsibilities of various NSS functionaries.
- **Health, Hygiene & Sanitation:** Definition, needs and scope of health education; Food and Nutrition; Safe drinking water, water borne diseases and sanitation (Swachh Bharat Abhiyan); National Health Programme; Reproductive health.
- **Civil/Self Defense:** Civil defense services, aims and objectives of civil defense; Needs for self defense training.

9. Field Work: Visit to a local area to document environmental assets—river / forest / grassland / hill / mountain. Visit to a local polluted site—Urban / Rural / Industrial / Agricultural. Study of common plants, insects, birds. Study of simple ecosystems—pond, river, hill slopes, etc. (Field work equal to 5 lecture hours)

References:

1. Agarwal, K. C. 2001. Environmental Biology, Nidhi Publications Ltd. Bikaner.
2. Bharucha, E. 2005. Textbook of Environmental Studies, Universities Press, Hyderabad.
3. Bharucha, E. 2004. The Biodiversity of India, Mapin Publishing Pvt. Ltd. Ahmedabad.
4. Brunner, R. C. 1989. Hazardous Waste Incineration, McGraw Hill Inc. New York.
5. Clark, R. S. 2000. Marine Pollution, Clarendon Press Oxford.
6. Cunningham, W. P., Cooper, T. H., Gorhani, E. & Hepworth, M. T. 2001. Environmental Encyclopedia, Jaico Publications House, Mumbai.
7. De, A. K. 1989. Environmental Chemistry, Wiley Eastern Ltd.
8. Down to Earth, Centre for Science and Environment, New Delhi.
9. Hawkins, R. E. 2000. Encyclopedia of Indian Natural History, Bombay Natural History Society.
10. Heywood, V. H & Waston, R. T. 1995. Global Biodiversity Assessment, Cambridge House, Delhi.
11. Jadhav, H. & Bhosale, V. M. 1995. Environmental Protection and Laws. Himalaya Pub.
12. Joseph, K. and Nagendran, R. 2004. Essentials of Environmental Studies, Pearson Education (Singapore) Pte. Ltd., Delhi.
13. Kaushik, A. & Kaushik, C. P. 2004. Perspective in Environmental Studies, New Age International (P) Ltd, New Delhi.
14. Miller, T. G. Jr. 2000. Environmental Science, Wadsworth Publishing Co.
15. Odum, E. P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA.
16. Rajagopalan, R. 2005. Environmental Studies from Crisis to Cure. Oxford University Press, New Delhi.
17. Sharma, B. K. 2001. Environmental Chemistry. Geol Publishing House, Meerut.
18. Sharma, J. P. 2004. Comprehensive Environmental Studies, Laxmi Publications (P) Ltd, New Delhi.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-III)
(Under Credit Based Continuous Evaluation Grading System)

19. Sharma, P. D. 2005. Ecology and Environment, Rastogi Publications, Meerut.
20. Subramanian, V. 2002. A Text Book in Environmental Sciences, Narosa Publishing House, New Delhi.
21. Survey of the Environment. 2005. The Hindu.
22. Tiwari, S. C. 2003. Concepts of Modern Ecology, Bishen Singh Mahendra Pal Singh, Dehra Dun.
23. Townsend, C., Harper, J. and Michael, B. 2001. Essentials of Ecology, Blackwell Science.
24. Booklet on Safe Driving. Sukhmani Society (Suvidha Centre), District Court Complex, Amritsar

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-IV)
(Under Credit Based Continuous Evaluation Grading System)

SPL 271: REAL ESTATE

Credits: 03 (L=2, T=1, U=0)

Definition of Real Estate and its importance in Urban & Regional Planning, Characteristics of Real Estate, Land Market and its type, Land supply & Demand. Laws and Regulations related to ownership and tenancy, pricing, Transaction.

Landuse and development control, Land Taxation, Land record and information system. Land acquisition and Urban Ceiling, Land Pooling, role of public, private, land value and land speculation.

Effects of planning, legal financial and administrative measures on land value. Betterment and worsenment. Valuation of Urban property, Land rent, Urban Land Policy, its contents, objectives instruments for its implementation.

Suggested Readings:

1. 2008 (Ed.). J Richard Arnott, and P Daniel. A companion to Urban Economics. Blackwell Publishing. U.K.
2. 2006. John Mcdonald and McMillen Danial. Urban Economics and Real Estate: Theory and Policy. Blackwell Publishing, U.K.
3. 2001. John Rateliffel Stubbs and Shepard Mark Shepherd. Urban Planning and Real Estate Development (Natural and Built Environment). Spon Press. New York.
4. 1992, Darlodwen Ralicuff. Land Economics. Michigan Publishers. New York.
5. 1985. E.W. Alan. Urban Economics – An Introduction. Blackwell Publication. New York.
6. 1982. W. Lean. Aspects of Landuse Planning. Gonthic Publications. New Fersy.
7. 1980. Barlowe Raleigh. Land Resource Economics. Prentice Hall Publication, New Jersey.
8. 1977. B.N. Paul. Urban Land Economics. The McMillan Press, London.
9. 1965. Report of the Committee of Urban Land Policy. Ministry of Health. Govt. of India.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-IV)
(Under Credit Based Continuous Evaluation Grading System)

SPL 272: TRANSPORTATION PLANNING – I

Credits: 03 (L=2, T=1, U=0)

Definition, scope and components of transportation planning; Integration of components of transportation; Importance of transport development in economic, political and social development; Traffic and travel characteristics; Relation of traffic volume, concentration and speed; Traffic as a function of land use; Significance of road user's behaviour and vehicular characteristics.

Hierarchy of roads – regional and urban; Geometric design of roads – cross and longitudinal sections and their components; Geometric design standards; Design considerations and guidelines; Capacity and level of service of road; Intersections - classification, design and controls.

Traffic surveys - volume count, origin-destination, speed and delay, parking and accidents surveys - their need, design of proforma, methods of conducting surveys, analysis and interpretation; Highway design capacity - concept of PCU and level of service, factors affecting capacity and level of service, capacity of rural and urban roads and capacity at intersections; Traffic controls and regulations – design considerations and standards for signs, markings and signals.

Suggested Readings:

1. 2014. L. R. Kadiyali. Traffic Engineering and Transport Planning. Khanna Publishers. New Delhi.
2. 2013. Barry Hutton. Planning Sustainable Transport. Routledge. Taylor & Francis Books India Pvt Ltd. New Delhi
3. 2002. James H. Banks. Introduction to Transportation Engineering. McGraw-Hill. Boston.
4. 2002. C. J. Khisty and B. K. Lall. Transportation Engineering – An Introduction. Prentice Hall of India Pvt. Ltd.
5. 2001. C.S. Papacostas & P.D. Prevedouros. Transportation Engineering and Planning. Prentice-Hall. New York.
6. 1990. IRC:106. Guidelines for Capacity of Urban Roads in Plain Areas. Indian Road Congress. New Delhi.
7. 1985. IRC:93. Guidelines on Design and Installation of Road Traffic Signals. Indian Road Congress. New Delhi.
8. 1985. IRC:92. Guidelines for the Design of Interchanges in Urban Areas. Indian Road Congress. New Delhi.
9. 1983. IRC:86. Geometric Design Standards for Urban Roads in Plains. Indian Road Congress. New Delhi.
10. 1977. IRC:69. Space Standards for Roads in Urban Areas. Indian Road Congress. New Delhi.
11. 1976. IRC:65. Recommended Practice for Traffic Rotaries. Indian Road Congress. New Delhi.
12. 1973. IRC:SP:12. Tentative Recommendations on the Provision of Parking Spaces for Urban Areas. Indian Road Congress. New Delhi.

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SPL 273: LAND RECORD & INFORMATION SYSTEM

Credits: 03 (L=2, T=1, U=0)

Classification of information and data; Information collection - traditional methods, drawbacks, need for alternative technology; Topographical maps – sources, Survey of India (SOI) specifications, Study of SOI grids; Traditional Measurement units, Karam and Acre conversion, Open series maps Land records and Khasra maps; its relevance in Planning. Land records - shajra plan, revenue record, jamabandi, intekaal. Terminologies related to land (banjar, banjar qudim, gair mumkin, chahi, etc).

Aerial photography - concepts, types of aerial photography survey, elements of photo interpretation, photo-grammetry- thermal photography, sources, costs. Applications of aerial photography - physiographical analysis, calculation of heights, landuse studies, residential densities, networks, areas prone to flooding, encroachments, open spaces, vegetation covers, development controls, site selection, etc.; Small format aerial photography and its application.

Remote Sensing - electromagnetic radiation, spectral signatures, satellite imageries, false colour composite (FCC), thermal imagery, types of sensors used; image interpretation; Image processing; Sources of satellite imageries, costs. Application of satellite imageries - broad land use; residential types, open spaces, vegetation covers, networks, urban growth and fringe areas, water tables.

Suggested Readings:

1. 2005. Wajahat, Habibullah, “Computerisation of Land Records”, Sage Publishers, New Delhi.
2. 2005. National Map Policy, Survey of India, Dehradun.
3. 1990. Haryana Land Records Manual , Director, Land Records Department, Haryana.
4. Survey of India Manual of Maps
5. Census of India : Directory
6. National Sample Survey Organisation
7. Land record manual
8. Settlement manual

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SPU 274: TRANSPORTATION PLAN

Credits: 02 (L=0, T=0, U=5)

Surveys relating to transportation aspects will be carried out: traffic volume survey, speed and delay studies, parking studies, pedestrian studies, road geometrics and road components, rotaries and signalised intersections.

Analysis of the data and presentation of the same through scale drawings and written documents; design of road sections, road junctions and rotaries. Preparation of area traffic circulation plan by studying the existing land use, existing circulation pattern, geometric design, and level of services provided by the networks and traffic management measures.

Suggested Readings

1. 2014. L. R. Kadiyali. Traffic Engineering and Transport Planning. Khanna Publishers. New Delhi.
2. 2002. James H. Banks. Introduction to Transportation Engineering. McGraw-Hill. Boston.
3. 2002. C. J. Khisty and B. K. Lall. Transportation Engineering – An Introduction. Prentice Hall of India Pvt. Ltd.
4. 2001. C.S. Papacostas & P.D. Prevedouros. Transportation Engineering and Planning. Prentice-Hall. New York.
5. 1990. IRC:106. Guidelines for Capacity of Urban Roads in Plain Areas. Indian Road Congress. New Delhi.
6. 1985. IRC:93. Guidelines on Design and Installation of Road Traffic Signals. Indian Road Congress. New Delhi.
7. 1985. IRC:92. Guidelines for the Design of Interchanges in Urban Areas. Indian Road Congress. New Delhi.
8. 1983. IRC:86. Geometric Design Standards for Urban Roads in Plains. Indian Road Congress. New Delhi.
9. 1977. IRC:69. Space Standards for Roads in Urban Areas. Indian Road Congress. New Delhi.
10. 1976. IRC:65. Recommended Practice for Traffic Rotaries. Indian Road Congress. New Delhi.
11. 1973. IRC:SP:12. Tentative Recommendations on the Provision of Parking Spaces for Urban Areas. Indian Road Congress. New Delhi.

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SPU 275: STUDY OF TOWN

Credits: 04 (L=0, T=0, U=8)

Students shall be required to undertake the study of an urban area for purposes of preparing its Master Plan/development plan. This exercise therefore offers an opportunity to the students for learning the processes involved in the collection and analysis of data at the town level comprehensively. The study thus involves the collection and analysis of data regarding each and every aspect related with the establishment, nature & status and functioning of the town including historical evolution, regional setting, landuse, physical setting, socio-economic infrastructure, energy & environment, housing, tourism, urban design, heritage, legal, administrative & financial aspects.

The study so conducted shall be submitted in form of a detailed report illustrated with suitable maps, charts, sketches, photographs etc. underlining the major issues related with the planned growth and development of the town.

Suggested Readings

1. 2013. Somik Lall, Planning, connecting and financing cities, World Bank, Washington DC.
2. 2012. Helms,G, Towards safe city centres: remaking the spaces of an old industrial city, Ashgate, Aldershot.
3. 2012. T.Campbell, Beyond smart cities: how cities network, learn and innovate, Earthscan, N.York.
4. 2010. R.A.Venugopal,State of Urban services in Indian cities, Oxford University Press, N.delhi.
5. 2009. A.Latham, Key concepts in Urban Geography, Sage, London.

Recommended Journals

1. Spatio-Economic Development Record
2. ITPI Journal, ITPI
3. Cities, Elsevier
4. Third World Planning Review, Liverpool University Press
5. Journal of Urban Studies, Sage.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-IV)
(Under Credit Based Continuous Evaluation Grading System)

SPL 276: SPECIFICATIONS, ESTIMATION AND VALUATION (Elective I)

Credits: 03 (L=2, T=1, U=0)

Definition, Scope and Importance of Estimation, Units, Method of Estimating, Items of Work in a Building, Units of Measurements and Payments for Various Items of Work, Methods of Building Estimate, Building Estimate Problems for one or two Room Buildings, Types of Estimates: Preliminary, Plinth Area, Cube Rate, Approximate Quantity, Detailed, Revised, Supplementary, Repair/Maintenance Estimates; Contingencies, Administrative Approval, Quantity Survey

Concept of Analysis of Rates, Overhead Cost, Task Out-Turn, Labour Requirement, Problems of Analysis of Rates; Specifications: Concepts, General vs. Detailed Specifications, Specifications for Earthwork, Brickwork in Wall, Cement Concrete, RCC, Cement Concrete Floor, White Washing, Water Supply Network, Sewerage Network, Horticulture/Landscaping, Roads

Concept of Value and Valuation, Purpose of Valuation, Income vs. Expenditure, Various Types of Values of a Building: Scrap Value, Salvage Value, Market Value, Book Value, Rateable Value, Capitalized Value, Year's Purchase, Annuity, Sinking Fund, Depreciation, Obsolescence, Methods of Valuation of a Building, Fixation of Rent, Principles of Residential Building and Colony Planning.

Suggested Readings:

1. 2014. B.N. Dutta, Estimating and Costing in Civil Engineering, UBS Publishers' Distributors Ltd., New Delhi.
2. 2010. G.S. Birdie, and J.S. Birdie, Water Supply and Sanitary Engineering, Dhanpat Rai Publishing Company, New Delhi.
3. 2004. Gurcharan Singh, Jagdish Singh, Estimating, Costing & Valuation, Standard Publishers, Delhi.
4. 2004. R.S. Kshirsagar, Sewerage and Sewerage Treatment Plant, A.K. Publications, New Delhi.
5. 1993. B.C. Punmia, Building Construction, Laxmi Publications Pvt. Ltd, New Delhi.
6. 1987. Public Works Department, Common Schedule of Rate, Government of Punjab – Amendments made in 2008.
7. 1976. William J Hanburg, Estimating Building Construction; Quantity Surveying, Englewood Cliffs, Prentice Hall, U.K.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-IV)
(Under Credit Based Continuous Evaluation Grading System)

SPL 277: MUNICIPAL SERVICES MANAGEMENT (Elective I)

Credits: 03 (L=2, T=1, U=0)

Urban growth – Municipal management – Administrative framework –Present scenario of various services and their management in ULBs – Current practices and deficiencies in water supply, SWM, Sewerage

Institutional aspects - Governmental organization – Central and State governmental agencies – Non-governmental organization – NGOs – CBOs – concepts – scope – methods and application in various municipal services – Joint venture of Community and ULBs – Role of rag pickers – Public awareness

Financial aspects -Financing of water supply, sewerage and SWM projects – assessment of finance – Financial support of Central, State government and other financial institutions – Pricing of Municipal services – Cost recovery framework – SWM project evaluation techniques

Suggested Readings:

1. 2014. Alexander Henderson, Municipal Shared Services and Consolidation: A Public Solutions Handbook (The Public Solutions Handbook Series), Routledge
2. 2007. K Aswathaappa, Human Resource Management, Mc – Graw Hill company, Third edition
3. 2007. Annevelise Venter. Municipal Management: Serving the people, Juta and company Ltd.
4. 2006. Rajeev Narayan, Human Resources Development in Urban Administration , Serials publication, New Delhi
5. 2006. D.L. Craythorne, Municipal Administration Handbook, Juta and Company Ltd.
6. 2003. Archana Ghose, Urban Environment Management. Local government and community action, Concept publishing company, New Delhi.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-IV)
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SPL 278: SOCIOLOGY OF SETTLEMENTS (Elective II)

Credits: 03 (L=2, T=1, U=0)

Sociology as a science; Applied sociology, Functionalist perspective, Conflict perspective, Internationalist perspective; Culture of space and cultural ecology; Social structure and social control; Stratification and social inequality;

Family, kinship pattern and authority; Religion as social work and significance in planning; Voluntary associations (identifying NGOs and involving them as partners of development, operational issues); Groups (primary, secondary and reference groups)

Resettlement and rehabilitation; Neighbourhood pattern and development strategy; Rural and urban issues; Community based and workshop based methods; Gender and age : implications for spatial planning.

Suggested Readings:

1. 2015. Richard T. LeGates, Frederic Stout (Editors).The City Reader. 6th Edition
Routledge Inc. UK
2. 2015. Ray Hutchison, Mark Gottdiener, Michael T. Ryan The New Urban Sociology.(5th
Edition) Perseus Books Group. Boulder
3. 2014. Daniel Joseph Monti, Michael Ian Borer, Lyn C. Macgregor. Urban People and
Places: The Sociology of Cities, Suburbs, and Towns. SAGE Publications,
4. 2012. John J. Macionis, Vincent N. Parrillo. Cities and Urban Life. Pearson Education,
5. 2010. William G. Flanagan Urban Sociology: Images and Structure. (5th Edition)
Rowman & Littlefield. London
6. 2002. N. Jayapalan. Urban Sociology. Atlantic Publishers & Distributors, New Delhi

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-IV)
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SPL 279: SUSTAINABLE URBAN DEVELOPMENT (Elective II)

Credits: 03 (L=2, T=1, U=0)

Changing perspectives in man-environment relationship with focus on issues of population, urbanization, resource depletion and pollution; limits to growth vis-a-vis sustainable economy; growth and environmental imperatives of developing vs. developed countries; definitions, concepts and parameters in sustainable development with particular reference to Brundtland Commission, Agenda 21, Eco-City approach, etc.

Application of ecological principles in sustainability: energy and resource cycles, food webs, ecological pyramids and evolution and succession of natural ecosystems; Carrying Capacity based planning: concept, parameters and indicator measures, models and case studies in urban and regional development; Environmental Impact and Strategic Environmental Assessment for urban areas; Ecological Footprint Analysis of cities; Sustainable Lifestyle Assessment and behavioral modifications at household levels.

Urban interference in hydrological cycle, with particular reference to water pollution, water resources, drainage and natural ecosystems; urban water treatment, recycling and harvesting; use of non-conventional energy sources in urban development.

Suggested Readings:

1. 2013. Kent E. Portney, Taking Sustainable cities seriously, economic development, the quality of life in American cities , MIT
2. 2005. E. Bharucha. Textbook of Environmental Studies, Universities Press, Hyderabad.
3. 2004. E Bharucha , The Biodiversity of India, Mapin Publishing Pvt. Ltd. Ahmadabad.
4. 2004. Kaushik& Kaushik,. Perspective in Environmental Studies, New Age International (P) Ltd, New Delhi.
5. 2001. K.C. Agarwal, Environmental Biology, Nidhi Publications Ltd. Bikaner.
7. 2001. Cunningham, W. P., Cooper, T. H., Gorhani, E. & Hepworth. Environmental Encyclopaedia, Jaico Publications House, Mumbai
8. 2000. Hawkins, R. E. 2000. Encyclopaedia of Indian Natural History, Bombay Natural History Society.
9. 1995. Heywood, V. H & Waston, R. T. 1995. Global Biodiversity Assessment, Cambridge House, Delhi.

Journal

1. .Down to Earth, Centre for Science and Environment, New Delhi.

Bachelor of Technology (B. Tech.) (Urban & Regional Planning) (Semester-V)
(Under Credit Based Continuous Evaluation Grading System)

SPL 311: TRANSPORTATION PLANNING-II

Credits: 03 (L=2, T=1, U=0)

Meaning, scope and objectives of transportation planning and its importance in urban and regional planning; Transportation and land use integration; Trip generation, distribution and assignment; Norms and considerations for bus and truck terminals. Transportation planning process- stages and surveys; Meaning, scope, objectives, process and surveys for comprehensive traffic and transportation plan and transport system management plan.

Urban transport policy-objectives and provisions. Urban transport systems—meaning, types and pre-requisites; Urban transport system and urban structure; Characteristics of multi model transport system including bus service, LRTS, MRTS and intermediate public transport; City size and sustainable transport options. Regional transport systems – meaning, types, characteristics; Road, Rail, Air, Water.

Regional transport and spatial planning & development; Objectives and provisions for transportation in National Five Year Plans with special focus on 11th Five Year Plan. Transportation planning policies and guidelines for vulnerable - pedestrians, cyclists and handicaps; Road safety and transport environment – issues and guidelines; Organizational and financial mechanism for transportation; Motor Vehicle Act.

Suggested Readings:

1. 2015. Jeremy Mattson Associate. Rural Transit Fact Book 2015. Small Urban and Rural Transit Center. Upper Great Plains Transportation Institute. North Dakota State University Fargo. NDSURLC 15-001.
2. 2015. John Neff and Matthew Dickens. Public Transportation Fact Book. American Public Transportation Association. Washington.
3. 2014. L. R. Kadiyali. Traffic Engineering and Transport Planning. Khanna Publishers. New Delhi.
4. 2014. Urban Transport Policy (Proposed). Ministry of Surface Transport. Govt. of India. New Delhi.
5. 2010. Rohit Baluja. Road Traffic Legislation. Institute of Road Traffic Education. New Delhi.
6. 2006. Urban Transport Policy. Ministry of Surface Transport. Govt. of India. New Delhi.
7. 2004. Thamizh Arasan V. Transportation Systems Planning and Operation. Allied Publishers Pvt. Ltd. Chennai.
8. 2002. Arun Kanda et. al. Transportation Systems: Status and Directions. Phoenix Publishing House Pvt. Ltd. New Delhi.
9. 2001. Guidelines on Low-cost Traffic Management Techniques for Urban Areas. Indian Roads Congress.
10. 2001. Road Development Plan Vision: 2021. Indian Roads Congress. New Delhi.
11. 1988. Motor Vehicle Act. Govt. of India. New Delhi.
12. Five Year Plans. Planning Commission. Government of India.
13. Indian Journal of Transport Management. CIRT. Pune.
14. Indian Highways (Journals). Indian Road Congress. New Delhi.

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SPL 312: PLANNING LEGISLATION

Credits: 03 (L=2, T=1, U=0)

Definition of Law/Legislation, ordinance, bill, act, regulations and bye-laws; significance of law and its relationship to planning; Source of law; Legislative competence of State and Central legislatures; eminent domain; Property rights relating to ownership and use of land under the Constitution; Planning Legislation: meaning, significance and evolution of planning legislation in India.

Introduction, scope and relevance of various laws and acts relevant to planning such as Model Town and Country Planning Act, The Punjab Regional and Town Planning and Development Act, The Punjab District Planning Committees Act, The Punjab Municipal Corporation Act, The Punjab Town Improvement Act, The Punjab Periphery Control Act, The Punjab Development of Damaged Areas Act, 73rd and 74th Constitution Amendment Acts.

Introduction to Land Acquisition Act, Historical background, need, advantages, limitations; Relevance in today's context; Environment Legislation: objectives and contents of acts concerning with pollution of water and air, protection of environment, protection of forests and wild life, Coastal Regulation Zone; Case studies highlighting nature of contention, parties in dispute and the decisions in specific planning dispute.

Suggested Readings:

1. 2014. Mott. Macdonald. Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines. MoUD, New Delhi.
2. 2012. Ministry of Law and Justice, Govt. of India, The Constitution of India, New Delhi.
3. 2009. B.S. Chawla, Punjab Urban Development Acts and Rules. Chawla Publication Pvt. Ltd., Chandigarh.
4. 2008. S. Shastri, Environmental Law. New Delhi: Eastern Book company.
5. 2008. B. S. Chawla, The Punjab Municipal Corporation Act, 1976. Chandigarh: Chawla Publications (P) Ltd.
6. 2003. P.S Jaiswal & N. Jaswal, Environmental Law–Environmental Protection, Sustainable Development and the Law, Pioneer Publication, Delhi.
7. 1991. S.P. Sharma, India Legal System, Mittal Publications, New Delhi.
8. 1982. A.R. Biswas, Encyclopedic Law Dictionary. Eastern Law House, Calcutta.

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SPL 313: URBAN RENEWAL AND CONSERVATION

Credits: 03 (L=2, T=1, U=0)

Urban Process of urban decay demolition, its causes, intensity and character. Basic concepts of redevelopment & renewal. Conservation, meaning, techniques, importance and relevance in urban & regional planning. Conservation: Theories & Philosophies. Surveys & Studies for Conservation Plan for Urban, and Rural areas.

Concept of listed Buildings, Concept of Heritage zones, Preparation & Implementation of Conservation Plan, Integrating Conservation Plan with Master Plan; Integrating Tourism Plan of the City. Conservation movement; International Perspective, International Organizations; their role & functions; WHC, ICOMOS, ICCROM, CIPA. International Charters namely Venice Charter, Charter of the conservation of historic towns and urban areas. Conservation movement; National perspective National Organizations their role & functions Archeological Survey of India, Indian National Trust for Art and Cultural Heritage (INTACH) .

Legislation related to Conservation at national level & state of Punjab, Delhi Urban Arts Commission. Community participation in Conservation; Study of specific zoning regulation, building bye-laws and development controls for Conservation. Case studies at city level Amritsar, York City (UK) and precinct level Katra/area of walled city, The Mall Shimla.

Suggested Readings:

1. 2009. G. J. Ashworth. "Town walls , Walled Towns and Tourism : paradoxes
2. 2008. Abdi Ali Mohammad "Spatial planning as an Approach to Achieve sustainable
3. 2007. Conservation and Sustainability in Historic Cities, by Dennis Rodwell .Blackwell,
4. 2007. Wiles Craig " Consideration of Historic Authenticity In Heritage tourism Planning and Development" Proceedings of the 2007 Northeastern Recreation Research Symposium
5. 2004. Litwin. W. Stephen " Streetscape improvements in an historic tourist city a second
6. 2000. W.H Siddiqi, "Luchnow: The Historic City" Sundeep Prakashan, New Delhi.
7. 1998. B.M. Feilden, and Jukka Jokilehto , Management Guidelines for World Cultural
8. 1992. I Mohan, "The world of walled cities: Conservation environmental pollution, urban
9. 1990. Meller, Helen , Patrick Geddes: Social Evolutionist and City Planner, Routledge,
10. 1989. B.M Fielden, Guidelines for Conservation: A technical Manual, INTACH, New
11. 1989. Charles Mynor, Listed Buildings and Conservation Areas, Longman, London.
12. 1978. Alan Dobby, Conservation and Planning, Hutchinson, London.

Journals:

1. Paradigms", Journal of Heritage Tourism, Vol 4(4) 299-314 (website :www.ema.edu.ee) development in Historic Cities" (website : [www.waset.org/journals/waste/v46/40 .pdf](http://www.waset.org/journals/waste/v46/40.pdf)) Oxford.
2. Heritage Sites, ICCROM, Rome. visit to King Street , Charleston , South Carolina" Tourism management 26(2005)421-429(website : [http:// www.sciencedirect.com/science/ article/pii/ so261517704000421](http://www.sciencedirect.com/science/article/pii/S0261517704000421)) London.
3. Renewal and Development Prospects" Mittal Publication New Delhi. (Website : [nrs.fs.fed.us/pubs/gtr/gtr-nrs-P-23 papers/41wiles-p23.pdf](http://nrs.fs.fed.us/pubs/gtr/gtr-nrs-P-23-papers/41wiles-p23.pdf))

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SPL 314: HOUSING AND COMMUNITY DEVELOPMENT

Credits: 03 (L=2, T=1, U=0)

Housing: definition and subject matter, Housing as a basic requirement, determinants of housing form and types, Housing Census of India definitions and statistics, Housing shortage, income and affordability, Slums causes and issues.

Approaches to neighbourhood living in traditional and contemporary societies, concepts and elements of neighbourhood structure, housing and area planning standards, Low cost housing- alternative low cost eco-friendly construction material, and low cost construction techniques.

Role of Housing Institutions (HUDCO and HDFC), National Housing and Habitat Policy, Slum Development approaches and programmes, Rural housing- types, policy and programmes, Co-operative housing, Case studies of housing projects - Indore Slum networking project.

Suggested Readings:

1. 2015. B. Aldrich and Sandhu R.S., Housing for the Urban Poor in Developing Countries, Rawat Publications. Jaipur
2. 2011. A.K. Jain, The Informal City: Inclusive Growth for Poverty Alleviation, Readworthy Publications (P) Ltd., Delhi
3. 2009. S. Chattopadhyaya, New Essays on Inclusive Housing, McMillan India Ltd., Delhi
4. 2007. Rishi Muni Dwivedi, Urban Development and Housing in India, New Century Publication, New Delhi.
5. 2007. V.K. Kohli, Housing Finance Agencies in India. Deep & Deep, New Delhi.
6. 2005. Rangwala S.C., Town Planning, Charotar Publication House, Anand India.
7. 2002. K. Thomas Poulse, Reading Material on Housing, Institute of Town Planners India, New Delhi.
8. 1998 Vijaya Bhole, 1998, Housing, Classical Publication Company, New Delhi.
9. 1987. Kiran Wadhwa, Role of Private Sector Housing, Dhanpat Rai Publications, New Delhi.
10. 1985. D.B. Gupta, Urban Housing in India, World Bank Staff Working.
11. 1985. L.R. Sharma, Low Cost Housing in Developing Countries, New Delhi.
12. 1978. Sam Davis, The Form of Housing, Van Nostrand Reinhold Company, New York.
13. 1969. F. Muth, Cities and Housing, The University of Chicago Press, London.
14. 1965. R.N. Morris, The Sociology of Housing, Alden Press Limited, London.

Recommended Journals

1. Journal of Housing Studies, Sage
2. Journal of Housing and Built Environment, Taylor and Francis.

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SPU 315: MASTER PLAN

Credits: 02 (L=0, T=0, U=5)

Students shall be required to prepare master plan for the urban area studied in previous Planning Studio “Study of Town”. The scope of master plan preparation will include working out the detailed requirements; formulation goals, objectives and policies; planning considerations; conceptual framework; planning proposals including zoning and phasing; and implementation strategy covering organizational and financial aspects.

The master plan shall be submitted in form of a detailed report illustrated with necessary maps, charts, drawings, sketches etc.

Suggested Readings

1. 2013. Somik Lall, Planning, connecting and financing cities, World Bank, Washington DC.
2. 2012. Helms,G, Towards safe city centres: remaking the spaces of an old industrial city, Ashgate, Aldershot.
3. 2012. T.Campbell, Beyond smart cities: how cities network, learn and innovate, Earthscan, N.York.
4. 2010. R.A.Venugopal,State of Urban services in Indian cities, Oxford University Press, N. Delhi.
5. 2009. A.Latham, Key concepts in Urban Geography, Sage, London.

Recommended Journals

1. Spatio-Economic Development Record
2. ITPI Journal, ITPI
3. Cities, Elsevier
4. Third World Planning Review, Liverpool University Press
5. Journal of Urban Studies, Sage.

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SPU 316: STUDY OF REGION

Credits: 04 (L=0, T=0, U=8)

Students will be required to undertake the study of a region/district/block in holistic manner with a view to underline the basic issue pertaining to problems and prospects of development especially in spatial context. The study shall be covered under the following stages:

- Theoretical framework including norms and standards
- Identification of data
- Collection of data field visit
- Tabulation of data and presentation of base map
- Analysis of data aspect wise highlighting implication
- Identifying various resources of the region selected
- Drawing of conclusion highlighting the main issues.

The study shall be submitted in the form of detailed report illustrated with drawings, maps, charts and diagrams, photographs and sketches, highlighting the main features of the region.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), Urban & Regional Development Plans Formulation and Implementation Guidelines, ITPI, New Delhi.
2. 2010. Peter Hall and Jones Tewdwr Jones. Urban and Regional Planning. Rutledge. New York
3. 2007. S.K. Aggarwal. Regional Development and Planning in India. Concept Publishing Company. New Delhi.
4. 2004. Sudhanshu Shekhar. Regional Planning in India (Set of two vols.). Anmol Publications Pvt. Ltd. New Delhi.
5. 1992. R.P. Misra. Regional Planning: Concepts, Techniques. Policies and Caste-Studies. Concept Publisher, New Delhi.
6. 1983. Mahesh Chand and V.K. Puri. Regional Planning in India. Allied Publications, New Delhi.

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SPL 317: PLANNING FOR INFORMAL SECTOR (Elective)

Credits: 03 (L=2, T=1, U=0)

Concept, characteristics and importance of informal sector in urban areas; Socio-economic perspectives of the urban processes, Roots of informal sector in the context of poverty, migration, urbanization, etc.; Infrastructural base of informal sector, Urban planning and informal sector activities; Size and composition of informal sector

Significance of informal sector in urban planning; Key issues in understanding and tackling the problems of informal sector. Estimation of infrastructural requirements for informal sector; Formulation of proposals; short term and long term planning measures for informal sector; General planning and design considerations for informal sector as part of urban planning.

Informal sector in residential, commercial and industrial context; Current planning practices and approaches for informal sector – basic need approach; Community planning approach; urban basic services approach; Planning for informal sector – Residential, Commercial, Industrial; Principles and techniques of low cost infrastructure for informal sector. Policies and programs for informal sector in the context of urban planning; Planning and administrative tools for informal sector;

Suggested Readings:

1. 2011. A.K. Jain, The Informal City: Inclusive Growth for Poverty Alleviation, Readworthy Publications (P) Ltd., Delhi
2. 1996. Urban Development Plans Formulation and Implementation Guidelines, Ministry of Urban Affairs & Employment (G.O.I.), ITPI, New Delhi.
3. 1982. W.J. Goode & P.K. Hatt, Methods in Social Research, McGraw-Hill Inc., New York.
4. 1973. David Harvey, Social Justice and the City, Edward Arnold, London.
5. 1972. F.S. Chapin, Urban Land Use Planning, University of Illinois Press, Chicago.
6. 1972. Lewis Keeble, Principles & Practice of Town and Country Planning, the Estates Gazette Ltd., London.
7. 1969. F. Muth, Cities and Housing, the University of Chicago press, London.
8. 1965. R.N. Morris, The Sociology of Housing, Alden press limited, London

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SPL 318: PLANNING FOR SPECIAL AREA (Elective)

Credits: 03 (L=2, T=1, U=0)

Meaning, types and scale of special areas; Special areas as determinant of Urban & Regional Planning and Development; Issues and Challenges, resources and constraints of special areas. Nature, challenges, guidelines; for Natural hazards and disaster prone areas; hilly areas, coastal areas, desert areas, volcanic eruption areas and resources regions.

Special areas as man-made development attributes. Capital regions, industrial estate/regions tribal areas, Tourist Attraction and centers, border areas; Considerations and guidelines for planning and developing special areas; Norms, standards and approaches to plan and develop such areas.

Contemporary concepts: Challenges, considerations and guidelines; Technological breakthroughs, policies and programmes for Shopping Malls and Multiplexes, Information Technology Parks, Theme Parks, Special Economic Zone, Utopian concepts: Case studies- Hill Area, Information Technology Park and Commercial areas.

Suggested Readings:

1. 2009. J Mistch, William and James G. Goselwik, 2007, Wetlands, fourth Edition, John Wiley & Sons, New Jersey.
2. 2009. Geeta Das, Special Economic Zones in India: Lessons from China, Eastern Book corporation, New Delhi
3. 2007., T. Anton. Clave, "The Global Theme Park Industry", CPL Scientific, London.
4. 2006. T. Singh, "Disaster management approaches and strategies", Akanksha Publishing house, New Delhi.
5. 2004. Jos Arts and Saunders Angus Morrison, Assessing Impact: Handbook of EIA Spons Architecture Price Books, U.K.
6. 2003. Peter Morris and R.K. Therivel, Methods of Environmental Impact Assessment, SEA Follow-up, CPL Scientific Publishing Services, U.K.

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SPL 361: PROJECT FORMULATION AND MANAGEMENT

Credits: 03 (L=2, T=1, U=0)

The concept of a project– definition and objective; Classification of Projects; Project identification, and their significance; Meaning, scope and significance of project formulation & its role in city and regional planning; Life cycle of a project. Project formulation and its components.

Techniques of project formulation – Feasibility analysis, Financial analysis, Cost–benefit analysis, Technical analysis, Socio–cost–benefit analysis. Project Design and networks – Critical Path Method and Project Evaluation and review Technique, Project appraisal and report preparation. Project Monitoring – meaning, objectives and significance.

Monitoring techniques – Integrated reporting techniques, Mile–stone technique, Time and cost under run, cost overrun techniques, Unit index technique. Project evaluation – meaning, objectives, scope, stages, approach and steps of evaluation; Techniques of project evaluation: Financial analysis–discounted cash flow, net present value, Formulation, monitoring and evaluation of different types of projects as case studies – Housing, Integrated Development of Small and Medium Towns, JNNURM and Transportation projects.

Suggested Readings:

1. 2014. URDPFI Guidelines, Ministry of Urban Development, Government of India, New Delhi
2. 2013. Kerzner Harod, “Project Management–A System Approach to Planning, Scheduling and Control”, John Wiley & Sons, USA, 11th edition
3. 2011. Patrick Gudda, “A guide to Project Monitoring and Evaluation”, Authorhouse, Bloomington.
4. 2005. JnNRUM Guidelines, Ministry of Urban Development & Poverty Alleviation, Govt. of India, New Delhi.
5. 2004. K Nagarajan, “Project Management”, New Age International Pvt Ltd, New Delhi
6. 2002. Prasanna Chandra, “Projects Planning, Analysis, Financing, Implementation, and Review”, Sage Publishers, New Delhi.
7. 1993. M. Shaghil &M. Mushtaqu, “Project Planning Management”, Vol. I, II, III, Printwell, Jaipur.
8. 1993. M. Shaghil &M. Mushtaqu, “Project Formulation Concept & Approach”, Printwell, Jaipur.

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SPL 362: REGIONAL PLANNING

Credits: 03 (L=2, T=1, U=0)

Concept of region, Techniques of delineating the regions, Concept of regional planning & its objective, Regional problems & its need. Regional interaction – Central place theories of Christaller, Losch.

Regional network – rail, road, irrigation, power, markets. Theories of regional development – balanced growth, unbalanced growth, cumulative causation theory, growth pole theory.

Formulation of regional plan; identification of plan objectives, Regional studies – Physical, socio-economic infrastructure, legal – collection, classification and analysis of data, Formulation and evaluation of alternative plan. Implementation of regional plan, its tool's such as legal, administrative and financial. Selected case study of Regional development – National Capital Region.

Suggested Readings:

1. 2010. Peter Hall and Jones Tewdwr Jones. Urban and Regional Planning. Rutledge. New York
2. 2007. S.K. Aggarwal. Regional Development and Planning in India. Concept Publishing Company. New Delhi.
3. 2004. Sudhanshu Shekhar. Regional Planning in India (Set of two vols.). Anmol Publications Pvt. Ltd. New Delhi.
4. 2001. Jayasri Roy Chaudhari. An Introduction to Development and Regional Planning. Orient Longman, Hyderabad.
5. 2000. Amitabh Shukla. Regional Planning and Sustainability Development. Kanishka Publisher Distributors. New Delhi.
6. 1992. R.P. Misra. Regional Planning: Concepts, Techniques. Policies and Case-Studies. Concept Publisher, New Delhi.
7. 1983. Mahesh Chand and V.K. Puri. Regional Planning in India. Allied Publications, New Delhi.

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SPU 363: REGIONAL PLAN

Credits: 04 (L=0, T=0, U=8)

In continuation of the Previous Planning Studio “Study of Region’. The students shall be required to prepare the Regional Plan for the region already studied. The scope of the regional plan shall include:

1. Formulation of Objectives
2. Planning Considerations
3. Land Utilization Plan
4. Hierarchy of Settlements
5. Communication Networks
6. Physical Infrastructure, Socio-Economic Infrastructure
7. Plan Implementation Strategies
8. Administrative, Legal & Financial Support

Regional plan shall to be submitted in the form of detailed report, illustrated with maps, charts, drawings, diagrams etc.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), Urban & Regional Development Plans Formulation and Implementation Guidelines, ITPI, New Delhi.
2. 2010. Peter Hall and Jones Tewdwr Jones. Urban and Regional Planning. Rutledge. New York
3. 2007. S.K. Aggarwal. Regional Development and Planning in India. Concept Publishing Company. New Delhi.
4. 2004. Sudhanshu Shekhar. Regional Planning in India (Set of two vols.). Anmol Publications Pvt. Ltd. New Delhi.
5. 2001. Jayasri Roy Chaudhari. An Introduction to Development and Regional Planning. Orient Longman, Hyderabad.

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SPU 364: VILLAGE PLAN

Credits: 02 (L=0, T=0, U=5)

The exercise aims to orient students to understand the character of the village, understand physical, social, demographic, environmental and other requirement such as (chajjra plan) of the village. The plan proposal will be highlighted to suggest suitable models of development of village and its economy.

1. It will include preparation of a detailed list of the components of study of the village. To understand the character of basic/focal village or urban village.
2. Data Identification:
 - Indicating time series data.
 - Data Indicators, Understanding the relevance/source's of Data as: Physiographical data. Historical Growth, Land use and identification of different components of village, Infrastructure, demographic, economic, social character.
 - Identification of village ecosystem
 - Role of village panchayat/gramsabha etc. in development of village.
3. Preparation of Base map (out line plan, Street network Plan), Theme maps and general outline map of the village using basic surveying techniques.
4. Presentation of the profile of the village settlement and surrounding area.
5. Identifying Issues and Challenges that needs solutions and Plans.
6. Presentation of Problems and Potentials on map, illustrations.
7. Population projection in relation to the village requirement and Proposed Plan of the village
8. Plan implementation Strategy (Role and functions of village bodies in the light of 73rd amendment).

Suggested Readings:

1. 2008. Avtar Dhesi, 2008, *Rural Development in Punjab: A Success Story Gone Astray*, Rourledge India.
2. 2008. G.B. Kashyap and J. P. Garg, 2008, *Rural India: Vision and Action 25 Vol.*, Vista International, New Delhi.
3. 2004. K.R. Gupta, 2004, *Rural Development in India (Vol.2)*, Atlantic Publishers and Distributors Pvt. Ltd.
4. 1991. Ghosh Kumar, 1991, *Management of Rural Development*, Anmol Publications Pvt. Ltd.
5. 2000. Satish Tiwari, *Rural Development*, Anmol Publications Pvt. Ltd.

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SPF 365: EDUCATIONAL TOUR - I

Credits: Audit Course

Each student shall be required to go for an educational tour to different places in the country preferably a Historical town. The objective of the educational tour is to experience the students to the functioning of various planning & development organizations to be visited, and give exposure to specialized projects in the field.

The teacher incharge/s for the tour shall be decided by the Board of Control of the Department from time to time. The duration and places/organizations to be visited shall be decided by the tour incharge.

The students shall submit the report in summary format (20 pages) of the tour regarding organizations/offices/projects visited. The tour report shall be evaluated through Viva-Voce by the teacher Incharge/s.

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SPL366: URBAN DESIGN (Elective -1)

Credits: 03 (L=2, T=1, U=0)

Definition and scope of urban design; Relationship of urban design with urban & regional planning; Elements of urban design: point, line, shape, form and organisation of forms in space. Principles of design: repetition, rhythm, contrast, emphasis, symmetry, harmony, unity, variety etc.; Scale, proportion, composition, texture and pattern in urban design.

Relationship of form and image of city; aesthetical and functional aspects of urban design; Image of city and its elements: nodes, districts, paths, edges and landmarks. Norms & standards, controls, building bye-laws and zoning regulations determining style and character of urban design.

The shape and structure of cities- pattern, styles and trends in history urban design tools- policy design and legislative tools,. Urban design policy and guidelines for urban development plans. Efficacy of different agencies as promoter and protector of urban design.

Suggested Readings:

1. 2011. Paul D Sperigen. Urban Design: The Architecture of Towns & Cities. Mc GrawHill. New York
2. 2009. Helon Meller, Patrick Geddes. Social Evolutionist and City Planner. Routledge. London.
3. 2007. Edmund N Bacon. Design of Cities. Thames and Hudson. London.
4. 2004. G Broadbent. Emerging Concepts in Urban Space Design. Van Nostrand Reinhold. London.
5. 1982. Kevein Lynch. Good City Form. MIT Press, Cambridge, Massachusetts.
6. 1979. Rob Krier. Urban Space. Academy Editions, London.
7. 1961. Lewis Mumford. The City in History. Secker and Warburg, London.
8. 1960. Kevein Lynch. The image of the City. MIT Press, Cambridge. Massachusetts and London.

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SPL 367: LANDSCAPE PLANNING (Elective -1)

Credits: 03 (L=2, T=1, U=0)

Introduction to landscape design; relevance of landscape design in urban and regional planning; Trends in landscape design; Functional, architectural and environmental aspects of landscape design elements. Plants as elements of landscape design; Environment and visual concerns of plants in urban & regional planning;

Composition and structure of plants for landscaping; Planting design theory; Criteria for plant selection and plantation plan. Nature and consideration of landscape design; Landscape design process, surveys, studies and site analysis for landscaping. Evaluation, system and hierarchy of parks and gardens; Techniques and considerations for landscaping recreational and leisure areas; Philosophy and principles of Japanese and Mughal Gardens.

Approaches and design concepts for landscaping – residential, commercial and administrative and industrial areas; Landscape design for lines of movement – roads, rail, water and airways. Landscape Planning for large areas – towns & cities, industrial estates etc.; Case studies of Delhi, Chandigarh and Amritsar.

Suggested Readings :

1. 2013. Giovanni Maciocco. Urban Landscape Perspectives. Springer Publishers. Berlin.
2. 2012. Pradip Krishen. Trees of Delhi. Dorling Kindersley India (Pvt.) Limited. New Delhi.
3. 2011. Nigel Dunnett, James Hitchmough. The Dynamic Landscape: Design, Ecology and Management of Naturalistic Urban Planting. Taylor and Francis. U.K.
4. 2004. Menon Subhadra. Trees of India. Timeless book. New Delhi.
5. 2000. Chattar Singh, Rajnish Wattas. Trees of Chandigarh. B.R. Publishing. Delhi.
6. 1993. Marc Treib. Modern Landscape Architecture: A Critical Review. MIT Press. Cambridge.
7. 1990. Clouston Brian. Landscape Design with Plants. Hienemam Newnes. Oxford.
8. 1985. B James Root. Fundamentals of Landscape and Site Planning. Avi Publishing Company. West Port Connecticut.
9. 1983. J.O. Simonds. Landscape Architecture. McGraw Hill book Company (Inc.). New York.
10. 1981. Mitchell Bring, Joose Wayembegh. Japanese Gardens – Design and Meaning. McGraw Hill Book Company. New York.
11. 1975. Michael Laurie. An Introduction to Landscape Architecture. American Elsevier Publishing Company Inc. New York.
12. 1974. Cliff Tandy. Handbook of Urban Landscape. Watson Guptill Publications. New York.

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SPL 368: DISASTER MANAGEMENT (Elective -2)

Credits: 03 (L=2, T=1, U=0)

Understanding Natural and Man-Made Disaster, Difference between Disaster and Hazard, Concept of Disaster Management; Disaster Cycle, Disaster Phase, Risk and vulnerability, Type of Disaster and their Impact, Role of Urban and Regional Planning in Disaster Management

Disaster Response and Preparedness Plan, Vulnerability analysis and mapping techniques, Post disaster Rehabilitation, Partnerships in Disaster Management, Disaster Management in India and Institutional structures.

Financial structure for Disaster Management, Policy and Legislation related to Disaster Management, Role of International Organizations: United Nations Agencies in Disaster Management, Hyogo Framework for Action, Asian and SAARC initiatives, Global/national best practices in Disaster Management.

Suggested Readings:

1. 2013. R. Rasik and R. Sinha, R, Earth system processes and disaster management, Springer, New York.
2. 2006. Tej Singh, Disaster Management Approaches and Strategies, Akanksha Publication House, New Delhi
3. 2005. NDMA, National Disaster Act 2005.
4. 2005. R.K. Bhandani, An overview on Natural & Manmade Disaster & their Reduction, CSIR, New Delhi.
5. 2003. S. Singh, Disaster Management in Hills, Concept publication Co., New Delhi
6. 2001. S. L. Goel and R. Kumar, Disaster Management, Deep and Deep Publications, New Delhi
7. 2001. M.C. Gupta, Manuals on Natural Disaster Management in India, National centre for Disaster Management, IIPM, New Delhi.
8. 1994. A.K. Arya, A.K, Action plan for Earthquake, Disaster, Mitigation in V.K Sharma (ed.), Disaster Management, IIPA Publication New Delhi.

Recommended Journals

1. Community, Environment and Disaster Risk Management, Emerald Publishing.

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SPL 369: ENVIRONMENT PLANNING (Elective -2)

Credits: 03 (L=2, T=1, U=0)

Environment, Ecology, & Ecosystem; Natural resources, Types, exploitation of resources, Impact of resources on economy, Protection of natural resources, stakeholders in natural resources and development. Concept of settlement as an Ecosystem; Natural Environmental Hazards; Considerations in Physical Planning for Natural Hazards: Landslides, Floods, Draught, Cyclones, Tsunami, Earthquake and Volcanic Eruptions

Man-made Environmental Hazards, consideration in Physical Planning for Manmade Hazards: Air Pollution, Water Pollution, Land Pollution, Noise Pollution; Technological, management, and policy solutions to environmental issues; Norms and Standards for Environmental Protection.

Environmental Planning and sustainable development, community and regional perspective on planning for environment, Environmental Action Plan and planning process; challenges to create sustainable built environment; legal foundations of environmental planning; Environment Impact Assessment; Climate change and International Treaties / Conventions / Declarations.

Suggested Readings:

1. 2012. Mary K. Theodore, Louis Theodore. Introduction to Environmental Management. Boca Raton: CRC press.
2. 2012. Vir Singh, [ed.]. Climate Change and New Challenges. New Delhi: Concept Publishing Company Pvt. Ltd.
3. 2012. Bala Krishnamoorthy, Environmental Management. New Delhi: PHI learning pvt. ltd.
4. 2012. M.S. Bhatt, Asheref Illiayan, [ed.]. Solid Waste Management-An Indian Perspective. New Delhi: Synergy Books India.
5. 2010. Subhash Anand, Solid Waste Management. New Delhi: Mittal Publications.
6. 2009. Jonathan Cowte, Climate Change. Cambridge: Cambridge University Press.
7. 2008. L. K. Singh, [ed.]. Ecology, Environment and Tourism. Delhi: Isha books.
8. 2008. S.C. Shastri, Environmental Law. New Delhi: Eastern Book company.
9. 2007. Peter Murphy, P.S. Rana, [ed.]. Environmental Impact Assessment. New Delhi: Bookwell.
10. 2007. Al. Gore, An Inconvenient Truth. London: Mixed Sources.
11. 2006. K.S. Valdiya, [ed.]. Coping with Natural Hazards: Indian Context. Hyderabad: Orient Longman pvt. ltd.
12. 2005. P. Bani Banerjee, Handbook of Energy and the Environment in India. New Delhi: Oxford university press.
13. 2004. S.A. Abbasi, D.S. Arya. Environmental Impact Assessment. New Delhi: Discovery Publishing House.
14. 2003. S. P. Das Gupta, [ed.]. Environmental Issues for the 21st century. New Delhi: Mittal Publications.
15. 2001. V.K. Prabhakar, [ed.]. Environmental Impact Assessment. New Delhi: Anmol Publications Pvt. ltd.
16. 2000. Paul. Selman, Environmental Planning. New Delhi : Saga Publications ltd.

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SPL 411: PROJECT MANAGEMENT

Credits: 03 (L=2, T=1, U=0)

The concept of a project– definition and objective, taxonomy of a project: industrial and non-industrial projects etc.; Meaning, Objective and stages of project management, relevance of project management in urban and regional planning. Life cycle of a project, Project Formulation and its stages; identification of a project: feasibility analysis, techno-economic analysis.

Design & Network analysis, network logic, rules, forms of network, Application of C.P.M. & P.E.R.T. in Project Management, Time estimates and Work schedule- concepts & techniques, Project appraisal and report.

Concept of Project monitoring and its objectives; Techniques of project Monitoring; Project Evaluation: criteria and techniques of project Evaluation.; Cost-benefit analysis; Financial cost-benefit analysis: discounted cash-flow analysis, Social cost-benefit analysis of public and private projects; Application of cost and benefit analysis in developing countries – Case studies in housing, transportation and infrastructure development projects.

Suggested Readings:

1. 2014. K. Nagarajana. Project Management. Green Publishing House. New Delhi.
2. 2011. Prasanna Chandra. Projects Planning, Analysis, Financing, implementation and Review. Sage Publishers. New Delhi.
3. 2009. Harod Kerzner. Project Management- A System Approach to Planning, Scheduling and Control. John Wile & Sons. USA
4. 1993. M.Shaghil & M.Mushtaqu. Project Formulation Concept & Approach. Printwell. Jaipur
5. 1993. M.Shaghil & M.Mushtaqu. Project Planning Management. Vol I, II, II, Printwell. Jaipur
6. 1987. B.B. Goel. Project Management: a development perspective. Deep and Deep Publications. New Delhi.

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SPL 412: REGIONAL PLANNING

Credits: 04 (L=3, T=1, U=0)

Concept of region, Techniques of delineating the regions, Concept of regional Planning & its objective, Regional problems & its need. Regional interaction – Central place theories of Christaller, Losch.

Regional network – rail, road, irrigation, power, markets. Theories of regional development – balanced growth, unbalanced growth, cumulative causation theory, growth pole theory.

Formulation of regional plan; identification of plan objectives, Regional studies – Physical, socio-economic infrastructure, legal – collection, classification and analysis of data, Formulation and evaluation of alternative plan. Implementation of regional plan, its tool's such as legal, administrative and financial. Selected case study of Regional development – National Capital Region.

Suggested Readings:

1. 2010. Peter Hall and Jones Tewdwr Jones. Urban and Regional Planning. Rutledge. New York
2. 2007. S.K. Aggarwal. Regional Development and Planning in India. Concept Publishing Company. New Delhi.
3. 2004. Sudhanshu Shekhar. Regional Planning in India (Set of two vols.). Anmol Publications Pvt. Ltd. New Delhi.
4. 2001. Jayasri Roy Chaudhari. An Introduction to Development and Regional Planning. Orient Longman, Hyderabad.
5. 2000. Amitabh Shukla. Regional Planning and Sustainability Development. Kanishka Publisher Distributors. New Delhi.
6. 1992. R.P. Misra. Regional Planning: Concepts, Techniques. Policies and Caste-Studies. Concept Publisher, New Delhi.
7. 1983. Mahesh Chand and V.K. Puri. Regional Planning in India. Allied Publications, New Delhi.

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SPE 413: INTERNSHIP (8 WEEKS)

Credits: Audit Course

Each student shall be required to undertake internship in a office/firm dealing planning and development projects during summer vacation for a period of 8 weeks. The Internship Coordinator/ s shall be appointed by Board of Control of the department.

The objective of internship is to expose the students to the planning and development projects and structure and functioning of the office/firm in which the student is taking internship. The students shall finally submit the report in summary format (20 pages) after the completion of internship to the Internship Coordinator. The viva voce of the report will be conducted by the Internship Coordinator/ s.

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SPU 414: DETAIL PROJECT REPORT

Credits: 02 (L=0, T=0, U=5)

The students shall undertake the preparation of project/s in detail. The aim of the exercise is to understand a project while preparing Detailed Project Report (DPR) of designed project/s of various nature i.e. Commercial, Industrial, Institutional, Residential, Transportation or any other project. The exercise will be completed as per the following stages:

a) Study of the Project

The study of project is to highlight the prime objectives of the project and set Network priorities of the project.

b) Preparation of Development Project

To identify the components as major tasks of project and set their priority for the implementation with the help of PERT/CPM charts. The students shall be required to prepare cost estimates of the various identified tasks and total project cost along with the time frame. They shall identify the returns from the project, total seed money required, working capital and breakeven point on timeframe.

c) Project Implementation and Monitoring Mechanism

To identify agencies, financial and legal mechanism involved in the implementation of different components of the project.

Suggested Readings:

- 1 2006. Kerzner Harold, Project Management- A System Approach to Planning, Scheduling and Control, John Wile & Sons, USA.
- 2 2005. JNNRUM Guidelines Ministry of Urban Development & Poverty Alleviation, Govt. of India, New Delhi.
- 3 2002. P. Chandra, Projects Planning, Analysis, Financing, Implementation and Review, Sage Publishers, New Delhi.

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SPU 415: RE-PLANNING OF AN AREA

Credits: 03 (L=0, T=0, U=7)

Our cities, regions and settlements require re-planning in the light of changing requirements of their inhabitants. This requires to analyze in terms of problems, constraints and potentials of such areas and impact of such alterations on the surroundings of these settlements.

The students, individually or in groups, shall be required to meet the desired outcome with essential required alterations as per the requirement of the future.

The students shall be required to undertake the following

1. Introduction, Need, Objective, Methodology for planning of selected area;
2. Analysis, land utilization, built-up environment, physical features, socio-economic characteristics, circulation, infrastructure, activities and bylaws of the site and surroundings;
3. Identification of existing problems, constraints, potentials and proposal for the settlements, proposed activities, development controls etc;
4. Preparation of conceptual plan & detail plan and plan implementation strategies;
5. Administrative, legal and financial setup;

The study shall be suitably presented in form of a report illustrated with necessary drawings, maps charts, diagrams and photographs.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), Urban & Regional Development Plans Formulation and Implementation Guidelines, ITPI, New Delhi.
2. 2013. Bauer, Kurt W. City planning; for civil engineers, environmental engineers and surveyors. CRC Press, Boca Raton.
3. 1964, Monkhouse and Willinson, Maps and Diagrams, Methuen & Co., London.

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SPL 416: ENVIRONMENT PLANNING (Elective)

Credits: 04 (L=3, T=1, U=0)

Environment, Ecology, & Ecosystem; Natural resources, Types, exploitation of resources, Impact of resources on economy, Protection of natural resources, stakeholders in natural resources and development. Concept of settlement as an Ecosystem; Natural Environmental Hazards; Considerations in Physical Planning for Natural Hazards: Landslides, Floods, Draught, Cyclones, Tsunami, Earthquake and Volcanic Eruptions

Man-made Environmental Hazards, consideration in Physical Planning for Manmade Hazards: Air Pollution, Water Pollution, Land Pollution, Noise Pollution; Technological, management, and policy solutions to environmental issues; Norms and Standards for Environmental Protection.

Environmental Planning and sustainable development, community and regional perspective on planning for environment, Environmental Action Plan and planning process; challenges to create sustainable built environment; legal foundations of environmental planning; Environment Impact Assessment; Climate change and International Treaties / Conventions / Declarations.

Suggested Readings:

1. 2012. Mary K. Theodore, Louis Theodore. Introduction to Environmental Management. Boca Raton : CRC press.
2. 2012. Vir Singh, [ed.]. Climate Change and New Challenges. New Delhi : Concept Publishing Company Pvt. Ltd.
3. 2012. Bala. Krishnamoorthy, Environmental Management. New Delhi : PHI learning pvt. ltd.
4. 2012. M.S. Bhatt, Asheref Illiayan, [ed.]. Solid Waste Management-An Indian Perspective. New Delhi : Synergy Books India.
5. 2010. Subhash Anand, Solid Waste Management. New Delhi : Mittal Publications.
6. 2009. Jonathan Cowte, Climate Change. Cambridge : Cambridge University Press.
7. 2008. L.K. Singh, [ed.]. Ecology, Environment and Tourism. Delhi : Isha books.
8. 2008. S.C. Shastri, Environmental Law. New Delhi : Eastern Book company.
9. 2007. Peter Murphy, P.S. Rana, [ed.]. Environmental Impact Assessment. New Delhi : Bookwell.
10. 2007. Al. Gore, An Inconvenient Truth. London : Mixed Sources.
11. 2006. K.S. Valdiya, [ed.]. Coping with Natural Hazards: Indian Context. Hyderabad : Orient Longman pvt. ltd.
12. 2005. Bani P. Banerjee, Handbook of Energy and the Environment in India. New Delhi : Oxford university press.
13. 2004. S.A. Abbasi, D.S. Arya. Environmental Impact Assessment. New Delhi : Discovery Publishing House.
14. 2003. S. P. Das Gupta, [ed.]. Environmental Issues for the 21st century. New Delhi : Mittal Publications.
15. 2001. V.K. Prabhakar, [ed.]. Environmental Impact Assessment. New Delhi : Anmol Publications Pvt. ltd.
16. 2000. Paul Selman, Environmental Planning. New Delhi : Saga Publications ltd.

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SPL 417: FREIGHT TRANSPORT PLANNING (Elective)

Credits: 04 (L=3, T=1, U=0)

Introduction to freight transport – concept, types and characteristics; Determinants of freight demand; Warehousing – concept, types of warehouses, planning and design consideration of warehouses, warehousing cost, inventory models, inventory cost.

Historical perspectives on facility location, facility location criteria, single and multiple facility location models; Transport modes selection, vehicle route selection models (VRP), vehicle scheduling models (TSP), Transportation Problem, fleet sizing etc.

Characteristics, types and siting of freight terminals– truck stand, transport nagar, integrated freight complex, dry port; Design of freight terminal- components, norms and design guidelines for different components.

References

1. 2014 Terminal design manual Washington State ferries. M 3082. Terminal Engineering Department. Washington State Department of Transportation Ferries Division. USA.
2. 2013. S. Benjamin Blanchard, Logistics engineering and management. 6th Edition. Pearson Education Limited. UK.
3. 2007. Maher Lahmar. Facility logistics: approaches and solutions to next generation challenges. CRC Press. USA.
4. 2007. G. Don. Taylor,. Logistics engineering handbook. CRC Press. USA.
5. 2006. James Jones, Integrated logistics support handbook. McGraw Hill. New York. USA.
6. 2006. Michael B. Stroh. A practical guide to transportation and logistics. 3rd Edition. Logistics Network. Inc. USA.

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SPD 461: PLANNING DISSERTATION

Credits: 10 (L=0, T=0, U=20)

Each student of is required to prepare a dissertation on the subject of his / her choice, concerning urban, regional or rural planning. The topic shall be approved by BOC. Dissertation will provide an opportunity to the student to conduct independent research by using the skills of analysis and synthesis learnt through various theory and practical courses. Dissertation will be completed under the guidance of a supervisor approved by BOC. Dissertation will be prepared by the student as per Thesis Manual prepared by the Department.

The students will be required to present dissertation orally, graphically and through written report. The student will also be required to present his/her dissertation before the external jury appointed by the concerned University / Department.

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SPF 462: EDUCATIONAL TOUR - II

Credits: Audit Course

Each student shall be required to go for an educational tour to different places in the country, preferably a Metropolitan City. The objective of the educational tour is to experience the students to the functioning of various planning & development organizations as well as to see their live projects.

The teacher incharge/s for the tour shall be decided by the Board of Control of the Department from time to time. The duration and places/organizations to be visited shall be decided by the tour incharge.

The students shall submit the report in summary format (20 pages) of the tour regarding organizations/offices/projects visited. The tour report shall be evaluated through Viva-Voce by the teacher Incharge/s.

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SPL 463: GOVERNANCE AND FINANCE (Elective –1)

Credits: 04 (L=3, T=1, U=0)

Governance: Basic principles and process of Governance; Role of Governance in a developing economy. Settlement Planning a decision making process; Development Administration at National, Regional, State, District and Local levels and the process of decision making at various levels related to urban & regional planning.

Urban & regional development management policies and programmes in the Five Year Plans and their relevance in urban and regional planning; Functions, Powers, Structures and Resources of State level planning and development agencies and their performance; Case studies of Punjab Urban Planning and Development authority (PUDA), State Pollution Control Board (PPCB), Punjab Infrastructure Development Board (PIDB).

Multiple sources of Finance; public and private finance; Budgetary allocation from Central and State Governments for urban and regional development; Financial resources of local bodies, Causes and effects of poor finance health of local Bodies ; Various measures to augment financial resources of local bodies; Privatization and role of private finance in development.

Suggested Readings:

1. 2012. Kath Wellman, Marcus Spiller, [ed.]. Urban Infrastructure: Finance and Management. United Kingdom: Wiley Blackwell.
2. 2011. K.K. Srivastava, Decentralised Governance and Panchayati Raj. Delhi: Kalpaz Publications.
3. 2011. Pardeep Sachdeva, Local Government in India. Delhi: Pearson.
4. 2010. A.K. Jain, Urban Planning and Governance. New Delhi: Bookwell India.
5. 2009. Surya Narain Yadav, Indu Baghel. Good Governance: Issues, Challenges and Prospects. New Delhi: Global vision publishing house.
6. 2009. Rashmi Sharma, Local Government in India: Policy and Practice. Delhi: Salasar Imaging Systems.
7. 2009. R.S. Chhikara, [ed.]. Governance - problems, prospects and perspectives. Gurgaon: Hope India Publications.
8. 2007. George E. Peterson, Procoia Clarke Annez, [ed.]. Financing Cities. New Delhi: Sage Publications.
9. 2006. P.S.N. Rao, [ed.]. Urban Governance and Management. New Delhi: Kanishka Publishers.
10. 2005. Soul Jagmohan, and Structure of Governance in India. New Delhi: Allied Publishers pvt. ltd.
11. 2005. Jo Beall, Funding Local Governane . Great Britain: ITDG publishing.
12. 2004. Bibek Debroy, [ed.]. Governance. New Delhi: Academic Foundation.
13. 2003. H.L. Bhatia, Public Finance. New Delhi: Vikas Publishing House pvt. ltd.

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SPL 464: PROFESSIONAL PRACTICE (Elective –1)

Credits: 04 (L=3, T=1, U=0)

Introduction, importance and types of professional planning practice, Role of Planner in decision making process: qualities and responsibilities of spatial planner. Aims & objectives of professional institutes such as Institute of Town Planner, India, Sister professional institute such as Institute of Engineers, Institute of Architecture.

Various services rendered by professional planner: Consultancy agreements & contracts, Professional ethics and code of Conduct, Legal Backing for residential developments in Punjab. Registration, Licensing, consultancy office; Organization composition and structure; Office infrastructure and equipment.

Study of Revenue Plans in context of layout plans and Conversion Tables. Charges for normal and special professional services and their mode of payment. Relationship of the professional planner with clients, contractors, developers, public bodies and institutions; Copy rights, Disputes arbitrations; Handling of legal matters.

Suggested Readings:

1. 2014. Ministry of Urban Affairs & Employment (G.O.I.), 'Urban & Regional Development Plans Formulation and Implementation Guidelines', ITPI, New Delhi.
2. 2012. S.K. Kulshrestha. Urban and Regional Planning in India. SAGE Publication. New Delhi
3. 2009. B.S. Chawla. Punjab Urban Development Acts and Rules. Chawla Publication (P)Ltd. Chandigarh.
4. 2005. American institute of certified planners.Code of ethics and professional conduct, www.planning.org/etics/ethicscode.htm
5. 2003. Institute of town planners, India. Memorandum, articles of association and bye-laws. New Delhi
6. 1993. M. Shahgill, M. Mushtaque. Project Management: Concept and Approaches. Printwel. Jaipur.
7. 1982. J.N. Pandey Constitutional Laws of India. Central Law Agency., Allahabad.

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SPL 465: RURAL INFRASTRUCTURE (Elective –2)

Credits: 04 (L=3, T=1, U=0)

Need & importance of rural infrastructure in settlement. Provision of rural infrastructure in the light of 73rd Constitutional amendment (Eleventh schedule), Infrastructure inputs for Agriculture.

Infrastructure for Processing, Grading, Packing and Marketing System. Input-output infrastructure of allied activities – animal husbandry, poultry, fisheries, piggeries, sericulture, bee keeping, training, programmes.

Concepts, considerations to provide educational, medical, religious, recreation facilities for rural settlements. Audio-visual communication, provision for banks, co-operatives, fair price shop, police, postal services.

Suggested Readings:

1. 2006. Nairdeepak Padmanbbar Kumar. Rural Infrastructure: Issue and Perspectives ICFAI University Press. Hyderabad, India.
2. 2005. Nisha Chaudhary. Rural Power Structure in India. Common Wealth Publishers. New Delhi.
3. 2003. Vivek Saurath. Rural Industrialization and Infrastructure. Dominant Publisher and Distributor, New Delhi.
4. 2003. Dinesh Kumar Verma and Sawalia Bihari Verma. Strategy for Promoting Rural Infrastructure. Pointer Publishers. Jaipur.
5. 2002. G. Srinivas Rao Srinivas. Rural Marketing in India. Anmol Publications Pvt. Ltd. New Delhi.
6. 2001. S. Shekhar and Arul Gnanna. Forestry and Rural Development Planning and Management. Kanishka Publishers Distributors. New Delhi.
7. 1993. S.S. Yadav. Infrastructure to Rural Development. Pointer Publishers. Jaipur.

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SPL 466: COMMUNITY PARTICIPATION IN PLANNING (Elective –2)

Credits: 04 (L=3, T=1, U=0)

Definition and concepts of community participation, Ladders of Public Participation – Arnstein Ladder etc, Communication and Public Participation in decision making process in planning, Challenges to public participation

Emerging approaches to Public participation, Participatory budgeting process, Case studies in urban planning India, Abroad where projects are implemented through community participation

Selecting the appropriate level of public participation, developing a detailed public participation plan, planning for communications initiatives that support the process, Identifying appropriate evaluation tools to measure the effectiveness of the public participation process.

References

1. 2015. Gary Paul Green, Anna Haines, Asset Building and Community Development, Sage Publications
2. 2011. Jerry W. Robinson, Introduction to Community Development: Theory, Practice and Service Learning, Sage Publications Ltd.
3. 2008. The Effectiveness of Community Participation In Planning And Urban Development
4. 2006. Robert Cox, Environmental Communication and the Public Sphere. Sage
5. 2005. James L .Creighton, The Public Participation Handbook, Josey Bass
6. 2004. Stephen P. Depoe, Delicath, John W., Elsenbeer, Marie-france Aepli (eds), Communication and Public Participation in environmental decision making (Albany, NY: State University of New York Press, 2004).
7. 2000. Henry Sanoff, John .Community Participation Methods in Design and Planning: Wiley & Sons, New York, 2000, 306 pp.
8. 1990. D. J. Fiorino, (Citizen participation and environmental risk: A survey of institutional mechanisms.
9. 1969. A. Arnstein, ladder of citizen participation. Journal of the American Institute of Planners, 25, 216-224.

Journals

1. Planning Theory