SEMESTER I

I Semester

PLANNING STUDIO - I AREA APPRECIATION AND SPACE PERCEPTIONS			
Course Code	**21 PLN11**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:10:0:0	SEE Marks	50
Total Hours of Pedagogy	160	Total Marks	100
Credits	5	Exam Hours	-

Course objectives:

- First-semester will focus on understanding basic terminologies in planning through study of different areas. It would also focus on developing observation and mapping skills

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Planning requires hands-on experience to utilize the knowledge gained out of theoretical subjects. This is done through exposure to site visits and site studies
- The faculty can make the students think based on small activity based exercises and projects, manual sheets are to be prepared.

Elements of a city: Understanding various building blocks of a city; Developing understanding about city planning elements using movies, lectures and city tours

Distance and Area Perception: Developing an understanding about distance and area and translating the same to scale on drawings.

Space Perception: Study of areas with varying characters to appreciate the concepts of built form, activities and people. Appreciate various elements of built form such as plot sizes, FAR, densities, building heights and open spaces; Understanding how built form supports various activities in different areas.

Neighbourhood Perception: Mapping of a neighbourhood and appreciating the basic characteristics of a neighbourhood; Creation of base maps, recording and presenting information on maps, both manually and digitally.

Use of mapping and presentation skill and representations learnt in planning communication into studios

Teaching-Learning Process	Practical field based exercises to be undertaken, studios help students to work in teams, and get acquainted with live case areas and their problems and help them prepare a professional plan that is relevant to the residents and local bodies, also enables them to critically analyse the area around them and appreciate the same.

Course outcome (Course Skill Set)

Upon the completion of this course, the students would be able:

1. To develop an understanding of the key components of a city and show familiarity with the basic planning terminologies.
2. To show understanding of different patterns and forms that forms the physical fabric of a city.
3. To express awareness of planners' sensibilities.
4. To develop skills to prepare technical drawings and maps for small areas.
5. To develop the ability to visualize areas in two and three dimensions and draw them accurately.
6. To show ability to observe, record, map and present different activities and spaces.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

- Continuous Internal Evaluation (CIE): The CIE marks awarded in case of Studio shall be based on the weekly evaluation of progress of the studio works after the conduction of every Presentation

Semester End Examination:

- Planning Studio SEE will be conducted by the University as per scheduled time table, in a batch wise with External examiner and Internal Examiner reviewing the works of the students through Viva voice.

Suggested Learning Resources:

Books

1. Brownill, S. (ed.) (2017) Localism and Neighbourhood Planning, Policy Press, Bristol.
2. Parker, G., Salter, K. and Wargent, M. (2019) Neighbourhood Planning in Practice, Lund Humphries Publishers, London.

Web links and Video Lectures (e-Resources):

- https://www.my-mooc.com/en/categorie/urban-planning
- https://www.youtube.com/watch?v=knUerjiLmNw

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Site visits and physical case studies based learning to be adapted

I Semester

FUNDAMENTALS OF URBAN AND REGIONAL PLANNING			
Course Code	**21 PLN12**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To introduce to students, the basic concepts and rationales of planning, plan making processes, planning organizations, and theories of urbanization.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- FURP components of planning to be focused upon, various parameters and analysis to be brought out
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Visits to concerned site studies, if need be
- Short videos for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking and different methodologies of problem solving

Module-1

Rationales of Planning and Planning as a Discipline

Various definitions of town and country planning; Goals, objectives and components of planning; Benefits of planning; Planning as a discipline and multidisciplinary nature of planning; Different roles of planners.

Pedagogy	Taught through ppts and pdf materials

Module-2

Foundations of Planning

Orthodoxies of planning; Components of sustainable urban and regional development; Reasoning and its forms in planning; Planning knowledge and its various forms; Arguments for and against planning; Economic and societal aspects as bases of town and country planning.

Pedagogy	Taught through ppts and pdf materials

Module-3

Development Plans and Planning Organizations

Defining development plan; Types and scope of development plans: regional plan, master plan, zonal plan, town planning scheme, layout plan; Structure plan, district plan, action area plan, subject plan; Hierarchy of plans and its significance; Development regulations;

Pedagogy	Taught through ppts, pdf materials and group discussions

Module-4

Governance of Planning

Local government of India; District Planning Committees and Metropolitan Planning Committees; Different development authorities and other organizations like improvement trusts.

Pedagogy	Taught through group ppts, pdf materials and group discussions

Module-5	
Theories of Urbanization and Role of Planning Organizations Theories of urbanization including Concentric Zone Theory, Sector Theory, Multiple Nuclei Theory and other latest theories; Land Use and Land Value Theory of William Alonso; Meanings and forms of globalization; Characteristics of a global city; Principles for planning for a global city.	
Pedagogy	Taught through group ppts, pdf materials and group discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate understanding about the foundational concepts and rationales of planning, learn processes affecting preparation, content and types of development plans.
- To develop knowledge of theories of urbanization

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Alexander, E.R. (1987) Planning as Development Control: Is That All Urban Planning Is For? Town Planning Review, Vol. 58, No. 4, pp. 453-467.

2. Baer, W.C. (2007) General Plan Evaluation Criteria: An Approach to Making Better Plans, Journal of the American Planning Association, Vol. 63, Issue 3, pp. 329-344.

3. Branch, M.C. (2018) Comprehensive City Planning: Introduction and Explanation, Routledge. First Edition published in 1985

4. Kasarda, J.D. and Crenshaw, E.M. (1991) Third World Urbanization: Dimensions, Theories, and Determinants, Annual Review of Sociology, Vol. 17, pp. 467-501.

5. King, A. (1976) Colonial Urban Development: Culture, Social Power, and Environment, Routledge and Kegan Paul, New York.

6. Klosterman, R.E. (1985) Arguments for and Against Planning, Town Planning Review, Vol. 56, No. 1, pp. 5-20.

7. Patel, S.B. (1997) Urban Planning by Objectives, Economic and Political Weekly, Vol. 32, No. 16, pp. 822-826.

8. Roberts, T. (2002) The Seven Lamps of Planning [with Comments] by Cliff Hague, Glyn Roberts and Lesley Punter, Town Planning Review, Vol. 73, No. 1, pp. 1-15.

9. Vidyarthi, S. (2018) Spatial Plans in Post-liberalization India: Who's making the plans for fast-growing Urban Regions? Journal of Urban Affairs, DOI: 10.1080/07352166.2018.1527658

Web links and Video Lectures (e-Resources):

- https://www.my-mooc.com/en/categorie/urban-planning
- https://www.youtube.com/watch?v=g18a4I9fMtk
- https://nptel.ac.in/courses/124/107/124107158/

Activity-Based Learning (Suggested Activities in Class)/ Practical Based learning

- Module based activity related to topics
- Presentation preparation related to the given topics
- Debate on various topics from the module or current affairs

I Semester

TECHNIQUES OF PLANNING I			
Course Code	**21PLN13**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:1:0:1:0:0	SEE Marks	50
Total Hours of Pedagogy	64	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- This course introduces students to know the data requirements for planning and undertake surveys and map data collected for a neighbourhood and a city and present it in a coherent and analytical manner.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Techniques of planning components to be focused upon, various concepts, parameters and analysis to be brought out
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Visits to concerned site studies, if need be
- Short videos for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking and different methodologies of problem solving

Module-1

Types of Data and Sources of Data for Planning

Understanding difference between data, information and knowledge; Distinction between facts and opinions; Reliable sources of data and information; Data requirements for urban and regional planning; Sources of primary and secondary data; Overview of data availability from different sources including Census of India, NSSO, etc.

Pedagogy	Taught through ppts and pdf materials

Module-2

Data Collection Methods - Socio-Economic Surveys

Questionnaire design, design of sample surveys, types of sampling, measurement scales, data coding and data verification; Qualitative data collection methods: focus group surveys, individual interviews, observations, ethnographic methods; Validity and reliability of data.

Pedagogy	Taught through ppts and pdf materials

Module-3

Data Collection Methods - Physical Surveys and Mapping

Physical Surveys and Mapping Physical surveys for the preparation of base maps at different scales, contents of base maps; Land use classifications; Techniques for conducting field surveys for land use, building use, density and other surveys needed for planning; Use of information, communication and technology (ICT) based data collection methods.

Pedagogy	Taught through ppts and pdf materials, group discussion and activities

Module-4

Data Analysis, reasoning and relationships

Data tabulation, statistical methods, frequency distribution, classification, mean, median, mode, correlation, content analysis, Land Use classification system, planning standards, population and economic analysis, Land Suitability analysis, housing analysis, development of indicators.

Pedagogy	Taught through ppts and pdf materials, group discussion and activities

Module-5

Data Presentation

Preparation of tables and charts; Interpreting statistical, qualitative and spatial data to identify trends, patterns and processes; Communication of data through presentations, reports, etc.

Pedagogy	Taught through ppts and pdf materials, group discussion and activities

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To develop the skills for preparing a base map at different scales and representation of relevant planning information on it.
- To know data requirements for planning and to demonstrate skills for undertaking surveys.
- To produce data through tables, charts and reports.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

3. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
4. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

4. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
5. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
6. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Berke, P.R. and Goodschalk, D.R., Kaiser, E.J. and Rodriguez, D.A. (2006) Urban Land Use Planning, University of Illinois Press, Champaign, Illinois. Fifth Edition.
2. Dandekar, H.C. (ed.) (2019) The Planner's Use of Information, Routledge, New York. Third Edition.
3. Guthrie, G. (2010) Basic Research Methods: An Entry to Social Science Research, Sage, Los Angeles.
4. Krueckeberg, D.A. and Silvers, A.L. (1974) Urban Planning Analysis: Methods and Models, Wiley, London.
5. Monmonier, M. (1996) How to Lie with Maps, University of Chicago Press, Chicago.
6. Wang, X., Rainer, A. and Hofe, V. (2007) Research Methods in Urban and Regional Planning, Springer, Berlin

Web links and Video Lectures (e-Resources):

- https://www.my-mooc.com/en/categorie/urban-planning
- https://www.youtube.com/watch?v=Ywrag8amNsU

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group activities, group presentations
- Assignment on various topics from the modules

I Semester

PLANNING COMMUNICATION I			
Course Code	**21 PLN14**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	2:0:0:0:0:0	SEE Marks	-
Total Hours of Pedagogy	32	Total Marks	50
Credits	2	Exam Hours	-

Course objectives:

- To introduce to students applications of computer software for report writing, data analysis and presentations required for planning. To expose students to the use AutoCAD and similar software to prepare drawings and presentations. This course intends to equip the students to present their work through reports and learn how to critically examine literature review for the purposes of developing an Understanding about a particular topic.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Exposing students to manual sheet preparation, manual drafting and architectural design principles
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos, model making and activity based methods to be adapted for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyses information rather than simply recall it
- Discussions on grammar and other language and software oriented technical topics

Module-1

Visual Communication – Drawings

Visual studies about use of line, shape, form, texture, color, composition, and scale in cities and buildings, streets, cities with special emphasis on rhythms, balance, harmony and proportion etc.; Sketching as a tool for communication; Techniques of preparation of base maps at area, city and regional level; Presentation of
planning information through maps, thematic maps

Pedagogy	Chalk and talk method and various teaching aid

Module-2

Verbal Communication

Language and communication; Differences between speech and writing, distinct features of speech; Body language, eye contact, speech, and spoken expression, Elements of a good verbal presentation.

Pedagogy	Chalk and talk method and various teaching aid

Module-3

Photography and Model Making

Photography as a tool for visual information; Images and history; Developing basic understanding of photography, use of camera and its functions; Elements of good photographs; Understanding of different materials for models and built form models to understand the concepts learnt in the studio; A study of basic land and built forms through models, and presentation models.

Pedagogy	Chalk and talk method and various teaching aid

Module-4	
Intrapersonal Communication, Listening Skills, Self-Awareness Listening as an active skill; Types of listeners; Listening for general content; Listening to fill up information; Intensive listening; Listening for specific information; Can intensive listening improve understanding	
Pedagogy	Chalk and talk method and various teaching aid
Module-5	
Introduction to Computer Application in planning Various software packages, utility of computers in planning assignments, current trends in planning with respect to use of computer applications, advanced features of MS word - Use of MS Word in report preparation, Adding and updating table of contents, Spell check, thesaurus, working with columns, tabs and indents, creation and working with tables, margins and space management in a document; Adding references and graphics; Importing and exporting across various formats; Creating questionnaires using macros, PowerPoint and Advanced features of MS excel - Defining data and database management; Working with census data; Data analysis using various functions and tools; Creating formulas, using formulas, cell references, replication, sorting, filtering, functions; Preparation of charts and graphs, creating trend lines, and simple macros. Introduction to AutoCAD; Concept of Mapping and Drafting techniques, introduction to AutoCAD, Understanding the fundamental concepts and the terminologies used in CAD; Tools for digitization; Modifying tools; Layer creation and management; Creating Blocks; Annotation; Scaling; Plotting and Printing and hand-on exercises. Introduction to Google Sketch.	
Pedagogy	Chalk and talk method and laboratory exposure to various planning software

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able:
- To show the ability to appreciate the basic elements of composition in drawings and photographs.
- To demonstrate the ability to prepare base maps at different scales.
- To demonstrate the ability to prepare a model for a given area.
- To identify and name feelings and become aware of patterns of communication of the self
- To design and produce written reports using software, and perform analysis of data.
- To compose data in the form of graphs, charts and also able to prepare maps, plans and sketches to present planning information.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 100% and for Semester End Exam (SEE) is Nil, No Semester End Exam (SEE) for the subject. The student has to obtain a minimum of 40% marks in CIE. Grading will be awarded based on CIE.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Suggested Learning Resources:

Books

1. Machi A.L., McEvoy B.T. (2016) Literature Review: Six Steps to Success, Corwin (Sage), New Delhi.
2. Kousoulas, C.A. (2019) Writing for Planners: Handbook for Students and Professionals in Writing, Editing, and Document Production, CRC Press, New York
3. Macris, N. (2002) Writing in Planning English: Writing Tips for Urban and Environmental Planners, Routledge, New York.

Web links and Video Lectures (e-Resources):

- https://www.my-mooc.com/en/categorie/urban-planning
- https://www.youtube.com/watch?v=eLZc-jGXQ8A

• https://www.youtube.com/watch?v=H_GVANPyI18 • https://www.youtube.com/watch?v=w8LCcTm1o5U • https://www.youtube.com/watch?v=O5A58npxsps
Activity Based Learning (Suggested Activities in Class)/ Practical Based learning • Design principles and manual sheet preparation • Various activities such as model making and photography adapted innovatively • Manual architectural plan drafting assignments, measure the actual dimensions and draw in converted metric scales and Planning software assignments

I Semester

QUANTITATIVE AND QUALITATIVE METHODS FOR PLANNERS			
Course Code	**21PLN15**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:2:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- To comprehend various techniques and methods of quantitative analysis relevant for planning.
- To show how these techniques could be used to identify planning problems and help in taking planning decisions.
- To expose students to various qualitative analysis techniques and their relevance for planning practice and research.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Orienting Planners towards various analysis involving statistical methods
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Module-1

Correlation and Regression Analysis

Degree of correlation, Scatter Diagram, correlation analysis, correlation coefficient, co– efficient of rank correlation, partial correlation analysis and multiple correlation, simple Linear and nonlinear regression, lines of
regression, coefficient of regression; Multiple Regression Analysis; Use of SPSS and its applications in planning

Pedagogy	Taught in presentations and pdf materials, problem solving in class

Module-2

Statistical Inference and Chi-Square Test and Analysis of Variance

Types of estimation; Point, interval, testing of hypothesis, statistical hypothesis, simple and composite tests of significance, null hypothesis, alternative hypothesis; Types of errors, level of significance, critical region; Two tailed and one tailed tests, large and small sample tests for mean and proportion; Chi-square distribution: applications of chi-square distribution; Test of goodness of fit; ANOVA distribution; Use of SPSS; Applications in planning

Pedagogy	Taught in presentations and pdf materials, problem solving in class, group ppts related to topics etc

Module-3

Mathematical Programming Techniques

Mathematical Programming models, linear programming problems, transportation problems, assignment problems, applications in planning

Pedagogy	Taught in presentations and pdf materials, group ppts related to topics etc

Module-4	
Qualitative Methods Dimensions of qualitative research; Designing qualitative research; Terms and principles in qualitative data analysis; Content analysis; Narrative analysis; Discourse analysis for planning.	
Pedagogy	Taught in presentations and pdf materials, problem solving in class, group ppts related to topics etc
Module-5	
Decision Theory Decision making under conditions of certainty, uncertainty, and conditions of risk decision trees, payoff matrix, applications in planning	
Pedagogy	Taught in presentations and pdf materials, problem solving in class, group ppts related to topics etc

Course outcome (Course Skill Set)

Upon the completion of this course, the students would be able:

1. To demonstrate use of quantitative and qualitative techniques for planning analysis.
2. To show knowledge about interpreting findings from such analysis to pursue planning decisions.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Gelman, A. and Hill, J. (2006) Data Analysis Using Regression and Multilevel and Hierarchical Models, Colombia University Press, New York.

2. Molugaram, K. and Rao, G.S. (2017) Statistical Techniques for Transportation Engineering, BSP Books Pvt. Ltd. Published by Elsevier, London.

3. Kambo, N.S. (2008) Mathematical Programming Techniques, Affiliated East-West Press Pvt. Ltd. New Delhi.

4. Braun, V. and Clarke, V. (2013) Successful Qualitative Research: A Practical Guide for Beginners, Sage, New Delhi

5. Gupta S.C., ‘Fundamentals of Statistics’. Himalaya Publishing House, Delhi. (BOOK)

6. Ash Robert B., 'Basic Probability Theory' Dover Publications, New york.

7. Veerarajan T., ' Probability Statistics and Random Processes, India

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=V3iEsLPAD68&list=PLU6SqdYcYsfLRq3tu-g_hvkHDcorrtcBK
- https://www.youtube.com/watch?v=COI0BUmNHT8&list=PLyqSpQzTE6M_JcleDbrVyPnE0PixKs2JE
- http://www.sagepub.in/upmdata/43350_4.pdf
- https://www.youtube.com/watch?v=wRZwrcPnmc4
- https://www.youtube.com/watch?v=VK-rnA3-41c

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Presentation preparation on the given topics from each module
- Problem solving on topics

I Semester

Rural Development and Management			
Course Code	**21PLN16**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:2:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	64	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

Significance of rural development and management could not be better explained than the fact that a majority of Indians still live in rural areas. The chief objective of this subject is to introduce rural development and management by concentrating on understanding the idea of rural development, and how we planned for rural areas and people after 1947 to 2020. Second, we seek to teach students how institutions of local self-government developed after the most important amendment to the Constitution of India was made in 1992.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teachers can devise innovative pedagogy to improve teaching-learning.**

Module-1

Introduction to Rural Development

Meaning, nature and scope of development; Nature of rural society in India; Hierarchy of settlements; Social, economic and ecological constraints for rural development.

Pedagogy	Chalk and talk method, Power Point Presentation

Module-2	
Roots of Rural Development in India Rural reconstruction and Sarvodaya programme before independence; Impact of voluntary effort and Sarvodaya Movement on rural development; Constitutional direction, directive principles; Panchayat Raj - beginning of planning and community development; National extension services.	
Pedagogy	Chalk and talk method, Power Point Presentation
Module-3	
Post-Independence Rural Development Balwant Rai Mehta Committee - three tier system of rural local Government; Need and scope for people's participation and Panchayat Raj; Ashok Mehta Committee - linkage between Panchayat Raj, participation and rural development; Five Year Plans and Rural Development; 73rd Constitution Amendment Act, including – XI Schedule, devolution of powers, functions and its implications; Critical appraisal of government initiatives and their implementation.	
Pedagogy	Chalk and talk method, Power Point Presentation
Module-4	
Planning for Rural Areas Planning process at National, State, Regional and District levels; Planning, development, implementing and monitoring organizations and agencies; Urban and rural interface - integrated approach and local plans; Development initiatives and their convergence; Special component plan and sub-plan for the weaker section; Micro-eco zones; Data base for local planning; decentralized planning; Sustainable rural development.	
Pedagogy	Chalk and talk method, Power Point Presentation
Module-5	
Infrastructural Intervention & Rural Economy Community driven rights-based development; Rural marketing and mobility: the last mile distribution; Development of market and warehouse; Rural housing and sanitation. Rural Economy Rural livelihood and its diversification; Profiling rural economy; Increasing shift to rural nonfarm Sector; Developmental challenges.	
Pedagogy	Chalk and talk method, Power Point Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To develop knowledge about rural development and management with a particular focus on the evolution of the idea of rural development.
- To demonstrate knowledge about how rural areas were planned from 1947 to 2020.
- To show knowledge about how institutions and organizations of local self-government developed after 1992.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Gandhi, F.V. (2018) A Rural Manifesto: Realizing India's Future through her Villages, Rupa, New Delhi.
2. Gupta, K.R. (2010) Rural Development in India, Atlantic Publishers, New Delhi. Volume 4.
3. Jodhka, S.S. (2018) A Handbook of Rural India, (Readings on the Economy, Polity and Society), Orient Black Swan, New Delhi.
4. Jodhka, S.S. and Simpson, E. (2019) India's Villages in the 21st Century: Revisits and Revisions, Oxford University Press, New Delhi.
5. Ministry of Rural Development (2017) Sustainable Rural Development, Ministry of Rural Development, Government of India.
6. Paul, S.K. (2015) Rural Development: Concept and Recent Approaches, Concept Publishing Company Private Limited, New Delhi.
7. Singh, K. and Shishodia, A. (2019) Rural Development: Principles, Policies, and Management, Fourth Edition, Sage, New Delhi.

Web links and Video Lectures (e-Resources):

- https://www.panchayat.gov.in/spatial-planning
- https://niti.gov.in/planningcommission.gov.in/docs/sectors/rural.php?sectors=rural
- http://dpal.kar.nic.in/11%20of%201963%20(E).pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A site visit to a nearby village to understand the economy, the culture, the development pattern.

I Semester

INNOVATION AND DESIGN THINKING			
Course Code	**21PLN17 / 21IDT19**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	16	Total Marks	100
Credits	1	Exam Hours	1

Course Category: Foundation

Preamble: This course provides an introduction to the basic concepts and techniques of engineering and reverse engineering, process of design, analytical thinking and ideas, basics and development of engineering drawing, application of engineering drawing with computer aide.

Course objectives:

- To explain the concept of design thinking for product and service development
- To explain the fundamental concept of innovation and design thinking
- To discuss the methods of implementing design thinking in the real world.

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Show Video/animation films to explain concepts
3. Encourage collaborative (Group Learning) Learning in the class
4. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
5. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it.
6. Topics will be introduced in a multiple representation.
7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
8. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.

Module-1

PROCESS OF DESIGN

Understanding Design thinking

Shared model in team based design – Theory and practice in Design thinking – Exploring work of Designers across globe – MVP or Prototyping

Pedagogy	Introduction about the design thinking : Chalk and Talk method Theory and practice through presentation MVP and Prototyping through live examples and videos

Module-2

Tools for Design Thinking

Real-Time design interaction capture and analysis – Enabling efficient collaboration in digital space – Empathy for design – Collaboration in distributed Design

Pedagogy	Case studies on design thinking for real-time interaction and analysis Simulation exercises for collaborated enabled design thinking Live examples on the success of collaborated design thinking

Module-3	
Design Thinking in IT Design Thinking to Business Process modelling – Agile in Virtual collaboration environment – Scenario based Prototyping	
Pedagogy	Case studies on design thinking and business acceptance of the design Simulation on the role of virtual eco-system for collaborated prototyping
Module-4	
DT For strategic innovations Growth – Story telling - Predictability – Strategic Foresight - Change – Sense Making - Maintenance Relevance – Value redefinition - Extreme Competition – experience design - Standardization – Humanization - Creative Culture – Rapid prototyping, Strategy and Organization – Business Model design.	
Pedagogy	Business model examples of successful designs Presentation by the students on the success of design Live project on design thinking in a group of 4 students
Module-5	
Design thinking workshop Design Thinking Work shop Empathize, Design, Ideate, Prototype and Test	
Pedagogy	8 hours design thinking workshop from the expect and then presentation by the students on the learning from the workshop

Course Outcomes:

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
CO1	Appreciate various design process procedure	K2
CO2	Generate and develop design ideas through different technique	K2
CO3	Identify the significance of reverse Engineering to Understand products	K2
CO4	Draw technical drawing for design ideas	K3

Assessment Details (both CIE and SEE)

(methods of CIE need to be defined topic wise i.e.- Tests, MCQ, Quizzes, Seminar or micro project/Course Project, Term Paper) The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 35% of maximum marks in SEE and a minimum of 40% of maximum marks in CIE. Semester End Exam (SEE) is conducted for 50 marks (1 hours' duration) based on this grading will be awarded. The student has to score a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

Three Unit Tests each of 20 Marks (duration 01 hour)

1. First test at the end of 5th week of the semester
2. Second test at the end of the 10th week of the semester
3. Third test at the end of the 15th week of the semester

(Preferred pattern of the all test are similar to the SEE pattern, however; teacher may follow the CIE test pattern of other engineering courses)

Two assignments each of 10 Marks

4. First assignment at the end of 4th week of the semester
5. Second assignment at the end of 9th week of the semester Report writing /Group discussion/Seminar any one of three suitably planned to attain the COs and POs for 20 Marks (duration 01 hours)
6. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will

be scaled down to 50 marks

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for subject

SEE paper will be set for 50 questions of each of 01 marks. The pattern of the question paper is MCQ. The time allotted for SEE is 01 hours

Suggested Learning Resources:

Text Books :

1. John.R.Karsnitz, Stephen O'Brien and John P. Hutchinson, "Engineering Design",Cengage learning (International edition) Second Edition, 2013.
2. Roger Martin, "The Design of Business: Why Design Thinking is the Next Competitive Advantage", Harvard Business Press , 2009.
3. Hasso Plattner, Christoph Meinel and Larry Leifer (eds), "Design Thinking: Understand – Improve – Apply", Springer, 2011
4. Idris Mootee, "Design Thinking for Strategic Innovation: What They Can't Teach You at Business or Design School", John Wiley & Sons 2013.

References:

1. Yousef Haik and Tamer M.Shahin, "Engineering Design Process", CengageLearning, Second Edition, 2011.
2. Book - Solving Problems with Design Thinking - Ten Stories of What Works (Columbia Business School Publishing) Hardcover – 20 Sep 2013 by Jeanne Liedtka (Author), Andrew King (Author), Kevin Bennett (Author).

Web links and Video Lectures (e-Resources):

1. www.tutor2u.net/business/presentations/. /**productlifecycle**/default.html
2. https://docs.oracle.com/cd/E11108_02/otn/pdf/. /E11087_01.pdf
3. www.bizfilings.com › Home › Marketing › Product Development
4. https://www.mindtools.com/brainstm.html
5. https://www.quicksprout.com/. /how-to-**reverse-engineer**-your-competitor
6. www.vertabelo.com/blog/documentation/**reverse-engineering**
   https://support.microsoft.com/en-us/kb/273814
7. https://support.google.com/docs/answer/179740?hl=en
8. https://www.youtube.com/watch?v=2mjSDIBaUlM
   thevirtualinstructor.com/foreshortening.html
9. https://dschool.stanford.edu/.../designresources/.../ModeGuideBOOTCAMP2010L.pdf
10. https://dschool.stanford.edu/use-our-methods/
11. https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process
12. http://www.creativityatwork.com/design-thinking-strategy-for-innovation/ 49
13. https://www.nngroup.com/articles/design-thinking/
14. https://designthinkingforeducators.com/design-thinking/
15. www.designthinkingformobility.org/wp- content/.../10/NapkinPitch_Worksheet.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- http://dschool.stanford.edu/dgift/

I Semester

COMMUNICATIVE ENGLISH			
Course Code	**21EGH18**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:1:0:1:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	2

Course objectives:

The course (21EGH18) will enable the students ,

- To know about Fundamentals of Communication Skills
- To impart basic English grammar and essentials of language skills
- To train to identify the nuances of phonetics, intonation and enhance pronunciation skills
- To enhance with English vocabulary and language proficiency
- To learn about Techniques of Information Transfer through presentation

Language Lab: To augment LSRW, grammar, and Vocabulary skills (Listening, Speaking, Reading, Writing and Grammar, Vocabulary) through tests, activities, exercises etc., comprehensive web-based learning and assessment systems can be referred as per the AICTE /VTU guidelines.

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Teachers shall adopt suitable pedagogy for effective teaching - learning process. The pedagogy shall involve the combination of different methodologies which suit modern technological tools and software's to meet the present requirements of the Global employment market.
   - (i) Direct instructional method (Low /Old Technology),
   - (ii) Flipped classrooms (High/advanced Technological tools),
   - (iii) Blended learning (combination of both),
   - (iv) Enquiry and evaluation based learning,
   - (v) Personalized learning,
   - (vi) Problems based learning through discussion,
   - (vii) Following the method of expeditionary learning Tools and techniques,
   - (viii) Use of audio visual methods through language Labs in teaching of of LSRW skills.
2. Apart from conventional lecture methods, various types of innovative teaching techniques through videos, animation films may be adapted so that the delivered lesson can progress the students In theoretical applied and practical skills in teaching of communicative skills in general.

Module-1

Introduction to Communicative English

Introduction, Language as a Tool, Fundamentals of Communicative English, Process of Communication, Barriers to Effective Communicative English, Different styles and levels in Communicative English (Communication Channels). Interpersonal and Intrapersonal Communication Skills, How to improve and Develop Interpersonal and Intrapersonal Communication Skills.

Teaching-Learning Process	Chalk and talk method, Videos, PowerPoint presentation to teach Communication skills (LSRW Skills), Creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies real time situations).

Module-2

Introduction to Phonetics

Introduction, Phonetic Transcription, English Pronunciation, Pronunciation Guidelines Related to consonants and vowels, Sounds Mispronounced, Silent and Non-silent Letters, Syllables and Structure, Word Accent and Stress Shift, – Rules for Word Accent, Intonation – purposes of intonation, Spelling Rules and Words often Misspelt – Exercises on it. Common Errors in Pronunciation.

Teaching-Learning Process	Chalk and talk method, Videos, PowerPoint presentation and Animation videos to teach phonetics in Practical method, creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).

Module-3

Basic English Communicative Grammar and Vocabulary PART - I

Grammar: Basic English Grammar and Parts of Speech - Nouns, Pronouns, Adjectives, Verbs, Adverbs, Conjunctions, Articles and Preposition. Preposition, kinds of Preposition and Prepositions often Confused. Articles: Use of Articles – Indefinite and Definite Articles, Pronunciation of 'The', words ending 'age', some plural forms. Introduction to Vocabulary, All Types of Vocabulary –Exercises on it.

Teaching-Learning Process	Chalk and talk method, Videos, PowerPoint presentation to teach Grammar, Animation videos on communication and language skills, creating real-time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).

Module-4

Basic English Communicative Grammar and Vocabulary PART – II

Question Tags, Question Tags for Assertive Sentences (Statements) – Some Exceptions in Question Tags and Exercises, One Word Substitutes and Exercises. Strong and Weak forms of words, Words formation - Prefixes and Suffixes (Vocabulary), Contractions and Abbreviations. Word Pairs (Minimal Pairs) – Exercises, Tense and Types of tenses, The Sequence of Tenses (Rules in use of Tenses) and Exercises on it.

Teaching-Learning Process	Chalk and talk method, PowerPoint presentation to teach Grammar and phonetics, Animation videos on communication and language skills, creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).

Module-5

Communication Skills for Employment

Information Transfer: Oral Presentation - Examples and Practice. Extempore / Public Speaking, Difference between Extempore / Public Speaking, Communication Guidelines for Practice. Mother Tongue Influence (MTI) – South Indian Speakers, Various Techniques for Neutralization of Mother Tongue Influence – Exercises. Reading and Listening Comprehensions – Exercises.

Teaching- Learning Process	Chalk and talk method, Videos, PowerPoint presentation to teach Grammar and phonetics, Animation videos on communication and language skills, creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).

Course outcome (Course Skill Set)

At the end of the course(21EGH18) the student will be able to :

1. Understand and apply the Fundamentals of Communication Skills in their communication skills.
2. Identify the nuances of phonetics, intonation and enhance pronunciation skills.
3. To impart Basic English grammar and essentials of language skills as per present requirement.
4. Understand and use all types of English vocabulary and language proficiency.
5. Adopt the Techniques of Information Transfer through presentation.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

Three Unit Tests each of 20 Marks (duration 01 hour)

1. First test at the end of 5th week of the semester
2. Second test at the end of the 10th week of the semester
3. Third test at the end of the 15th week of the semester

All the tests are preferred similar to SEE pattern; however, teacher may follow test pattern similar to other theory courses of Engineering

Two assignments each of 10 Marks

4. First assignment at the end of 4th week of the semester
5. Second assignment at the end of 9th week of the semester

Report writing /Group discussion/Seminar any one of three suitably planned to attain the COs and POs for 20 Marks (duration 01 hours)

6. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be scaled down to 50 marks

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:

SEE paper will be set for 100 questions of each of 01 marks. The pattern of the question paper is MCQ. The time allotted for SEE is 120 minutes. Marks scored are scaled down to 50 Marks. (Time duration may be made 90 minutes to train the students for engineering / non-engineering competitive examination) 1.

1. Communicative English has become a very important component in all engineering and non-engineering competitive examinations. In exams like GRE, TOEFL, IELTS and GATE exam, all state and Central Government recruitment examinations, placement tests and other Examinations, so the pattern of question paper, in general, will be in a multiple-choice question (MCQ) Pattern. So, to meet the relevance of the recruitment requirement of our Engineering students "Communicative English" Semester end examination (SEE) will be conducted in a multiple choice question (MCQ) pattern.
2. MCQ Pattern (Multiple Choice Questions) Semester End Exam (SEE) is conducted for 50 marks (120 minutes duration).

Suggested Learning Resources:

1) **Communication Skills** by Sanjay Kumar and Pushp Lata, Oxford University Press - 2018.
2) **A Textbook of English Language Communication Skills,** Infinite Learning Solutions – (Revised Edition) 2020.
3) **English for Engineers** by N.P.Sudharshana and C.Savitha, Cambridge University Press – 2018.
4) **Technical Communication** by Gajendra Singh Chauhan and Et al, Cengage learning India Pvt Limited [Latest Revised Edition] - 2019.
5) **English Language Communication Skills – Lab Manual cum Workbook,** Cengage learning India Pvt Limited [Latest Revised Edition] – 2019.
6) **Practical English Usage** by Michael Swan, Oxford University Press – 2016.
7) **Technical Communication** – Principles and Practice, Third Edition by Meenakshi Raman and Sangeetha Sharma, Oxford University Press 2017.
8) **Effective Technical Communication** – Second Edition by M. Ashraf Rizvi, McGraw Hill Education
(India) Private Limited – 2018.

Web links and Video Lectures (e-Resources):

1. icao.int/APAC/Meetings/2012_CMC/FUNDAMENTALS%20OF%20COMMUNICATION.pdf
2. https://www.youtube.com/watch?v=u16EPwFmdis
3. https://www.youtube.com/watch?v=5XsvUjNvLZE

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

1. Group discussions and presentations

SEMESTER II

II Semester

PLANNING STUDIO – II: VILLAGE PLANNING AND URBAN NEIGHBOURHOOD PLANNING			
Course Code	**21PLN21**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:10:0:0	SEE Marks	50
Total Hours of Pedagogy	160	Total Marks	100
Credits	5	Exam Hours	-

Course objectives:

- This studio intends to develop vocabulary in planning and develop an ability to observe, record and present data in meaningful ways with the purpose of understanding planning issues.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Classification of land and exposing the students to the Planning guidelines (URDPFI)
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Course Contents

Neighbourhood Study

- This component is divided in two parts. In the first part students undertake a study of different land uses other than the residential land use. Through land use case studies, students are expected to develop understanding of basic principles of land use planning such as categorization, hierarchy, permissibility, compatibility, etc. and supporting infrastructure required for various land uses.
- Second part of this component focuses on residential land use. Building on the understanding of residential neighbourhood developed in the previous semester, students would also develop an understanding of typologies of residential development with respect to built form, evolution, ownership, etc. and requirements of facilities and infrastructure in residential areas.
- Students are expected to apply data collection methods learnt in Planning Techniques class including primary surveys to understand different activities, socio-economic conditions, and infrastructure availability.

Village study

- Village study would involve an analysis of a rural settlement by comprehending social, economic, physical and political aspects. This exercise would also focus on the understanding of the history of a village and its people, basis of spatial organisation of a village and its transformations over the years.
- This would further include understanding of land between abadi area and revenue boundary of a village. Lastly, a study of government schemes for the entire village would be undertaken. Students would be expected to develop sensitivity to development issues in a rural settlement.

Pedagogy

Through site visits and site studies from both physical study as well as literature study, the studio should focus on the development of various conceptual models and ideas of the students into Plans

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To explain the basic terminologies in planning. To apply data collection methods in field surveys. To identify ways in which we observe, record and present data in meaningful ways. To demonstrate familiarity with the functioning of a neighbourhood and a village through processes of experiential learning.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

- Continuous Internal Evaluation (CIE): The CIE marks awarded in case of Studio shall be based on the weekly evaluation of progress of the studio works after the conduction of every Presentation

Semester End Examination:

Planning Studio SEE will be conducted by the University as per scheduled time table, in a batch wise with External examiner and Internal Examiner reviewing the works of the students through viva voice.

Suggested Learning Resources:

Books

Text Books and References:

1. Berke, P. and Goodschalk, D.A., (2006) Urban Land Use Planning, University of Illinois Press, Champaign, Illinois.
2. Jodhka, S.S. (ed.) (2012) Village Society, Orient Blackswan, Hyderabad.
3. Talen, E. (2012) City Rules: How regulations affect urban form, Island Press, Washington.
4. Stevens, N.J., Salmon, M.P., Walker, H.G., and Stanton, A.N. (2008) Human Factors in Land Use Planning and Design, CRC Press, New York.
5. Sheth, A., and Panchal, N. and Patel, S.B. (2007) Urban Layouts, Densities and the Quality of Urban Life, Economic and Political Weekly Vol. 42, No. 26, pp. 2725-2736.
6. Vidyarthi, S. (2015) One Idea Many Plans: An American City Design Concept in Independent India, Routledge, New York.

Web links and Video Lectures (e-Resources):

- http://mohua.gov.in/link/urdpfi-guidelines.php
- https://www.youtube.com/watch?v=mrcCagx8M1w
- https://www.youtube.com/watch?v=nSOBTRKUmQQ
- https://rural.nic.in/departments/departments-of-mord/department-rural-development
- https://rural.nic.in/sites/default/files/Guidelines_Evaluation_Impact_Assessment_Research_Studies_Econ omic_Monitoring_Wing.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Physical site visits and case studies to enhance the knowledge of the students, field studies to be based on the Village Planning and Urban Neighbourhood Planning
- Literature study ppts and class discussions

II Semester

CITIES IN HISTORY			
Course Code	**21PLN22**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- History informs the present in various ways. The chief objective of this subject is to understand historical processes of human settlements and development of different patterns. Second, to understand common characteristics of settlements in different time periods, and to appreciate influences of political, economic, technological, social and cultural factors in shaping the city and its role in shaping these societal processes.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding of ancient cities in history
- Various forms of Art. Various ideologies of Aristotle and Plato
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Module-1	
History and Historical Processes Significance of studying historical processes; Interpreting history for planning purposes; Concept of time as a dimension of built form; Human settlements as a material expression of civilizational development.	
Pedagogy	Taught through ppts, pdf materials and discussions
Module-2	
Settlements in History Cities in India from medieval to colonial era; Medieval planning in India and their common and distinct elements; Colonial history, built form and town planning; Colonialism and the modernist city in India.	
Pedagogy	Taught through ppts, pdf materials and discussions
Module-3	
Urban Processes Criteria of location and development of towns in Asian history; Political, economic, technological, social and cultural factors shaping settlements through history; Indian city typologies and study of urban growth, decline, renewal in different cities based on functions, locations, etc.	
Pedagogy	Taught through ppts, pdf materials and discussions
Module-4	
History of Cities in South Asia Evolution of cities in South Asia, Urban patterns and trends, similarities and differences from Indian cities; Historical challenges and interventions in Asian cities; Examples and case studies from South Asia.	
Pedagogy	Taught through group ppts, pdf materials and discussions

Module-5	
Definition and symbols of culture Concepts of beauty and ugliness; Classical theories of aesthetics; Relationship of aesthetics with other cultural values; Concepts of scale, space, form and structure. Concept of time as dimension of the built form; concept of space and scale as followed through different cultures; the elements of the town, the house, the street, the chowk; social and cultural criteria of location of towns and activities within it	
Pedagogy	Taught through group ppts, pdf materials and discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To analyse historical processes for overview of urban settlements and their various urban patterns. To identify common elements for categorization of urban patterns based on different parameters. To demonstrate familiarity with chronological evolution of different cities and their functional and spatial characteristics in different time periods. To develop understanding about various urban processes and different parameters affecting the Functioning of a city in terms of its character and pattern.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

5. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
6. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

7. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
8. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
9. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Banga, I. (1991) The City in Indian History, Manohar Publishers and Distributors, New Delhi.

2. Beverley, E. (2011) Colonial Urbanism and South Asian Cities, Social History, Vol. 36, No. 4, pp. 482–497.

3. Bosselmann, P. (2008) Urban Transformation, Island Press, Washington, D.C.

4. Chandavarkar, R. (2009) History, Culture, and the Indian City, Cambridge University Press, New Delhi.

5. Geddes, P. (1915) Cities in Evolution, Williams and Norgate, London.

6. Gallion, A.B. (1950) The Urban Pattern, John Wiley and Sons, London.

Gooptu, N. (2001) The Politics of the Urban Poor in Early Twentieth-Century India, Cambridge University Press, Cambridge.

8. Heitzman, J. (2008) The City in South Asia, Routledge, London.

9. Kenoyer, J. (1998) Ancient Cities of the Indus Valley Civilization, Oxford University Press, New Delhi.

10. King, A. (1976) Colonial Urban Development: Culture, Social Power, and Environment, Routledge and Kegan Paul, New York.

11. Kostof, S. (1993) The City Shaped: Urban Patterns and Meanings through History, Bullfinch Publishing, Stockholm.

12. Mumford, L. (1961) The City in History: Its Origins, Its Transformations, and Its Prospects, Mariner Books, New York.

13. Richards, J. (1993) The Mughal Empire, Cambridge University Press, New Delhi.

14. Sharma, Y. and Malekandathil, P. (2014) Cities in Medieval India, Primus Books, New Delhi.

15. Smith, M.L. (2003) The Social Construction of Ancient Cities, Smithsonian Books, Washington, D.C.

Web links and Video Lectures (e-Resources):

- https://www.my-mooc.com/en/categorie/urban-planning
- https://www.youtube.com/watch?v=H1jHdnZ2U3o

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group presentations and discussions on the topics from the modules

II Semester

SPATIAL DATA INFRASTRUCTURE FOR PLANNING – I			
Course Code	**21 PLN23**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:2:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- To expose students to the modern techniques of remote sensing and photo interpretation required for planning. To provide exposure to the students to the available spatial data and organizations involved in providing planning information and also to impart skills for the use of this planning information.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, introduction to practical hands on experience of the softwares
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Module-1

Remote Sensing and Photo Interpretation Remote Sensing:

Definition, aerial and satellite remote sensing; Aerial photo interpretation, qualitative and quantitative elements of photo-interpretation; Satellite remote sensing, geo-stationary and sun-synchronous satellites, principles of electromagnetic radiations, resolutions; Introduction to digital image processing; salient features of popular
remote sensing satellites; Applications in planning along with laboratory exercises

Pedagogy	Taught through ppts and pdf materials

Module-2

Photogrammetry Limitations of traditional surveys in planning;

Photogrammetry as an alternative tool for surveying; Aerial photographs, and their classification; Principles of stereoscopic vision; Basic instruments like Stereopair, Pocket and Mirror Stereoscopes, Parallax Bars; Principles of photogrammetry, Measurement of heights and depths; Introduction to digital photogrammetry

Pedagogy	Taught through ppts and pdf materials

Module-3

Planning Information Systems

Systems approach to planning as basis for planning information systems; Systems, hierarchy, types; Data and information, value of information, information flows and loops; Information sharing and security; Information systems, types, limitations; New sources of data such as big data and real data.

Pedagogy	Taught through group ppts, pdf materials and group discussions

Module-4

Human Settlements and Planning Information Systems

Information needs, scales and levels of human settlements; Preconditions for using planning information systems; Introduction to various planning information systems

Pedagogy	Taught through group ppts, pdf materials and group discussions

Module-5

Introduction to spatial data infrastructure

Planning information systems in India: NNRMS, NUIS, National Urban Observatory, Municipal information systems, land information systems, cadastre systems; Tools for spatial data handling; Introduction to GIS; BHUVAN; Agencies responsible for generating spatial data.

Pedagogy	Taught through group ppts, pdf materials, group discussions, laboratory introduction to softwares

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate skills about the use of remote sensing and photointerpretation for the preparation of land use and land cover maps. To show the ability to use planning information for making planning decisions.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

TThe weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

1. Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject
2. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
3. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
4. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Lillesand, T., Kiefer, R.W., and Chipman, J. (2011) Remote Sensing and Image Interpretation, Wiley, London.
2. Weilberg M. (ed.) (2016) Photogrammetry and Remote Sensing, Syrawood Publishing House, New York.
3. Ralph, M.S., George, W. R. (2016) Fundamentals of Information Systems, Cengage Learning, Boston.
4. Herold, M. and Gamba, P. (2009) Global Mapping of Human Settlement: Experiences, Datasets, and Prospects, CRC Press, Taylor and Francis, Boca Raton, Florida.

Web links and Video Lectures (e-Resources):

• https://www.youtube.com/watch?v=-5dfbW57EwE • https://www.youtube.com/watch?v=vJAQHA5XQWI&list=PL3MO67NH2XxLAFn3jc7gOhXLD9YFx-_oew • https://www.youtube.com/watch?v=WVC3sKCp6IM
Activity Based Learning (Suggested Activities in Class)/ Practical Based learning • Theoretical discussions on various topics from the modules • Research based activities

II Semester

PLANNING COMMUNICATION II			
Course Code	**21 PLN24**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:2:0:0:0:0	SEE Marks	-
Total Hours of Pedagogy	48	Total Marks	50
Credits	2	Exam Hours	-

Course objectives:

- The primary objective of this course is to develop verbal, visual and interpersonal communication skills.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos, model making and activity based methods to be adapted for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussions on grammar and other language and software oriented technical topics

Module-1

Written communication

Language and communication, differences between speech and writing, distinct features of speech, distinct features of writing, Reading Skills to find out particular information and get the gist through notes, letters, articles, reports. English comprehension, paraphrasing, summarizing and editing.

Pedagogy	Taught through teaching aid, discussion, chalk and talk method, group activities

Module-2

Undertaking Literature Review

Identification of credible journals, books, reports, etc.; How to read literature; Styles of referencing such as Harvard Style of Referencing, APA, etc., Understanding an argument, developing your own interpretations What is an argument, validity and strength of arguments, common fallacies of reasoning, use and abuse of language in reasoning

Pedagogy	Taught through teaching aid, discussion, chalk and talk method, group activities

Module-3

Format and Elements of Reports

Type; Types of reports, difference between technical, scientific, legal and other types of communication; specific characteristics of writing technical reports. Preliminaries: contents, preface, acknowledgements, list of tables and figures; Key words and indexing, Body: introduction, sections and subsections, or chapters, conclusions and recommendations; Appendices; References; knowledge of indexing and available reference materials

Pedagogy	Taught through teaching aid, chalk and talk method, group/individual works discussion, group activities

Module-4

Writing a Report

Developing a coherent structure for a term paper and report; Introductory, developmental, transitional and concluding paragraphs, linguistic unity, coherence and cohesion, descriptive, narrative, expository and argumentative writing. Report writing,

Pedagogy	Taught through teaching aid, chalk and talk method, group/individual works discussion, group Activities

Module-5

Leadership

Meaning, Nature and Functions, Leadership styles in organization, Decision Making Decision making; definition, features, factors, essentials and hindrances in sound decision-making; structure of decisions and types of decisions; approaches to study leadership; trait-approach, behavioural approach and situational approach; Leadership in Teams, Meaning and Nature, Types Of power, Relevance in organization and Society. This unit could be covered in workshop format.

Pedagogy	Taught through teaching aid, chalk and talk method, group/individual works discussion, group activities

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To show ability to lead
- To demonstrate the ability to prepare base maps at different scales.
- To demonstrate the ability to prepare a report.
- To identify and name feelings and become aware of patterns of communication of the self.
- To demonstrate the ability to undertake literature review.
- To demonstrate written communication skills in English.
- To show knowledge about the elements of a report and correct ways of citing sources.
- To show knowledge and ability of structuring a report.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 100% and for Semester End Exam (SEE) is Nil, No Semester End Exam (SEE) for the subject. The student has to obtain a minimum of 40% marks in CIE. Grading will be awarded based on CIE.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.

The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Suggested Learning Resources:

Books

1. Sontang, S. (2014) On Photography, Penguin, Delhi.
2. Jardin, V. (2017) Street Photography: Creative Vision behind the Lens, Routledge, New York.
3. Goleman, D. (2009) Emotional Intelligence, Bloomsbury, New York.
4. Zakia, R.D. and Page, D. (2010) Photographic Composition: A Visual Guide, Focal Press, Massachusetts.
5. Field, K. (2018) Cartography, ESRI Press, California.
6. Hashimoto, A. and Clayton, M. (2009) Visual Design Fundamentals: A Digital Approach, Charles River Media, Needham Heights, M.A.

Web links and Video Lectures (e-Resources):

- https://www.inc.com/encyclopedia/written-communication.html
- https://www.teamwork.com/blog/10-ways-leaders-teams/
- https://slcbmooc.org/

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Various activities related to leadership
- Group ppts, group activities, group discussions, debates
- writing skills enhancing activities and assignments

II Semester

SITE AND LAND DEVELOPMENT			
Course Code	**21PLN25**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:2:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	64	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To develop basic understanding about land development with a particular focus on surveys, geology and hydrology.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, introduction to practical hands on experience of the software's
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels
- Site visits for surveying etc

Module-1

Fundamentals of Surveying

Principles of surveying, types of surveying, classification of surveys and maps; Plan versus map, accuracy versus precision, sources and kinds of errors; Least squares adjustments and applications; Key principles of land surveying, basics of chain surveying, basics of levelling; Modern methods and instruments, accessories, operations, EDM without reflecting prisms; Total Station: types, instrument description, field techniques, Traversing, motorized total stations, field procedures for total stations in topographic surveys.

Pedagogy	Taught through chalk and talk method, ppts and pdf materials

Module-2

Topographical Surveying

Concepts and Techniques and GPS Definitions and procedure for topographic surveying, uses of topographical maps; Relief, methods of representing relief, contours and contour intervals, characteristics of contours, methods of locating contours and interpolation of contours; Dam surveys; Various satellites used by GPS: Differential GPS, Fundamentals of GPS, Application of GPS: GPS Receivers, Hand held GPS Receiver – Function – Field
procedure

Pedagogy	Taught through chalk and talk method, ppts and pdf materials

Module-3

Geology

Geological structure, land forms, weathering, landslides and mass wasting; Instability of hill slopes; Land and terrain suitability for various types of development; Earthquakes, seismic zoning, disaster prevention and other planning considerations

Pedagogy	Taught through chalk and talk method, ppts and pdf materials

Module-4	
Ground Water Concept and role in urban and regional planning in different types of terrains; Hydrologic cycle; Groundwater bearing properties of different lithological formations, surface water, reservoirs and springs; Artificial recharge and groundwater mound; Hydrological features in relation of seepage, fluctuation of water table and hydrographs, geological structure and underground passages for water supply; Hydrology and its links with planning; Implications on site selection and development.	
Pedagogy	Taught through chalk and talk method, PowerPoint Presentations and pdf materials
Module-5	
Fundamentals of Geomorphology Geomorphic classification and Evolution of landforms; Geomorphic cycle and their interpretation; Evolution of typical geomorphic features of India; Description and classification of folds, faults, joints, unconformities, fault planes; Landform types; Landslides, instability of hill slopes and its prevention	
Pedagogy	Taught through chalk and talk method, ppts and pdf materials, group discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To show knowledge and skills about land surveys by actually conducting land surveys by using a range of methods and technologies.
- To demonstrate knowledge and skills about geological and hydrological aspects of land development.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Beer, A.R. and Higgins, C. (2000) Environment Planning for Site Development: A manual for sustainable local planning and design, Second Edition, E and FN Spon, London.

2. Dewberry, S.O. (2008) Land Development Handbook: Planning, Engineering, and Surveying, Third Edition, McGraw Hill, New York.

3. Syms, P. (2010) Land Development and Design, Wiley, Oxford.

Web links and Video Lectures (e-Resources):
• https://www.youtube.com/watch?v=qaEUB_G75dY • https://www.youtube.com/watch?v=6COT986SYTQ • https://prs3.com/site-land-planning/#:~:text=An%20important%20precursor%20of%20any,will%20work%20in%20the%20space.
Activity Based Learning (Suggested Activities in Class)/ Practical Based learning • Group discussions and group ppts • Surveying a site, principles and methodology • Usage of lab equipment

II Semester

	ECONOMICS FOR PLANNERS			
	Course Code	**21PLN26**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- Formal planning activity is focused on master plan making and policy implementation. This results in the distribution of critical resources such as land and built environment. Therefore, it is imperative that planners have a good knowledge of macro-economic aspects. Keeping this in view, the main objective of this course is to comprehend and analyse the significance of economic aspects for planning cities and regions.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Various concepts, models in economics for urban and regional planning
- Visits to concerned site studies, if need be
- Short videos for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking and different methodologies of problem solving

Module-1	
Definition and Scope of Economics in Planning Central problems of economics; Micro and macro-economic decisions, and use of economics in planning; Basic economic concepts relevant to urban and regional planning and related sectors; Relationship between economic forces and planning.	
Pedagogy	PowerPoint preparation, case studies, pdf materials
Module-2	
Theory of Demand and Supply Laws of demand and supply; Elasticity of demand and supply, and its uses in urban and regional planning	
Pedagogy	PowerPoint preparation, case studies, pdf materials, problem solving
Module-3	
Theory of Firm Production Perfect and imperfect markets, and market demand and supply; Pricing under different market conditions; Theory of production, factors of production, costs, scale of production; Economies of scale; Economies of agglomeration.	
Pedagogy	PowerPoint preparation, case studies, pdf materials
Module-4	
Concepts of Income, Employment and Money Classical and modern approaches; Growth and development indicators; Measures of national income; Defining development and under development through various approaches.	
Pedagogy	PowerPoint preparation, case studies, pdf materials, problem solving

	Module-5	
	Introduction to Urban and Regional Economics Use of economic concepts in urban planning, housing, transport, taxes, land use, location, etc.; use of economic concepts in regional planning; location, disparities in development, input output techniques, sectoral development etc. Economic Analysis. Economic Planning in India National and Urban level.	
	Pedagogy	PowerPoint preparation, case studies, pdf materials

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate the basic knowledge about macro-economic aspects of the Indian economy and its relationship with urban and regional planning.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Basu, K. and Maertens, A. (eds.) (2011) The Concise Oxford Companion to Economics in India, Oxford University Press, New Delhi.
2. Bertaud, A. (2018) Order without Design: How Markets Shape Cities, MIT Press, Massachusetts.
3. Behrman, J. and Srinivasan, T.N. (1995) Handbook of Development Economics, Volumes I-III, Elsevier Science, Amsterdam
4. Clark, G.L., Feldman, M.P., Gertler, M.S., Wójcik, D. and Kaiser, A. (eds.) (2018) The New Oxford Handbook of Economic Geography, Oxford University Press, Oxford.
5. Duranton, G., Henderson, J.V., and Strange, W.C. (2015) Handbook of Regional and Urban Economics, Volume 5, Elsevier, Amsterdam.
6. Feldman, M.M.A. (1987) What Kind of Economics for What Kind of Planning? Journal of the American Planning Association, Vol. 53, Issue 4, pp. 427-429.

7. Jacobs, J. (1970) The Economy of Cities, Random House, New York.

8. Jenkins, R., Kennedy, L., Mukhopadhyay, P., & Pradhan, K. (2015) Special Economic Zones in India: Interrogating the Nexus of Land, Development and Urbanization, Environment and Urbanization Asia, Vol. 6, No. 1, pp. 1–17.

9. Klosterman, R.E. (1985) Arguments for and against planning, Town Planning Review, Vol. 56, No. 1, pp. 5-20.

10. Mayer, P. (1993) An Economist's Work in a City Planning Department, Business Economics, Vol. 28, No. 2, pp. 55-58

11. Mohanty, P. (2019) Planning and Economics of Cities: Shaping India's Form and Future, Sage, New Delhi.

12. Windsor, D. (1986) Why planners need economics, Journal of the American Planning Association, Vol. 52, Issue 3, pp. 260-261

Web links and Video Lectures (e-Resources):

- https://www.worldbank.org/en/research/brief/economic-monitoring
- https://documents1.worldbank.org/curated/en/212581468764694501/pdf/multi0page.pdf
- https://www.youtube.com/watch?v=DQq-zJPSf4U
- https://www.youtube.com/watch?v=hwAr1zbRWLs
- https://www.youtube.com/watch?v=LwLh6ax0zTE

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Activities which include applications of economic concepts on regional planning
- Case analysis from each module and problem solving from module 2 & 4

II SEMESTER

PROFESSIONAL WRITING SKILLS IN ENGLISH			
Course Code	**21PLN27 / 21EGH28**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:1:0:1:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	2

Course objectives:

The course (21EGH27) will enable the students ,

- To Identify the Common Errors in Writing and Speaking of English.
- To achieve better Technical writing and Presentation skills for employment.
- To read Technical proposals properly and make them to write good technical reports.
- Acquire Employment and Workplace communication skills.
- To learn about Techniques of Information Transfer through presentation in different level.

Language Lab :

To augment LSRW, grammar and Vocabulary skills (Listening, Speaking, Reading, Writing and Grammar, Vocabulary) through tests, activities, exercises etc., comprehensive web-based learning and assessment systems can be referred as per the AICTE / VTU guidelines.

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

- Teachers shall adopt suitable pedagogy for effective teaching - learning process. The pedagogy shall involve the combination of different methodologies which suit modern technological tools and software's to meet the present requirements of the Global employment market.
  - (i) Direct instructional method (Low /Old Technology),
  - (ii) Flipped classrooms (High/advanced Technological tools),
  - (iii) Blended learning (combination of both),
  - (iv) Enquiry and evaluation based learning,
  - (v) Personalized learning,
  - (vi) Problems based learning through discussion,
  - (vii) Following the method of expeditionary learning Tools and techniques,
  - (viii) Use of audio visual methods through language Labs in teaching of of LSRW skills.
- Apart from conventional lecture methods, various types of innovative teaching techniques through videos, animation films may be adapted so that the delivered lesson can progress the students In theoretical applied and practical skills in teaching of communicative skills in general

Module-1

Identifying Common Errors in Writing and Speaking English :

- Advanced English Grammar for Professionals with exercises, Common errors identification in parts of speech, Use of verbs and phrasal verbs, Auxiliary verbs and their forms, Subject Verb Agreement (Concord Rules with Exercises).
- Common errors in Subject-verb agreement, Noun-pronoun agreement, Sequence of Tenses and errors Identification in Tenses. Advanced English Vocabulary and its types with exercises – Verbal Analogies, Words Confused/Misused.

Pedagogy	Chalk and talk method, Power Point presentation to teach Communication skills (LSRW Skills), Creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).

<table>
<tr><th colspan="2">Module-2</th></tr>
<tr><td colspan="2">Nature and Style of sensible writing :
• Organizing Principles of Paragraphs in Documents, Writing Introduction and Conclusion, Importance of Proper Punctuation, The Art of Condensation (Precise writing) and Techniques in Essay writing, Common Errors due to Indianism in English Communication, Creating Coherence and Cohesion, Sentence arrangements exercises, Practice of Sentence Corrections activities. Importance of Summarizing and Paraphrasing.
Misplaced modifiers, Contractions, Collocations, Word Order, Errors due to the Confusion of words, Common errors in the use of Idioms and phrases, Gender, Singular & Plural. Redundancies & Clichés.</td></tr>
<tr><td>Pedagogy</td><td>Chalk and talk method, Power Point presentation to teach Communication skills (LSRW Skills), Creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).</td></tr>
<tr><th colspan="2">Module-3</th></tr>
<tr><td colspan="2">Technical Reading and Writing Practices :
• Reading Process and Reading Strategies, Introduction to Technical writing process, Understanding of writing process, Effective Technical Reading and Writing Practices , Introduction to Technical Reports writing, Significance of Reports, Types of Reports.
• Introduction to Technical Proposals Writing, Types of Technical Proposals, Characteristics of Technical Proposals. Scientific Writing Process.
• Grammar – Voice and Speech (Active and Passive Voices) and Reported Speech, Spotting Error Exercises, Sentence Improvement Exercises, Cloze Test and Theme Detection Exercises.</td></tr>
<tr><td>Pedagogy</td><td>Chalk and talk method, Power Point presentation to teach Communication skills (LSRW Skills), Creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with company's real time situations).</td></tr>
<tr><th colspan="2">Module-4</th></tr>
<tr><td colspan="2">Professional Communication for Employment :
• The Listening Comprehension, Importance of Listening Comprehension, Types of Listening, Understanding and Interpreting, Listening Barriers, Improving Listening Skills. Attributes of a good and poor listener.
• Reading Skills and Reading Comprehension, Active and Passive Reading, Tips for effective reading.
• Preparing for Job Application, Components of a Formal Letter, Formats and Types of official, employment, Business Letters, Resume vs Bio Data, Profile, CV and others, Types of resume, Writing effective resume for employment, Model Letter of Application (Cover Letter) with Resume, Emails, Blog Writing, Memos (Types of Memos) and other recent communication types.</td></tr>
<tr><td>Pedagogy</td><td>Chalk and talk method, Power Point presentation to teach Communication skills (LSRW Skills), Creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).</td></tr>
<tr><th colspan="2">Module-5</th></tr>
<tr><td colspan="2">Professional Communication at Workplace :
• Group Discussions – Importance, Characteristics, Strategies of a Group Discussions. Group Discussions is a Tool for Selection. Employment/ Job Interviews - Importance, Characteristics, Strategies of a Employment/ Job Interviews. Intra and Interpersonal Communication Skills - Importance, Characteristics, Strategies of a Intra and Interpersonal Communication Skills. Non- Verbal Communication Skills (Body Language) and its importance in GD and PI/JI/EI.
• Presentation skills and Formal Presentations by Students - Importance, Characteristics, Strategies of Presentation Skills. Dialogues in Various Situations (Activity based Practical Sessions in class by Students).</td></tr>
</table>

Pedagogy	Chalk and talk method, Power Point presentation to teach Communication skills (LSRW Skills), Creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies' real time situations).

Course outcome (Course Skill Set)

At the end of the course (21EGH27) the student will be able :

1. To understand and identify the Common Errors in Writing and Speaking.
2. To Achieve better Technical writing and Presentation skills.
3. To read Technical proposals properly and make them to Write good technical reports.
4. Acquire Employment and Workplace communication skills.

To learn about Techniques of Information Transfer through presentation in different level.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation (CIE):

1. Continuous internal evaluation (CIE) needs to be conducted for 50 marks like engineering courses - without any changes as per the University scheme and regulation (Modifications are not allowed).
2. Methods suggested: Quizzes, written quizzes and tests, Reports writing, Seminar and activities).
3. The class teacher has to decide the topic for the closed book test, Written Quiz, and Seminar. In the beginning, only the teacher has to announce the methods of CIE for the subject

.**Semester End Examination (SEE):**

1. Professional Writing Skills in English has become a very important component in all engineering and non-engineering competitive examinations. In exams like GRE, TOEFL, IELTS and GATE exam, all state and Central Government recruitment examinations, placement tests and other Examinations, so the pattern of question paper, in general, will be in multiple choice question (MCQ) Pattern. So, to meet the relevance of the recruitment requirement of our Engineering students "Communicative English" Semester end examination (SEE) will be conducted in a multiple choice question (MCQ) pattern.
2. MCQ Pattern (Multiple Choice Questions) Semester End Exam (SEE) is conducted for 100 marks . 100 MCQ questions will be set. Duration of examination is 02 hours. Marks scored shall be proportionally reduced to 50 marks

Suggested Learning Resources:

1. A Course in Technical English, Cambridge University Press – 2020.
2. Functional English (**As per AICTE 2018 Model Curriculam**) Cengage learning India Pvt Limited [Latest Revised Edition] - 2020.
3. Communication Skills by Sanjay Kumar and Pushp Lata, Oxford University Press - 2018. **Refer it's workbook** for activities and exercises – "Communication Skills – I (A Workbook)" published by Oxford University Press – 2018.
4. Professional Writing Skills in English, Infinite Learning Solutions – (Revised Edition) 2021.
5. Technical Communication – Principles and Practice, Third Edition by Meenakshi Raman and Sangeetha Sharma, Oxford University Press 2017.
6. High School English Grammar & Composition by Wren and Martin, S Chandh & Company Ltd – 2015.
7. Effective Technical Communication – Second Edition by M Ashraf Rizvi, McGraw Hill Education (India) Private Limited – 2018.

8. Intermediate Grammar, Usage and Composition by M.L.Tichoo, A.L.Subramanian, P.R.Subramanian, Orient Black Swan – 2016.
Activity Based Learning (Suggested Activities in Class)/ Practical Based learning 1. Contents related activities (Activity-based discussions) 2. For active participation of students instruct the students to prepare Flowcharts and Handouts 3. Organizing Group wise discussions Connecting to placement activities 4. Quizzes and Discussions, Seminars and assignments

II SEMESTER

HEALTH & WELLNESS (SCIENTIFIC FOUNDATIONS OF HEALTH)			
Course Code	**21PLN28 / 21SFH29**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	01	Exam Hours	1

Course objectives:

The course (21SFH28) will enable the students ,

- To know about Health and wellness (and its Beliefs),
- To acquire Good Health & It's balance for positive mindset
- To Build the healthy lifestyles for good health for their better future
- To Create of Healthy and caring relationships to meet the requirements of MNC and LPG world
- To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future
- To Prevent and fight against harmful diseases for good health through positive mindset

Module-1

Good Health and It's balance for positive mindset:

What Health, Why Now? – What influences your Health?
Health and Behaviour, Health beliefs and advertisements,
Advantages of good health (Short term and long term
benefits), Health and Society, health and family,
health and Personality - Profession.
Health and behaviour, Disparities of health in different vulnerable
groups. Health and psychology, Methods to improve good
psychological health.
Psychological disorders (Stress and Health - Stress management), how to maintain good health, Mindfulness for Spiritual and Intellectual health,
Changing health habits for good
health. Health and personality

RBT Levels : L1, L2 & L3

Module-2

Building of healthy lifestyles for better future:

Developing a healthy diet for good health,
Food and health, Nutritional guidelines for good health and well
beingness, Obesity and overweight disorders and its management,
Eating disorders and proper exercises for its maintenance (Physical activities for
health), Fitness components for health,
Wellness and physical function,
How to avoid exercise injuries.

RBT Levels : L1, L2 & L3

Module-3
Creation of Healthy and caring relationships : Building communication skills (Listening and speaking), Friends and friendship - education, the value of relationships and communication, Relationships for Better or worsening of life, understanding of basic instincts of life (more than a biology), Changing health behaviours through social engineering, **RBT Levels : L1, L2 & L3**
Module-4
Avoiding risks and harmful habits : Characteristics of health compromising behaviors, Recognizing and avoiding of addictions, How addiction develops and addictive behaviors, Types of addictions, influencing factors for addictions, Differences between addictive people and non-addictive people and their behavior with society, Effects and health hazards from addictions Such as..., how to recovery from addictions, **RBT Levels : L1, L2 & L3**
Module-5
Preventing and fighting against diseases for good health : Process of infections and reasons for it, How to protect from different types of transmitted infections such as…., Current trends of socio economic impact of reducing your risk of disease, How to reduce risks for good health, Reducing risks and coping with chronic conditions, Management of chronic illness for Quality of life, Health and Wellness of youth : a challenge for the upcoming future Measuring of health and wealth status **RBT Levels : L1, L2 & L3**
Course outcome (Course Skill Set) At the end of the course the student will be able to : CO 1: To know about Health and wellness (and its Beliefs) and To know about Health and wellness (and its Beliefs) CO 2: To acquire Good Health & It's balance for positive mindset CO 3: To Build the healthy lifestyles for good health for their better future CO 4: To Create of Healthy and caring relationships to meet the requirements of MNC and LPG world CO 5: To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future CO 6: To Prevent and fight against harmful diseases for good health through positive mindset

Assessment Details (both CIE and SEE)

(methods of CIE need to be defined topic wise i.e.- Tests, MCQ, Quizzes, Seminar or micro project/Course Project, Term Paper) The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 35% of maximum marks in SEE and a minimum of 40% of maximum marks in CIE. Semester End Exam (SEE) is conducted for 50 marks (hours' duration). Based on this grading will be awarded. The student has to score a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation (CIE):

Three Unit Tests each of 20 Marks (duration 01 hour)

1. First test at the end of 5th week of the semester
2. Second test at the end of the 10th week of the semester
3. Third test at the end of the 15th week of the semester

(All testsare similar to the SEE pattern i.e question paper pattern is MCQ) Two assignments each of 10 Marks

4. First assignment at the end of 4th week of the semester
5. Second assignment at the end of 9th week of the semester Report writing /Group discussion/Seminar any one of three suitably planned to attain the COs and POs for 20 Marks(duration 01 hours)
6. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be scaled down to 50 marks

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination (SEE):

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for subject

SEE paper will be set for 50 questions of each of 01 marks. The pattern of the question paper is MCQ. The time allotted for SEE is 01 hours

Suggested Learning Resources:

1. **Health Psychology** (Second edition) by Charles Abraham, Mark Conner, Fiona Jones and Daryl O'Connor – Published by Routledge 711 Third Avenue, New York, NY 10017.
2. **Health Psychology - A Textbook,** FOURTH EDITION by Jane Ogden McGraw Hill Education (India) Private Limited - Open University Press
3. **HEALTH PSYCHOLOGY (Ninth Edition)** by SHELLEY E. TAYLOR - University of California, Los Angeles, McGraw Hill Education (India) Private Limited - Open University Press
4. **General Books** - published for university and colleges references on **Health and Wellness.**
5. **SWAYAM / NPTL/ MOOCS/ We blinks/ Internet sources/ YouTube videos** and other materials / notes

SEMESTER III

III Semester

	PLANNING STUDIO-III : LAND USE AND TRANSPORT PLANNING			
	Course Code	**21 PLN31**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:10:0:0	SEE Marks	50
	Total Hours of Pedagogy	160	Total Marks	100
	Credits	5	Exam Hours	-

Course objectives:

- With a mix of field visits and studio classes involving theory, the main objective of this subject is to teach students about techniques and methods of traffic and transportation planning required for the preparation of traffic circulation plan and mobility plan.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Theory subjects and studio to go hand in hand
- Exposing the students to the Planning guidelines (URDPFI), IRC
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, physical site visits for understanding the scale and all the aspects of site planning
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking.
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Discussion in class to elevate thinking level and different problem solving levels

- This studio focuses on the interrelationship between transportation and land uses, and related economic, social and environmental issues. The key learning objectives are: To appreciate the difference between travel demand and transport supply. As part of travel demand, to learn techniques for assessment, mitigation and management of traffic impact of current and proposed development. To understand key techniques for management and enhancement of transport supply.
- Area Mobility Plan with an objective to promote and make way for sustainable mobility patterns, improve accessibility and promote liveability.
- Travel Patterns Study involves analysis of the mobility profile of residents and workers within an area, modes used, trip lengths, trip purpose, etc. Origin destination survey includes analysis by comparing travel patterns with socio economic condition, housing typologies and private vehicle ownership. This will also include public opinion on traffic, noise, accessibility and local environment.
- Assessment of Travel Demand involves understanding of basic techniques for assessment of traffic impact of existing uses; Surveys and analysis related to traffic generation rates and patterns, parking demand, non-motorized traffic, traffic conditions on surrounding roads and intersections; Basic principles of travel demand modelling could be used to simulate scenarios to test how change in the intensity of use of land could impact traffic in an area.
- Transport Supply Analysis will diagnose the key transportation issues in an area by undertaking studies for analysing traffic volume, journey speed, parking, pedestrian movement and access to public transport. A study about the adequacy of transport infrastructure vis-à-vis travel demand

		studies undertaken earlier. ● Impact of transport on the local environment involves analysis of noise, emissions, safety and quality of life; Developing indicators; Consideration of the needs of excluded groups such as children, elderly and women; Development of strategies consisting of planning, design and management measures.
	Pedagogy	The theory subject and studio to go hand-in-hand, the application of the theory is to be undertaken for the studio

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate skills and knowledge to prepare a traffic and transportation plan, circulation plan or traffic management plan for a human settlement.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

- Continuous Internal Evaluation (CIE): The CIE marks awarded in case of Studio shall be based on the weekly evaluation of progress of the studio works after the conduction of every Presentation

Semester End Examination:

- Planning Studio SEE will be conducted by the University as per scheduled time table, in a batch wise with external examiner and Internal Examiner reviewing the works of the students.

Suggested Learning Resources:

Books

1. Kadiyali L.R. (1999) Traffic Engineering and Transport Planning, Khanna Publishers, New Delhi.
2. Sarkar, P.K., Maitri, V. and Joshi, G.J. (2014) Transportation Planning: Principles, Practices and Policies, Prentice Hall India, New Delhi.
3. Verma, A. and Ramanayya, T.V. (2014) Public Transport Planning and Management in Developing Countries, CRC Press, London.
4. Relevant codes of Indian Road Congress, New Delhi

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=uTywQgFmmgI&list=RDCMUCgp23vdLNaUitOkCxxVnRrg&start_radio=1&rv=uTywQgFmmgI&t=2
- https://www.youtube.com/watch?v=0EIUnwcNLQY
- https://www.youtube.com/watch?v=uTywQgFmmgI
- http://mohua.gov.in/upload/uploadfiles/files/Chap-4.pdf
- http://www.irc.nic.in/

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Physical site visits and questionnaire survey to be done, data to be analysed for the studio in order to understand the inter-relationship between transportation and land use.

III Semester

PLANNING THEORY – I			
Course Code	**21 PLN32**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- This subject builds on the 'Fundamentals of Urban and Regional planning' taught in the first semester. The main objective of this subject is to introduce planning theory and its critical aspects such as rationality, globalization, modernism, postmodernism, sustainability, participation, implementation and evaluation. The second objective of this subject is to critically understand various forms cities have taken under variegated societal regimes.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Various models in planning theory
- Short videos for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking

Module-1

Theory, Planning Theory and Paradigm Development

Definitions of theory in general; Definitions of planning theory including theory of planning, theory in planning and theory about planning; Definition of paradigm and its various stages of development by Kuhn; Significance of planning theory.

Pedagogy	Taught through ppts, pdf materials and discussions

Module-2

Participation in Planning

Public interest and its forms; History and significance of public participation; Methods of public participation; Impediments to public participation and conditions for effective public participation; Public participation and empowerment; Participation, policy formulation and implementation

Pedagogy	Taught through ppts, pdf materials and discussions

	Module-3	
	Sustainability, Rationality and Globalization and Theories of City Development Sustainability and rationality in planning; Components of sustainable urban and regional development; Globalization, modernism and postmodernism debate; Pragmatism in planning; Regime theory and urban politics; Compact city approach: concept, advantages and limitations; Forms of cities in developing world, Forms of cities in the developed world; Forms of cities in the former and present socialist countries.	
	Pedagogy	Taught through ppts, pdf materials and discussions
	Module-4	
	Theories of City Development Compact city approach: concept, advantages and limitations; Forms of cities in developing world, Forms of cities in the developed world; Forms of cities in the former and present socialist countries.	
	Pedagogy	Taught through ppts, pdf materials and discussions
	Module-5	
	Planning, Implementation and Evaluation Need for evaluation; Inseparability of planning and evaluation; Planning theories and evaluation; Methods of evaluating development plans; Theories of implementation of planning policies and development plans.	
	Pedagogy	Taught through ppts, pdf materials and discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate knowledge of some of the core concepts of planning theory. To develop critical understanding of various forms cities developed under diverse societal regimes.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Alexander, E.R. (2000) Rationality Revisited: Planning Paradigms in a Post-Postmodernist Perspective, Journal of Planning Education and Research, https://doi.org/10.1177/0739456X0001900303

2. Alexander, E.R. (2006) Evaluation in Planning: Evolution and Prospects, Routledge, London.

3. Alexander, E.R. (1989) Planning and plan implementation: notes on evaluation criteria, Environment and Planning B: Planning and Design, Vol. 16, pp. 127-140.

4. Baer, W.C. (1997) General Plan Evaluation Criteria: An approach to making better plans, Journal of the American Planning Association, Vol. 63, No. 3, pp. 329-344.

5. Breheny, M.J. and Hooper, A.J. (eds.) (1985) Rationality in Planning: Critical Essays on the Role of Rationality in Urban and Regional Planning, Pion, London.

6. Cornwall, A. (ed.) (2011) The Participation Reader, Zed Books, London.

7. Goodchild, B. (1990) Planning and the Modern/Postmodern, Debate, Town Planning Review, Vol. 61, No. 2, pp. 119-137.

8. Hull, A., Alexander, E.R., Khakee, A. and Woltzer, J. (eds.) (2012) Evaluation for Participation and Sustainability in Planning, Routledge, London.

9. Irving, A. (1993) The Modern/Postmodern Divide and Urban Planning, University of Toronto Quarterly, Vol. 62 Issue 4, pp. 474-487

10. Kaza, N. (2018) Vain Foresight: Against the Idea of Implementation in Planning, Planning Theory, pp. 1-18. https://doi.org/10.1177/1473095218815201

11. Quick, K.S. and Bryson, J.M. (2016) 'Public Participation', in Jacob Torbing and Chris Ansell (eds.) Handbook in Theories of Governance, Edward Elgar Press, London.

12. Ren, X. and Keil, R. (2018) The Globalization Cities Reader, Second Edition, Routledge, London.

13. Newman, P. and Kenworthy, J. (1999) Sustainability and Cities, Island Press, Washington, D.C.

14. Sassen, S. (ed.) (2002) Global Networks, Linked Cities, Routledge, New York.

15. Sassen, S. (2001) The Global City, Princeton University Press, Princeton.

Web links and Video Lectures (e-Resources):

- Davidoff, P (1965), Advocacy and Pluralism in Planning, Journal of American Institute of Planners, vol. 31. USA.(JOURNAL ARTICLE)
- Lane, M. B. 'Public Participation in Planning: An Intellectual History'. Australian Geographer, Carfax Publishing. 2005. 36 (3), 283-299 (JOURNAL ARTICLE)
- Innes, Judith; Booher, David. 'Public Participation in Planning: New Strategies for the 21st Century'. University of California, Berkeley: Institute of Urban and Regional Development, USA. 2000. (Working Paper)
- S Christensen (1985). Coping with Uncertainty in planning. Journal of the American Planning Association
- https://www.youtube.com/watch?v=HxfbVLE3VEE

13.09.2022

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group ppts and discussions of various models
- Ppt preparations on various topics of the modules

III Semester

	TRAFFIC AND TRANSPORT PLANNING – I			
	Course Code	**21 PLN33**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- To understand the concepts of mobility, transport modes, travel patterns, transport networks and their relationships to urban forms. To teach how to do various traffic and transportation surveys and their analyses, which will help in preparing circulation and network management plans.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding
- Giving an exposure to students on the IRC, URDPFI, case study examples and good practices
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking and problem solving methods

Module-1

Introducing Transport Planning

Transport planning and management; Principles of sustainable mobility; Transport modes, PT, IPT, NMT and their importance; Traffic, travel and their measures and characteristics; Relationship between transport networks and urban form.

Pedagogy	Taught through ppts, pdfs, discussions and chalk and talk method

Module-2

Transport Surveys

Uses and applications of transport surveys; Methods of conducting, analysing and presenting transport surveys such as traffic volume survey, speed studies, pedestrian and walkability studies, PT and IPT studies, parking studies, and origin and destination survey

Pedagogy	Taught through ppts, pdfs, discussions and chalk and talk method

Module-3

Traffic Planning and Engineering

Urban and rural road hierarchy, understanding of networks analysis; cross-sectional elements, junctions; Street furniture and landscaping; Cycling and pedestrian infrastructure, norms, standards and guidelines; Pedestrian friendly design and planning principles; PT and IPT stops, locations and planning principles.

Pedagogy	Taught through ppts, pdfs, discussions and chalk and talk method

Module-4

	Transport Systems Management Traffic management methods, applications, advantages and disadvantages; Concept and importance of travel demand management; Methods of demand management.
Pedagogy	Taught through ppts, pdfs, discussions and chalk and talk method
	Module-5
	Safety and Environment Transport and Air Pollution, Traffic Noise: Units, sources, and impacts, Measurement of environmental impacts of transport Accidents, typology, accident black spots, Sources of data on accidents, Social Cost of accidents.
Pedagogy	Taught through ppts, pdfs, discussions and chalk and talk method

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To identify traffic and transportation planning problems of a human settlement based on various traffic and transportation surveys and their interpretations. To show the ability to prepare circulation and traffic management plans for human settlements.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Giuliano, G. and Hanson, S. (eds.) (2017) The Geography of Urban Transportation, Fourth Edition, Guildford, London.
2. Kadiyali L.R. (1999) Traffic Engineering and Transport Planning, Khanna Publishers, New Delhi.
3. Rodrigue, J.P. (2013) The Geography of Transport Systems, Third Edition, Routledge, London.
4. Sarkar P.K., Maitri V. and Joshi G.J. (2014) Transportation Planning: Principles, Practices and Policies, Prentice Hall India Learning Private Limited, New Delhi.

5. Saxena, S.C. (1989) A Course in Traffic Planning and Design, Dhanpat Rai and Sons, New Delhi.
6. Verma, A. and Ramanayya, T.V. (2014) Public Transport Planning and Management in Developing Countries, CRC Press, London.

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=0EIUnwcNLQY&list=PLSPmFdxUKM8aAhNBZFuoNlGAW7bzi6Vlx
- https://www.youtube.com/watch?v=oVnvzKZqXJ4&list=PLSPmFdxUKM8aAhNBZFuoNlGAW7bzi6Vlx&index=15
- https://www.youtube.com/watch?v=Gy3eg49aXOw&list=PLSPmFdxUKM8aAhNBZFuoNlGAW7bzi6Vlx&index=22

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Questionnaire preparations
- Group ppt preparations
- Aspects and terminologies of Transportation, research based activities

III Semester

	TECHNIQUES OF PLANNING – II			
	Course Code	**21 PLN34**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- To expose students to techniques required for analysis and presentation of data for understanding and identification of issues, prospects and potentials for development for the preparation of different levels of development plans. To provide exposure to students about techniques of plan preparation, plan evaluation, and public participation in planning.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding
- Giving an exposure to students on the IRC, URDPFI, case study examples and good practices
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking.

Module-1

Data Analysis, reasoning and relationships

Data tabulation; Statistical methods, frequency distribution, classification, mean, median, mode, correlation; Content analysis: discourses and narratives; Land use classification systems; Planning standards, population and economic analysis; Land suitability analysis, housing analysis, and development of indicators.

Pedagogy	Taught through chalk and talk method

Module-2

Techniques for Plan Preparation

Types and levels of plans, hierarchy of plans, planning process; Forecasting techniques, extrapolation techniques, cohort component techniques, economic analysis techniques; Goal formulation; Developing planning standards; Urban growth models and their uses in forecasting

	Pedagogy	Taught through chalk and talk method, discussions
	Module-3	
	Methods of Plan Evaluation Cost benefit analysis, planning balance sheet, logical framework approach; Plan evaluation techniques; Purpose of models, types of decision models, linear programming models, threshold analysis; Agent based decision models, Multi-criteria decision models; Plan monitoring and outcome evaluation techniques.	
	Pedagogy	Taught through chalk and talk method
	Module-4	
	Public Participation Techniques Purposes of participation; Types and methods of participation; Challenges and issues in the use of participatory methods in planning	
	Pedagogy	Taught through chalk and talk method
	Module-5	
	Decision Making Models Purpose of Models, types of decision models, linear programming models, threshold analysis and other decision models.	
	Pedagogy	Taught through chalk and talk method, discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate the ability to perform planning data analysis, and make presentations. To identify issues and potentials for any type of development plan and project. To demonstrate the ability to provide technique based inputs for plan evaluation involving public participation.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and

Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Kelley R.M. (1988) Planning Techniques (Basic and Advanced), Kelley Communication Development, Indiana University Press, Bloomington, Indiana.
2. Jepson, E.J. and Jerry W. (2016) Fundamentals of Plan Making: Methods and Techniques, Routledge, New York.
3. Field, B. and MacGregor, B.D. (2018) Forecasting Techniques for Urban and Regional Planning, Taylor and Francis Group, London.
4. Klosterman R.E. (1990) Community Analysis and Planning Techniques, Rowman and Littlefield Publishers, Lanham, Maryland.

Web links and Video Lectures (e-Resources):

- Government of India (2015), Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines. Vol.I, Town and Country Planning Organisation, Ministry of Urban Development, New Delhi.
- https://planningtank.com/planningtechniques/methods-of-conductingdensity-survey-or-land-use-survey-of-a-city 3. https://www.economicsnetwork.ac.uk/sites/ default/files/Dave%20Clark/1002a.pdf 4. www.tcd.ie/Economics/staff/paredesm/EC 2040/Lecture06.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group presentations from various topics in the modules

III Semester

URBAN AND REGIONAL INFRASTRUCTURE PLANNING			
Course Code	**21 PLN35**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To facilitate planning students to understand the role of planner in infrastructure planning and to introduce basics of urban and regional infrastructure planning. To give exposure to students for taking up innovative techniques for the provision of infrastructure.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding
- Giving an exposure to students on the URDPFI, case study examples, special areas
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Various analysis at regional level
- Discussion in class to elevate thinking

Module-1

Concepts and Terminologies in Infrastructure Planning

Role of physical planner in planning of urban, rural and regional infrastructure; Objectives of infrastructure planning and its implications for public health and environmental protection; Infrastructure networks at urban, rural, and regional level; Manual, code and standards for different infrastructure given by various agencies.

Pedagogy	Taught through chalk and talk methods, ppts and pdfs

Module-2

Storm Water System

Understanding hydrology, its classification, hydrological cycle, urban water cycle; Types of precipitation and its measurement techniques, rainfall analysis; Surface water runoff, measurements of runoff, hydrograph, discharge from small and big rivers; Flood frequencies, and flood protection measures in urban and rural areas; Layout and design of storm water systems; Rain water harvesting system at area level and beyond.

Pedagogy	Taught through chalk and talk methods, ppts and pdfs

	Module-3
	Water Supply Sources of water and intakes; Treatment, quality and quantity, area requirements of components of water supply system; Water distribution system; Water requirements for different land uses, factors affecting water demand, per capita requirements and variations; Planning for various uses of water;
Pedagogy	Taught through chalk and talk methods, ppts and pdfs
	Module-4
	Sanitation and Sewerage Systems Sources of water and intakes; Methods of sanitations; Off-site and onsite sanitation and technology; Low cost appropriate technologies; Standards for Indian cities; Sewerage system networks and layout planning; Sewage disposal methods, location criteria and capacity; Case studies of innovative sanitation approaches, financing and cost recovery for sewer system.
Pedagogy	Taught through chalk and talk methods, ppts, pdfs, discussions
	Module-5
	Solid Waste Management and Other Services Solid waste management for Indian cities, quantity of solid waste and its character; Methods of solid waste management, collection, transportation and disposal; Land filling and composting, pre and post treatment, location and cost aspects of different methods of solid waste disposal systems; Community participation and involvement of NGOs in efficient solid waste management. Best Practices. Provision of telecommunication services- locational criteria for mobile phone towers. gas and oil pipelines., Electric substations requirements, capacity, location and space requirements.
Pedagogy	Taught through chalk and talk methods, ppts, pdfs, discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate knowledge and skills about techniques of infrastructure planning. To apply this knowledge for the preparation of different kind of development plans and projects at different scales.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored

shall be proportionally reduced to 50 marks

2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Parkin J. and Sharma D. (1999) Infrastructure Planning, T. Telford, London.
2. Santen J.D. and Liptan, T.W. (2017) Sustainable Storm Water Management: A Landscape Driven Approach to Planning and Design, Timber Press, Portland, Oregon.
3. Sperling M.V. (1996) Wastewater Characteristics, Treatment and Disposal, IWA Publishing, London.
4. Chandrappa R., Das D.B. (2012) Solid Waste Management: Principles and Practice, Springer, Heidelberg

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=bxNSXutf3N4&list=PLFGUksPYY9Qp5rLjedeUIwcu13eAeETkh
- https://www.youtube.com/watch?v=fed36kdoRlw&list=PLFGUksPYY9Qp5rLjedeUIwcu13eAeETkh&index=14
- https://www.youtube.com/watch?v=rQB8Y5WHtaE&list=PLFGUksPYY9Qp5rLjedeUIwcu13eAeETkh&index=33

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group ppt preparations and discussions on various topics in the modules

III Semester

	SOCIAL CONNECT AND RESPONSIBILITY			
	Course Code	**21 UHV36**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	32	Total Marks	100
	Credits	1	Exam Hours	3

Course objectives:

- Enable the student to do a deep drive into societal challenges being addressed by NGO(s), social enterprises & The government and build solutions to alleviate these complex social problems through immersion, design & technology.
- Provide a formal platform for students to communicate and connect to their surroundings.
- Enable to create of a responsible connection with society.

Learning Outcomes:

The students are expected to have the ability to :

1. Understand social responsibility
2. Practice sustainability and creativity
3. Showcase planning and organizational skills

Contents:

The course is mainly activity-based that will offer a set of activities for the student that enables them to connect with fellow human beings, nature, society, and the world at large. The course will engage students inr interactive sessions, open mic, reading groups, storytelling sessions, and semester-long activities conducted by faculty mentors. In the following a set of activities planned for the course have been listed :

	Module-1
	Plantation and adoption of a tree: Plantation of a tree that will be adopted for four years by a group of B.Tech. students. They will also make an excerpt either as a documentary or a photoblog describing the plant's origin, its usage in daily life, and its appearance in folklore and literature.
Pedagogy	Taught through chalk and talk methods, ppts and pdfs
	Module-2
	Heritage walk and crafts corner: Heritage tour, knowing the history and culture of the city, connecting to people around through their history, knowing the city and its craftsman, photoblog and documentary on evolution and practice of various craft forms.
Pedagogy	Taught through chalk and talk methods, ppts and pdfs
	Module-3
	Organic farming and waste management: usefulness of organic farming, wet waste management in neighboring villages, and implementation in the campus.
Pedagogy	Taught through chalk and talk methods, ppts and pdfs
	Module-4
	Water Conservation: knowing the present practices in the surrounding villages and implementation in the campus, documentary or photo blog presenting the current practices
Pedagogy	Taught through chalk and talk methods, ppts, pdfs, discussions
	Module-5

	Food Walk City's culinary practices, food lore, and indigenous materials of the region used in cooking.	
	Pedagogy	Taught through chalk and talk methods, ppts, pdfs, discussions

Activities

Jamming session, open mic, and poetry: Platform to connect to others. Share the stories with others. Share the experience of Social Connect. Exhibit the talent like playing instruments, singing, one-act play, art-painting, and fine art.

PEDAGOGY

The pedagogy will include interactive lectures, inspiring guest talks, field visits, social immersion, and a course project. Applying and synthesizing information from these sources to define the social problem to address and take up the solution as the course project, with your group. Social immersion with NGOs/social sections will be a key part of the course. Will all lead to the course project that will address the needs of the social sector?

COURSE TOPICS:

The course will introduce social context and various players in the social space, and present approaches to discovering and understanding social needs. Social immersion and inspiring conversional will culminate in developing an actual, idea for problem-based intervention, based on an in-depth understanding of a key social problem.

A total of 14-20 hrs engagement per semester is required for the 3rd semester of the B.E. /B.Tech. program. The students will be divided into 10 groups of 35 each. Each group will be handled by two **faculty mentors.** Faculty mentors will design the activities (particularly Jammingsessions open mic ,and poetry) **Faculty mentors** has to design the evaluation system.

Assessment Details (both CIE and SEE)

Continuous Internal Evaluation:

After completion of, the social connect, the student shall prepare, with daily diary as reference, a comprehensive report in consultation with the mentor/s to indicate what he has observed and learned in the social connect period. The report should be signed by the mentor. The report shall be evaluated on the basis of the following criteria and/or other relevant criteria pertaining to the activity completed.

Marks allotted for the diary are out of 50.

Planning and scheduling the social connect

Information/Data collected during the social connect

Analysis of the information/data and report writing

Considering all above points allotting the marks as mentioned below

Excellent	80 to 100
Good	60 to 79
Satisfactory	40 to 59
Unsatisfactory and fail	< 39

Semester End Examination:

This Jamming session will be conducted at the end of the course **for 50 marks**

Jamming session includes -Platform to connect to others. Share the stories with others. **Share the experience of Social Connect**. Exhibit the talent like playing instruments, singing, one-act play, art-painting, and fine art.

Faculty mentor has to design the evaluation system for Jamming session.
Suggested Learning Resources: **Books**
Web links and Video Lectures (e-Resources):
•
Activity Based Learning (Suggested Activities in Class)/ Practical Based learning •

III Semester

	SAMSKRUTHIKA KANNADA			
	Course Code	**21KSK37/21KBK37**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	16	Total Marks	100
	Credits	1	Exam Hours	1

ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ ಪಠ್ಯದ ಕಲಿಕೆಯ ಉದ್ದೇಶಗಳು:

1. ವೃತ್ತಿಪರ ಪದವಿ ವಿದ್ಯಾರ್ಥಿಗಳಾಗಿರುವುದರಿಂದ ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಮತ್ತು ಕನ್ನಡದ ಸಂಸ್ಕೃತಿಯ ಪರಿಚಯ ಮಾಡಿಕೊಡುವುದು.
2. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪ್ರಧಾನ ಭಾಗವಾದ ಆಧುನಿಕ ಪೂರ್ವ ಮತ್ತು ಆಧುನಿಕ ಕಾವ್ಯಗಳನ್ನು ಸಾಂಕೇತಿಕವಾಗಿ ಪರಿಚಯಿಸಿ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಾಹಿತ್ಯ ಮತ್ತು ಸಂಸ್ಕೃತಿಯ ಬಗ್ಗೆ ಅರಿವು ಹಾಗೂ ಆಸಕ್ತಿಯನ್ನು ಮೂಡಿಸುವುದು.
3. ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯವನ್ನು ಹಾಗೂ ಅವರುಗಳ ಸಾಧಿಸಿದ ವಿಷಯಗಳನ್ನು ಪರಿಚಯಿಸುವುದು.
4. ಕನ್ನಡ ಶಬ್ದಸಂಪತ್ತಿನ ಪರಿಚಯ ಮತ್ತು ಕನ್ನಡ ಭಾಷೆಯ ಬಳಕೆ ಹಾಗೂ ಕನ್ನಡದಲ್ಲಿ ಪತ್ರ ವ್ಯವಹಾರವನ್ನು ತಿಳಿಸಿಕೊಡುವುದು.

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವ್ಯವಸ್ಥೆ (Teaching-Learning Process – General Instructions) :

These are sample Strategies, which teacher can use to accelerate the attainment of the course outcomes.

1. **ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡವನ್ನು ಬೋಧಿಸಲು ತರಗತಿಯಲ್ಲಿ ಶಿಕ್ಷಕರು ಪ್ರಸ್ತುತ ಪುಸ್ತಕ ಆಧಾರಿಸಿ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನವನ್ನು ಅನುಸರಿಸುವುದು. ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ತಯಾರಿಸಲು ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಪ್ರೇರೇಪಿಸುವುದು ಮತ್ತು ತರಗತಿಯಲ್ಲಿ ಅವುಗಳನ್ನು ಚರ್ಚಿಸಲು ಅವಕಾಶ ಮಾಡಿಕೊಡುವುದು.**
2. **ಇತ್ತೀಚಿನ ತಂತ್ರಜ್ಞಾನದ ಅನುಕೂಲಗಳನ್ನು ಬಳಸಿಕೊಳ್ಳುವುದು - ಅಂದರೆ ಕವಿ-ಕಾವ್ಯ ಪರಿಚಯದಲ್ಲಿ ಕವಿಗಳ ಚಿತ್ರಣ ಮತ್ತು ಲೇಖನಗಳು ಮತ್ತು ಕಥೆ ಕಾವ್ಯಗಳ ಮೂಲ ಅಂಶಗಳಿಗೆ ಸಂಬಂಧಪಟ್ಟ ಧ್ವನಿ ಚಿತ್ರಗಳು, ಸಂಭಾಷಣೆಗಳು, ಈಗಾಗಲೇ ಇತರ ವಿಮರ್ಶಕರು ಬರೆದಿರುವ ವಿಮರ್ಶಾತ್ಮಕ ವಿಷಯಗಳನ್ನು ಟಿಪಿಟಿ, ಡಿಜಿಟಲ್ ಮಾಧ್ಯಮಗಳ ಮುಖಾಂತರ ವಿಶ್ಲೇಷಿಸುವುದು.**
3. **ನವೀನ ಮಾದರಿಯ ಸಾಹಿತ್ಯ ಬೋಧನೆಗೆ ಸಂಬಂಧಪಟ್ಟ ವಿಧಾನಗಳನ್ನು ಶಿಕ್ಷಕರು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅನುಕೂಲವಾಗುವ ರೀತಿಯಲ್ಲಿ ಅಳವಡಿಸಿಕೊಳ್ಳಬಹುದು.**

ಘಟಕ -1 ಲೇಖನಗಳು

1. ಕರ್ನಾಟಕ ಸಂಸ್ಕೃತಿ - ಹಂಪ ನಾಗರಾಜಯ್ಯ
2. ಕರ್ನಾಟಕದ ಏಕೀಕರಣ : ಒಂದು ಅಪೂರ್ವ ಚರಿತ್ರೆ - ಜಿ. ವೆಂಕಟಸುಬ್ಬಯ್ಯ
3. ಆಡಳಿತ ಭಾಷೆಯಾಗಿ ಕನ್ನಡ - ಡಾ. ಎಲ್. ತಿಮ್ಮೇಶ ಮತ್ತು ಪ್ರೋ. ವಿ. ಕೇಶವಮೂರ್ತಿ

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	**ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.**

ಘಟಕ -2 ಆಧುನಿಕ ಪೂರ್ವದ ಕಾವ್ಯ ಭಾಗ	
1. ವಚನಗಳು : ಬಸವಣ್ಣ, ಅಕ್ಕಮಹಾದೇವಿ, ಅಲ್ಲಮಪ್ರಭು, ಆಯ್ದಕ್ಕಿ ಮಾರಯ್ಯ, ಜೇಡರದಾಸಿಮಯ್ಯ, ಆಯ್ದಕ್ಕಿ ಲಕ್ಕಮ್ಮ. 2. ಕೀರ್ತನೆಗಳು : ಅದರಿಂದೇನು ಫಲ ಇದರಿಂದೇನು ಫಲ - ಪುರಂದರದಾಸರು ತಲ್ಲಣಿಸದಿರು ಕಂಡ್ಯ ತಾಳು ಮನವೇ - ಕನಕದಾಸರು 3. ತತ್ವಪದಗಳು : ಸಾವಿರ ಕೊಡಗಳ ಸುಟ್ಟು - ಶಿಶುನಾಳ ಶರೀಫ	
ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	**ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.**
ಘಟಕ -3 ಆಧುನಿಕ ಕಾವ್ಯಭಾಗ	
1. ಡಿವಿಜಿ ರವರ ಮಂಕುತಿಮ್ಮನ ಕಗ್ಗದಿಂದ ಅಯ್ದ ಕೆಲವು ಭಾಗಗಳು 2. ಕುರುಡು ಕಾಂಚಾಣ : ದಾ.ರಾ. ಬೇಂದ್ರೆ 3. ಹೊಸಬಾಳಿನ ಗೀತೆ : ಕುವೆಂಪು	
ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	**ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.**
ಘಟಕ -4 ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯ	
1. ಡಾ. ಸರ್. ಎಂ. ವಿಶ್ವೇಶ್ವರಯ್ಯ : ವ್ಯಕ್ತಿ ಮತ್ತು ಐತಿಹ್ಯ - ಎ ಎನ್ ಮೂರ್ತಿರಾವ್ 2. ಕರಕುಶಲ ಕಲೆಗಳು ಮತ್ತು ಪರಂಪರೆಯ ವಿಜ್ಞಾನ : ಕರೀಗೌಡ ಬೀಚನಹಳ್ಳಿ	
ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	**ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.**
ಘಟಕ -5 ಕಥೆ ಮತ್ತು ಪ್ರವಾಸ ಕಥನ	
1. ಯುಗಾದಿ : ವಸುಧೇಂದ್ರ 2. ಮೆಗಾನೆ ಎಂಬ ಗಿರಿಜನ ಪರ್ವತ : ಹಿ.ಚಿ. ಬೋರಲಿಂಗಯ್ಯ	
ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	**ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.**

ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ ಕಲಿಕೆಯಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಆಗುವ ಪರಿಣಾಮಗಳು (course Outcomes):

1. ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಮತ್ತು ಕನ್ನಡದ ಸಂಸ್ಕೃತಿಯ ಪರಿಚಯವಾಗುತ್ತದೆ.
2. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಆಧುನಿಕ ಪೂರ್ವ ಮತ್ತು ಆಧುನಿಕ ಕಾವ್ಯಗಳು ಮತ್ತು ಸಂಸ್ಕೃತಿಯ ಬಗ್ಗೆ ಆಸಕ್ತಿಯು ಮೂಡುತ್ತದೆ.
3. ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯವಾಗುತ್ತದೆ.
4. ಕನ್ನಡ ಭಾಷಾಭ್ಯಾಸ, ಸಾಮಾನ್ಯ ಕನ್ನಡ ಹಾಗೂ ಆಡಳಿತ ಕನ್ನಡದ ಪದಗಳ ಪರಿಚಯವಾಗುತ್ತದೆ.

ಮೌಲ್ಯಮಾಪನದ ವಿಧಾನ (Assessment Details- both CIE and SEE) :

(methods of CIE - MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks individually both in CIE and 35% marks in SEE to pass. Theory Semester End Exam (SEE) is conducted for 50 marks (01 hour duration). The student has to get 40% out of total marks for course (ie. CIE+SEE marks). Based on this grading will be awarded.

Continuous Internal Evaluation:

Three Tests each of **20 Marks (duration 01 hour)**

a. First test at the end of 5th week of the semester
b. Second test at the end of the 10th week of the semester
c. Third test at the end of the 15th week of the semester

Two assignments each of **10 Marks : 1.** First assignment at the end of 4th week of the semester

2. Second assignment at the end of 9th week of the semester

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks (duration 01 hours)**

3. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆಯು ಈ ಕೆಳಗಿನಂತಿರುತ್ತದೆ – Semester End Exam (SEE):

SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject.

1. The question paper will have 50 questions. Each question is set for 01 mark.
2. SEE Pattern will be in MCQ Model for 50 marks. Duration of the exam is 01 Hour.

Suggested Learning Resources:

Books

1. https://vtu.ac.in/pdf/2018syll/samskruthi.pdf
2. https://vtu.ac.in/pdf/2018syll/baleke.pdf

Web links and Video Lectures (e-Resources):

- https://vtu.ac.in/pdf/2018syll/samskruthi.pdf
- https://vtu.ac.in/pdf/2018syll/baleke.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Interactions, discussions and language learning activities

	BALAKE KANNADA			
	Course Code	**21KSK37/21KBK37**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	16	Total Marks	100
	Credits	1	Exam Hours	1

ಬಳಕೆ ಕನ್ನಡ ಪಠ್ಯದ ಕಲಿಕೆಯ ಉದ್ದೇಶಗಳು (Course Learning Objectives):

- To Create the awareness regarding the necessity of learning local language for comfortable and healthy life.
- To enable learners to Listen and understand the Kannada language properly.
- To speak, read and write Kannada language as per requirement.
- To train the learners for correct and polite conservation.

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವ್ಯವಸ್ಥೆ (Teaching-Learning Process – General Instructions) :

These are sample Strategies, which teacher can use to accelerate the attainment of the course outcomes.

1. ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡವನ್ನು ಬೋಧಿಸಲು ತರಗತಿಯಲ್ಲಿ ಶಿಕ್ಷಕರು ಪ್ರಸ್ತುತ ಪುಸ್ತಕ ಆಧಾರಿಸಿ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನವನ್ನು ಅನುಸರಿಸುವುದು. ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ತಯಾರಿಸಲು ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಪ್ರೇರೇಪಿಸುವುದು ಮತ್ತು ತರಗತಿಯಲ್ಲಿ ಅವುಗಳನ್ನು ಚರ್ಚಿಸಲು ಅವಕಾಶ ಮಾಡಿಕೊಡುವುದು.
2. ಇತ್ತೀಚಿನ ತಂತ್ರಜ್ಞಾನದ ಅನುಕೂಲಗಳನ್ನು ಬಳಸಿಕೊಳ್ಳುವುದು - ಅಂದರೆ ಕವಿ-ಕಾವ್ಯ ಪರಿಚಯದಲ್ಲಿ ಕವಿಗಳ ಚಿತ್ರಣ ಮತ್ತು ಲೇಖನಗಳು ಮತ್ತು ಕಥೆ ಕಾವ್ಯಗಳ ಮೂಲ ಅಂಶಗಳಿಗೆ ಸಂಬಂಧಪಟ್ಟ ಧ್ವನಿ ಚಿತ್ರಗಳು, ಸಂಭಾಷಣೆಗಳು, ಈಗಾಗಲೇ ಇತರ ವಿಮರ್ಶಕರು ಬರೆದಿರುವ ವಿಮರ್ಶಾತ್ಮಕ ವಿಷಯಗಳನ್ನು ಟಿಪಿಟಿ, ಡಿಜಿಟಲ್ ಮಾಧ್ಯಮಗಳ ಮುಖಾಂತರ ವಿಶ್ಲೇಷಿಸುವುದು.
3. ನವೀನ ಮಾದರಿಯ ಸಾಹಿತ್ಯ ಬೋಧನೆಗೆ ಸಂಬಂಧಪಟ್ಟ ವಿಧಾನಗಳನ್ನು ಶಿಕ್ಷಕರು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅನುಕೂಲವಾಗುವ ರೀತಿಯಲ್ಲಿ ಅಳವಡಿಸಿಕೊಳ್ಳಬಹುದು.

Module-1

1. Introduction, Necessity of learning a local language. Methods to learn the Kannada language.
2. Easy learning of a Kannada Language: A few tips. Hints for correct and polite conservation, Listening and Speaking Activities
3. Key to Transcription.
4. **ವೈಯಕ್ತಿಕ, ಸ್ವಾಮ್ಯಸೂಚಕ/ಸಂಬಂಧಿತ ಸಾರ್ವನಾಮಗಳು ಮತ್ತು ಪ್ರಶ್ನಾರ್ಥಕ ಪದಗಳು - Personal Pronouns, Possessive Forms, Interrogative words**

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.

Module-2

1. **ನಾಮಪದಗಳ ಸಂಬಂಧಾರ್ಥಕ ರೂಪಗಳು, ಸಂದೇಹಾಸ್ಪದ ಪ್ರಶ್ನೆಗಳು ಮತ್ತು ಸಂಬಂಧವಾಚಕ ನಾಮಪದಗಳು – Possessive forms of nouns, dubitive question and Relative nouns**
2. **ಗುಣ, ಪರಿಮಾಣ ಮತ್ತು ವರ್ಣಬಣ್ಣ ವಿಶೇಷಣಗಳು, ಸಂಖ್ಯಾವಾಚಕಗಳು Qualitative, Quantitative and Colour Adjectives, Numerals**
3. **PÁgÀPÀ gÀÆ¥ÀUÀ¼ÀÄ ªÀÄvÀÄÛ «¨sÀQÛ ¥ÀævÀåAiÀÄUÀ¼ÀÄ – ¸À¥ÀÛ«Ä «¨sÀQÛ ¥ÀævÀåAiÀÄ – (D, CzÀÄ, C°À, C°è) Predictive Forms, Locative Case**

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.

Module-3

1. ZÀvÀÄyð «¨sÀQÛ ¥ÀævÀåAiÀÄzÀ §¼ÀPÉ ªÀÄvÀÄÛ ¸ÀASÁåªÁZÀPÀUÀ¼ÀÄ - **Dative Cases, and Numerals**
4. ¸ÀASÁåUÀÄtªÁZÀPÀUÀ¼ÀÄ ªÀÄvÀÄÛ §ºÀÄªÀZÀ£À £ÁªÀÄgÀÆ¥ÀUÀ¼ÀÄ - **Ordinal numerals and Plural markers**
5. £ÀÆå£À / ¤µÉÃzsÁxÀðPÀ QæAiÀiÁ¥ÀzÀUÀ¼ÀÄ ªÀÄvÀÄÛ ªÀtð UÀÄtªÁZÀPÀUÀ¼ÀÄ

Defective / Negative Verbs and Colour Adjectives

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.

Module-4

1. **ಅಪ್ಪಣೆ / ಒಪ್ಪಿಗೆ, ನಿರ್ದೇಶನ, ಪ್ರೋತ್ಸಾಹ ಮತು ಒತ್ತಾಯ ಅರ್ಥರೂಪ ಪದಗಳು ಮತ್ತು ವಾಕ್ಯಗಳು**
   Permission, Commands, encouraging and Urging words (Imperative words and sentences)
2. **ಸಾಮಾನ್ಯ ಸಂಭಾಷಣೆಗಳಲ್ಲಿ ದ್ವಿತೀಯ ವಿಭಕ್ತಿ ಪ್ರತ್ಯಯಗಳು ಮತ್ತು ಸಂಭವನೀಯ ಪ್ರಕಾರಗಳು**
   Accusative Cases and Potential Forms used in General Communication
3. **"ಇರು ಮತ್ತು ಇರಲ್ಲ" ಸಹಾಯಕ ಕ್ರಿಯಾಪದಗಳು, ಸಂಭಾವ್ಯಸೂಚಕ ಮತ್ತು ನಿಷೇಧಾರ್ಥಕ ಕ್ರಿಯಾ ಪದಗಳು -** Helping Verbs
   "iru and iralla", Corresponding Future and Negation Verbs
6. **ಹೋಲಿಕೆ (ತರತಮ) , ಸಂಬಂಧ ಸೂಚಕ ಮತ್ತು ವಸ್ತು ಸೂಚಕ ಪ್ರತ್ಯಯಗಳು ಮತ್ತು ನಿಷೇಧಾರ್ಥಕ ಪದಗಳ ಬಳಕೆ-** Comparitive, Relationship, Identification and Negation Words

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.

Module-5

1. **ಕಾಲ ಮತ್ತು ಸಮಯದ ಹಾಗೂ ಕ್ರಿಯಾಪದಗಳ ವಿವಿಧ ಪ್ರಕಾರಗಳು -** ifferent types of forms of Tense, Time and Verbs
2. **ದ್, -ತ್, - ತು, - ಇತು, - ಆಗಿ, - ಅಲ್ಲ, - ಗ್, -ಕ್, ಇದೆ, ಕ್ರಿಯಾ ಪ್ರತ್ಯಯಗಳೊಂದಿಗೆ ಭೂತ, ಭವಿಷ್ಯತ್ ಮತ್ತು ವರ್ತಮಾನ ಕಾಲ ವಾಕ್ಯ ರಚನೆ -** Formation of Past, Future and Present Tense Sentences with Verb Forms

3. Kannada Vocabulary List : ಸಂಭಾಷಣೆಯಲ್ಲಿ ದಿನೋಪಯೋಗಿ ಕನ್ನಡ ಪದಗಳು - Kannada Words in Conversation

ಬೋಧನೆ ಮತ್ತು ಕಲಿಕಾ ವಿಧಾನ	ಪುಸ್ತಕ ಆಧಾರಿತ ಬ್ಲಾಕ್ ಬೋರ್ಡ್ ವಿಧಾನ, ಪ್ರಮುಖ ಅಂಶಗಳ ಚಾರ್ಟ್ ಗಳನ್ನು ಬಳಸುವುದು, ಪಿಪಿಟಿ ಮತ್ತು ದೃಶ್ಯ ಮಾಧ್ಯಮದ ವಿಡಿಯೋಗಳನ್ನು ಬಳಸುವುದು, ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಚಟುವಟಿಕೆಗಳ ಮುಖಾಂತರ ಚರ್ಚಿಸುವುದು.

ಬಳಕೆ ಕನ್ನಡ ಪಠ್ಯದ ಕಲಿಕೆಯಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಆಗುವ ಅನುಕೂಲಗಳು ಮತ್ತು ಫಲಿತಾಂಶಗಳು: course Outcomes

(**Course Skill** Set): At the end of the Course, The Students will be able

1. To understand the necessity of learning of local language for comfortable life.
2. To Listen and understand the Kannada language properly.
3. To speak, read and write Kannada language as per requirement.
4. To communicate (converse) in Kannada language in their daily life with kannada speakers.
5. To speak in polite conservation.

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50)in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together

Continuous Internal Evaluation:

Three Tests each of **20 Marks (duration 01 hour**)

a. First test at the end of 5th week of the semester
b. Second test at the end of the 10th week of the semester
c. Third test at the end of the 15th week of the semester

Two assignments each of **10 Marks : 1.** First assignment at the end of 4th week of the semester. 2. Second assignment at the end of 9th week of the semester

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks (duration 01 hours)**

3. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆಯು ಈ ಕೆಳಗಿನಂತಿರುತ್ತದೆ – Semester End Exam (SEE):

SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject.

3. The question paper will have 50 questions. Each question is set for 01 mark.
4. SEE Pattern will be in MCQ Model for 50 marks. Duration of the exam is 01 Hour.

Textbook :

ಬಳಕೆ ಕನ್ನಡ

ಲೇಖಕರು : ಡಾ. ಎಲ್. ತಿಮ್ಮೇಶ

ಪ್ರಸಾರಾಂಗ, ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ.

Suggested Learning Resources:

Books

3. https://vtu.ac.in/pdf/2018syll/samskruthi.pdf
4. https://vtu.ac.in/pdf/2018syll/baleke.pdf

Web links and Video Lectures (e-Resources):

- https://vtu.ac.in/pdf/2018syll/samskruthi.pdf
- https://vtu.ac.in/pdf/2018syll/baleke.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Interactions, discussions and language learning activities

SEMESTER IV

IV Semester

	PLANNING STUDIO: SITE PLANNING			
	Course Code	**21 PLN41**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:10:0:0	SEE Marks	50
	Total Hours of Pedagogy	160	Total Marks	100
	Credits	5	Exam Hours	-

Course objectives:

- Objective of this studio is to undertake a sector level subdivision and plan for a residential site with sensitivity to its immediate as well as the city context within the sector.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Theory subjects and studio to go hand in hand
- Exposing the students to the Planning guidelines (URDPFI), NBC and local byelaws
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, physical site visits for understanding the scale and all the aspects of site planning
- Making the student understand sector planning, housing issues, densities, demographics and various other aspects of planning in order to prepare a masterplan for the studio.
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

- Sector Planning: Through developing an understanding of the city level context and with specific focus on housing issues, students are required to prepare a subdivision plan for an identified sector of not less than 50 ha. with an emphasis on the basics of densities, land subdivision, street layout, built form, facility distribution and integration of these elements with socioeconomic profile and housing options as a response to the context.
- This exercise will allow the students to do analysis of demographic, socio-economic and physical characteristics of an area, to help them develop concepts that are relevant to the context of a site.
- Factors such as location and type of land uses and infrastructural facilities are required to be considered along with the existing and proposed future growth of an area.. Entire work plan of the studio would include the following steps:
- Site Planning: Second stage of the studio would include selection of a residential plot not less than 5 ha for a detailed site plan within the context of proposed sector plan. The proposal will be presented and will include identification of issues, explanation of the concept, site layout, landscape plan, site services plan, node details, housing details, unit designs, roads, parking and other relevant details, project cost outline, along with a physical model of the site plan.
- The final submission may include a written report of the entire work with relevant analysis,

	plans and drawings.	
	Pedagogy	Physical study to be undertaken, the various aspects of the site both architectural and planning to be brought into the minds of the students. Application of concepts to the final masterplan proposal to be done for the studio.

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able:
- To summarize different elements of subdivision layouts and site planning
- To develop sensitivity to the site and city contexts.
- To apply development regulations at subdivision and site level.
- To plan for housing, services and landscape for a small site.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

- Continuous Internal Evaluation (CIE): The CIE marks awarded in case of Studio shall be based on the weekly evaluation of progress of the studio works after the conduction of every Presentation

Semester End Examination:

- Planning Studio SEE will be conducted by the University as per scheduled time table, in a batch wise with external examiner and Internal Examiner reviewing the works of the students.

Suggested Learning Resources:

Books

5. LaGro, J.A. Jr. (2013) Site Analysis: Informing Context-Sensitive and Sustainable Site Planning and Design, Third Edition, Wiley International, New York. Lynch, K. (1984) Site Planning, Third Edition MIT Press, USA. McHarg, I. (2008) Design with Nature, Twenty Fifth Edition, Wiley International, New York. Russ, T. (2009) Site Planning and Design Handbook, Second Edition, McGraw Hill, New York.

Web links and Video Lectures (e-Resources):

- http://mptownplan.nic.in/act%20&%20Rules/NationalBuilding%20Code%20Part-IV%20(Fire%20Safety).pdf
- https://www.bis.gov.in/index.php/standards/technical-department/national-building-code/
- https://www.bis.gov.in/index.php/standards/technical-department/national-building-code/
- http://www.naredco.in/notification/pdfs/Bangalore-Building-Byelaws.pdf

13.09.2022

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Site visit as physical case study to learn various aspects of site planning
- Site calculations
- Reviews and final proposed master plan outcome

IV Semester

	PLANNING THEORY - II			
	Course Code	**21 PLN42**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- The chief objective of 'Planning Theory – II' is to critically examine major theories of planning.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, group discussion and terminologies knowledge check
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Various analysis at regional level
- Discussion in class to elevate thinking

Module-1

Scientific Rationalism and Planning

Defining instrumental rationality; Systems view of planning; Chief characteristics of Comprehensive Rational Planning Model and implications for planning practice; Systematic and systemic change.

Pedagogy	Taught through ppts, pdfs, discussions

Module-2

Advocacy Planning, Pluralism and Equity Planning

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.

Pedagogy	Taught through ppts, pdfs, discussions

Module-3

Political Economy Theories and the City

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.

	Pedagogy	Taught through ppts, pdfs, discussions
	Module-4	
	Collaborative and Communicative Planning Various components of Collaborative Planning Model; Contributions of Patsy Healey and Judith Innes and others; Deliberative policy analysis; Role of trust in planning; Planning as persuasive storytelling; Pragmatic planning theory**.**	
	Pedagogy	Taught through ppts, pdfs, discussions
	Module-5	
	Human Development Approach Defining functioning and capabilities; Exploring relevance of Amartya 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.	
	Pedagogy	Taught through ppts, pdfs, discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To show knowledge of planning theories, and if possible, demonstrate application of these planning theories to Indian planning practices. To develop an understanding about the human development approach and its significance to urban and regional planning in India.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Agarwal, B., Humphries, J. and Robeyns (eds.) Capabilities, Freedom, and Equality: Amartya Sen's work from a gender perspective, Oxford University Press, New Delhi.

2. Allmendinger, P. (2009) Planning Theory, Palgrave Macmillan, New York.

3. Clavel, P. (1994) The Evolution of Advocacy Planning, Journal of American Planning Association, Vol. 60, No. 2, pp. 146–149.

4. Davidoff, P. (1965) Advocacy and Pluralism in Planning, Journal of the American Institute of Planners, Vol. 31, No 4, pp. 331–338. 58

5. Faludi, A. (1973) Planning Theory, Pergamon Press, New York.

6. Fincher, R. and Iveson, K. (2008) Planning and Diversity in the City, Palgrave Macmillan, New York.

7. Fukuda-Parr, S. and Shiva Kumar, A.K. (eds.) (2009) Handbook of Human Development: Concepts, measures, and policies, Oxford University Press, New Delhi.

8. Healey, P. (1997) Collaborative Planning: Shaping Places in Fragmented Societies, Macmillan Press Limited, London.

9. Hoch, C. (2019) Pragmatic Spatial Planning: Practical Theory for Professionals, Routledge, New York.

10. Krumholz, N. and Forester, J. (1990) Making Equity Planning Work: Leadership in the public sector, Temple University Press, Philadelphia.

11. Kumar, A. and Paddison, R. (2000) Trust and Collaborative Planning Theory: The Case of the Scottish Planning System, International Planning Studies, Vol. 5, No. 2, pp. 205- 223.

12. McLoughlin, J.B. (1969) Urban and Regional Planning: A Systems Approach, Faber and Faber, London.

13.Sandercock, L. (1998) Towards Cosmopolis: Planning for Multicultural Cities, Wiley, New York.

14.Sager, T. (2013) Reviving Critical Planning Theory: Dealing with pressure, neoliberalism, and responsibility in communicative planning, Routledge, New York.

15.Sandercock, L. (1998) Cosmopolis II: Mongrel Cities, Continuum, New York. 16.Sen, A. (1999) Development as Freedom, Alfred A Knopf, New York.

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=LMhDd11joP4
- https://www.youtube.com/watch?v=mWRLc4OLek0
- https://www.youtube.com/watch?v=8CH3v8eFnzI

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Various activities and ppt preparation from the topics in the modules

IV Semester

	PLANNING PRACTICE – I			
	Course Code	**21 PLN43**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	1:2:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

- This course intends to provide an understanding of the nature of planning practice in India and issues inherent in it.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, group discussion and terminologies knowledge check
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Various analysis at regional level
- Discussion in class to elevate thinking

Module-1	
Planning as a Profession Definition of profession; Planning as a profession and Role of a Planner in society, different roles of planner in practice; Planner in relation with other professions	
Pedagogy	Taught through discussions and interactions, ppt, pdf materials
Module-2	
Nature of Planning Practice Planning as a profession and Role of a Planner, Definition of profession, planning as a profession, role of planner in the society, different roles of planner in practice; Nature of planning practice in general and in Indian context, global context and planning practice. legal framework for planning in India, planning and development organizations, current planning practices, study of selected projects.	
Pedagogy	Taught through discussions and interactions, ppt, pdf materials
Module-3	
Framework of Planning Practice Legal framework for planning in India, planning and development organisations at Central, state and local level; planning practice in the private sector; Scope of work in planning practice, fees and other terms and conditions of planning work.	
Pedagogy	Taught through discussions and interactions, ppt, pdf materials
Module-4	

	Planning Practice Cases This unit would focus on developing critical reasoning and communication skills through study of planning cases including planning permissions, court cases, attending public meetings etc., application of concepts of previous units through study of planning practice; documentation of cases.	
	Pedagogy	Taught through discussions and interactions, ppt, pdf materials
	Module-5	
	Planning Practice in the field (or field work) This unit would focus on the types of analysis and field works carried out as a planner, the various departments which get involved in the process, documents filing and conduct	
	Pedagogy	Taught through discussions and interactions, ppt, pdf materials

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate the ability to distinguish between profession and business and limitations of planning as a profession. To show familiarity with public and private planning practices in India and their legal contexts. To develop competencies to understand planning issues for technically examining planning proposals.

Definition of profession; Planning as a profession and Role of a Planner in society, different roles of planner in practice; Planner in relation with other professions

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Verma, N. (1995) What is Planning Practice? The Search of Suitable Categories, Journal of Planning Education and Research, Vol. 14, pp. 178 – 182. 2.

2. Stevens, N.J., Salmon, M.P., Walker, H.G. and Stanton, A.N. (2008) Human Factors in Land Use Planning and Design, CRC Press, New York. 3.
3. Kulshreshtha, S.K. (2012) Urban and Regional Planning in India: A Handbook for Professional Practice, Sage, New Delhi.

Web links and Video Lectures (e-Resources):

- https://www.researchgate.net/publication/249051513_Critical_Theory_and_Planning_Practice
- https://www.in.undp.org/content/india/en/home/about-us/legal-framework.html
- http://spa.ac.in/writereaddata/tcpo.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Activities based on topics in the modules
- Group discussions and ppt preparations

IV Semester

	TRAFFIC AND TRANSPORT PLANNING – II			
	Course Code	**21 PLN44**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- To understand types, forms and components of urban and regional transport systems. To study transport policy and transport economics for urban and regional transport systems.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, group discussion and terminologies knowledge check
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Various analysis at regional level
- Discussion in class to elevate thinking and problem solving methods

Module-1	
Transport Policy Evolution of transport policy in India, current transport policy in India, Asian perspective on transport policy; Interactions between transport and other policy areas; Land use and transport policies: Translation of national policy in city and local level plans.	
Pedagogy	Taught through ppts, pds materials and discussions
Module-2	
Urban Transport System Urban form and transport systems; Impact of land use on transport and vice versa; Transport and quality of life planning for transport in cities and towns; Data requirements and planning techniques, travel behaviour and its determinants, choice modelling, influencing travel behaviour, land use transport models for cities; Provision of new mass transit in cities; Specific challenges of small towns and big cities; Roles and responsibilities of various agencies; Provision for freight transport.	
Pedagogy	Taught through ppts, pdfs materials and discussions
Module-3	

	Regional Transport System Planning for regional transport systems; Data requirements and planning techniques; Importance of accessibility in regional transport planning; Indicators of accessibility to basic services; Planning parameters for road, rail, air and water transport systems; Locational parameters for regional transport nodes; Roles and responsibilities of various agencies.	
	Pedagogy	Taught through ppts, pdfs materials and discussions
	Module-4	
	Transport Economics Pricing and funding of transport services and systems; Socio-economic appraisal of transport projects; Techniques for estimating direct and indirect road user costs benefits; Monetization of costs and benefits; Investment criteria and public private partnerships in the transport sector.	
	Pedagogy	Taught through ppts, pdfs materials and discussions
	Module-5	
	Technology and Transportation Intelligent Transportation System; Big data analysis; Smart parking; smart ticketing; SCADA, automated transportation options, etc	
	Pedagogy	Taught through ppts, pdfs materials and discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To analyse and evaluate critically issues and problems related to urban and regional transport systems. To show the ability to address these issues through policy and financial resource planning for implementation of effective transport plans and projects.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Stopher, P. and Stanley J. (2014) Introduction to Transport Policy: A Public Policy View, Edward Elgar Publishing Ltd., Northampton, Massachusetts.
2. Grava, S. (2002) Urban Transportation Systems, McGraw Hill Professional, New York.
3. Verma, A. (2010) Integrated Public Transportation System, VDM Verlag.
4. Chris, N. (ed.) (2015) Handbook of Research Methods and Applications in Transport Economics and Policy, Edward Elgar Publishing Ltd, Cheltenham.
5. Kadiyali L.R. (1999) Traffic Engineering and Transport Planning, Khanna Publishers, New Delhi.
6. Sarkar, P.K., Maitri, V. and Joshi, G.J. (2014) Transportation Planning: Principles, Practices and Policies, Prentice Hall India, New Delhi. 3.
7. Verma, A. and Ramanayya, T.V. (2014) Public Transport Planning and Management in Developing Countries, CRC Press, London. 4.
8. Relevant codes of Indian Road Congress, New Delhi

Web links and Video Lectures (e-Resources):

- Ministry of Urban Development. 'Code of Practice (Part -1): Cross Section'. Institute of Urban Transport.2012. (CODES)
- IRC:54. 'Lateral and Vertical Clearances at Underpasses for Vehicular Traffic. Indian Road Congress. 1974. (CODES)

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Activities based on several topics in the modules

IV Semester

	ECOLOGY AND RESOURCE PLANNING			
	Course Code	**21 PLN45**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

- To provide knowledge about ecology, climate change and resource planning. To expose students to techniques of analysis of ecological parameters of human settlements, districts and regions.
-

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, group discussion and terminologies knowledge check
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Various analysis at regional level
- Discussion in class to elevate thinking and problem solving methods

	Module-1
	Comprehending Ecology Meaning and scope of ecology; Evolution of ecology, components of nature and basic concepts and processes of ecology; Resources and human settlements' impact on advanced agricultural methods, urbanization and industrialization of nature; Urban ecosystem approach, its evolution and significance; Soil, water, land, vegetation and energy resources and their development and management; Defining ecologically sensitive areas, ESA as a resource for development; Impact of development on coastal areas, forests, hills and river ecology; Legislation and policies for the management of ecologically sensitive regions; Case studies for the management of ecologically sensitive areas in India.
Pedagogy	Taught through ppts, pds materials and discussions
	Module-2
	Quantitative Ecology Introduction to quantitative ecology; Identification of ecological parameters for planning at different levels like site planning, settlement planning and regional planning; Data needs and formats for data collection; Types of analysis required for evolving ecological parameters; Ecological footprints and carrying capacity.
Pedagogy	Taught through ppts, pds materials and discussions

	Module-3	
	Ecology sensitive areas What are Ecologically Sensitive Areas? ESA as a resource for development- use and over use. Impact of development on coastal, forest, hill and river ecology. Legislations and policies for management of ecologically sensitive regions. Case studies for management of ecologically sensitive areas- India and abroad.	
	Pedagogy	Taught through ppts, pds materials and discussions
	Module-4	
	Resource Planning Development and Management Endowments, types of resources, exhaustive and renewable resources development; Utilization and conservation of national, technological and human resources; Resource management, recycling of resources and resource equilibrium; Water resource management, waste land management; Rural industrialization and use of nonconventional energy in rural development; Major resource development programmes in 62 India; Case studies of resource development projects in agriculture, forestry, minerals, water, etc.	
	Pedagogy	Taught through ppts, pds materials and discussions
	Module-5	
	Climate Change Cities and climate change; Impact of built environment and transportation on greenhouse gas emissions; Role of planning in climate change mitigation and adaptation; Management tools for sustainable retrofitting infrastructure; Critical review of policies and regulations in India regarding climate change; Examples of climate change plans where mitigation and adaptation strategies are translated into concrete actions; Emerging technologies; National policy framework on climate change, carbon credits and trade, carbon footprints.	
	Pedagogy	Taught through ppts, pds materials and discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate skills to analyse ecological parameters of any human settlement, district or region. To apply these skills and knowledges for the preparation of development plans and projects integrating the ecological issues.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers

for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Agarwal S.K. (2011) Fundamentals of Ecology, APH Publishing Corporation, New Delhi.
2. Schneider, D.C. (1994) Quantitative Ecology: Spatial and Temporal Scaling, Academic Press, London.
3. Sethi, M. (2017) Climate Change and Urban Settlements: A Spatial Perspective of Carbon Footprint and Beyond, Routledge, Oxon.
4. Wurbs, A.R. (ed.) (2013) Water Resources: Planning, Development and Management, InTech, Rijeka.

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=1zyjKYbBCw4
- https://www.youtube.com/watch?v=ZngDF4jfRdw&list=PLyqSpQzTE6M_vO7rLpxKZWqai4uJP2bDa
- https://www.youtube.com/watch?v=icuK1zoGia4&list=PLyqSpQzTE6M_vO7rLpxKZWqai4uJP2bDa&index=4

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- PowerPoint preparations and group discussions based on topics in the module

IV Semester

	PROFESSIONAL ELECTIVE I - 1. ADVANCED SPATIAL DATA INFRASTRUCTURE FOR PLANNING			
	Course Code	**21 PLN46.1**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- To train students for skill development about concepts, scope and use of SDI for settlement planning so that they could ensure better planning using these new techniques.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, group discussion and terminologies knowledge check
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Various analysis at regional level
- Discussion in class to elevate thinking and problem solving methods

Module-1

Basic Principles and Broad Areas of SDI

Spatial data infrastructures: concept, contents, nature and hierarchy and future directions of SDI with advantages and challenges; Understanding Spatial Data Infrastructure (SDI) for settlement planning and regional planning; Local, district and national level spatial data infrastructure for planning decision making; and SDI for efficient governance at city and regional levels.

Pedagogy	Taught through ppts, pdfs and discussions

Module-2

Developing an SDI for a selected area and settlement for planning

Building an SDI and using it in the planning and decision making processes; Data streaming and mining of spatial data infrastructure; Use of Remote Sensing and GIS for developing SDI for a selected area for planning and management or administrative decisions.

Pedagogy	Taught through ppts, pdfs and discussions

Module-3

Application of open software for SDI

Real time technologies and their applications, web based models for spatiotemporal predictions, and decentralised planning; Satellite based and other real time technologies and their use in identifying physical changes and transformations and their applications in urban and rural areas.

Pedagogy	Taught through ppts, pdfs and discussions

	Module-4	
	SDI for planning and decision making Regional resource management, regional water and sanitation management and SDI; SDI for economic and environmental decision making, infrastructure planning and management, transportation planning, e-governance, flash flood warning systems in river and coastal belt, planning for disaster prone, etc.	
	Pedagogy	Taught through ppts, pdfs and discussions
	Module-5	
	Use of SDI SDI initiatives at global, national, regional and local levels; Case study of implementation and success of SDI in different levels of planning and resource management.	
	Pedagogy	Taught through ppts, pdfs and discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To develop skills to use SDI for settlement planning and decision making for development and management of resources and infrastructure. To show the ability to prepare different levels of plans using the SDI.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. ESRI (2010) GIS Best Practices, Spatial Data Infrastructure (SDI), ESRI, New York. Course Code: BPPE 4.5 Course Title Professional Elective – I
2. Masser, I. (ed.) (2019) Geographic Information Systems to Spatial Data Infrastructures: A Global Perspective, CRC Press, Boca Raton, Florida.

3. Sadahiro, Y. (ed.) (2008) Spatial Data Infrastructure for Urban Regeneration, Springer, Germany.
4. Williamson, I., Rajabifard, A., and Feeny, M.E.F. (ed.) (2003) Developing Spatial Data Infrastructures: From concept to reality, Taylor and Francis, London,

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=Mjr_V9KVo74
- https://www.youtube.com/watch?v=pOnIQ4X_28s
- https://www.youtube.com/watch?v=KOPpQicK3Hg

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Software activities based on the modules

IV Semester

	PROFESSIONAL ELECTIVE – I **2. PUBLIC POLICY AND POLITICS IN PLANNING**			
	Course Code	**21 PLN46.2**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- The main objective of this subject is to teach students how to analyse and comprehend public policies including planning policies with a particular focus on India but not to the relevant global environmental policies.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, group discussion and terminologies knowledge check
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Various analysis at regional level
- Discussion in class to elevate thinking and problem solving methods

Module-1

Nature and Making of Public Policy

Nature, scope and significance of public policy; Types of public policy: Regulatory, welfare, distributive and redistributive; Evolution of public policy studies and public policy cycle; Policy analysis and process: Six steps in policy analysis; How are policies made, who influences policy agendas and what issues affect success and failure of policies, Role of institutions in policy processes, and motivations of policy actors; Models of public policy: Systems model, Contributions of Harold Lasswell, Herbert Simon, Charles Lindblom, Amitai Etzioni and others.

Pedagogy	Taught through ppts, pdfs and discussions

Module-2

Public Policy Analysis and Management

Overview of policy process models, Multi-stream approaches, policy implementation analysis, life-course approach to policy analysis and case studies in policy process analysis; Policy Integration: Possible areas of integration in planning; How are new information and communication technologies shaping public service delivery?; EGovernance, E-Municipalities, E-Panchayats, E-Markets, etc.; Transparency, Course Code: BPPE 4.5 Course Title Professional Elective – I No. of Credits 3 (L: 3; T: 0; P: 0) Internal Assessment 50 Marks End Semester Assessment 50 Marks Total Assessment Marks 100 Marks 111 accountability, accessibility and participatory mechanisms; Trends and pressures affecting public service organizations; Market based arrangements; Coordination and networks; Conflict and crisis management.

Pedagogy	Taught through ppts, pdfs and discussions

	Module-3
	Planning and Policy Making in India Global Commitments: Millennium Development Goals (MDGs), Sustainable Development Goals (SDGs), Environment, etc. and its commitment at the National, State and Local Level; Land Policy: Interest groups, acts, agents and policy making process; Institutional factors including legislature, executive, judiciary, NITI Ayog; Other forces in policy making such as public opinion, political parties, pressure groups, media and professional bodies; External influencing agencies like UNDP, WHO, ILO, UNEP, ADB, World Bank, and IMF; Studies of specific public and planning policies.
	Pedagogy Taught through ppts, pdfs and discussions
	Module-4
	Politics in Planning Political institutions at center, state and local political economy; Emergence of state in the federal set up; Politics of the state and bureaucracy; Politics and emergence of civil society; Regeneration and redevelopment politics; Property rights, norms and standards, Regulatory state, reforming state, rent-seeking state and its spatial implications.
	Pedagogy Taught through ppts, pdfs and discussions
	Module-5
	Politics of Provision Land use politics Politics of provision of infrastructure and housing in urban and rural areas; Political decision making processes; Case studies from India and on planning and political decisions and their impact on rural and urban development; Politics of displacement.
	Pedagogy Taught through ppts, pdfs and discussions

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To show knowledge of theories of public policies as well as show how these public policies are made. To analyse critically the politics of planning in India.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks

2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Carmon, N. and Fainstein, S.S. (2013) Policy, Planning, and People: Promoting Justice in Urban Development, University of Pennsylvania Press, Philadelphia, PA.
2. Doshi, S. (2018) Greening Displacements, Displacing Green: Environmental Subjectivity, Slum Clearance, and the Embodied Political Ecologies of Dispossession in Mumbai, International Journal of Urban and Regional Research, Vol. 43, No. 1, pp. 112-132.
3. Cowan, T. (2018) Subaltern counter-urbanism: Work, dispossession and emplacement in Gurgaon, India, Geoforum, Vol. 92, pp. 152-160.
4. Fischer, F., Miller, G.J., and Sidney, M.S. (2006) Handbook of Public Policy Analysis: Theory, Politics, and Methods, CRC Press, London.
5. Moran, M., Rein, M. and Goodin, R.E. (2008) The Oxford Handbook of Public Policy, Oxford University Press, Oxford.
6. Rademacher, A. and Sivaramakrishnan, K. (2013) Ecologies of Urbanism in India: Metropolitan Civility and Sustainability, Hong Kong University Press, Hong Kong.
7. Shatkin, G. (2013) Contesting the Indian City: Global Visions and the Politics of the Local, International Journal of Urban and Regional Research, Vol. 38, Issue 1, pp. 1-13.
8. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley-Blackwell, Oxford.
9. Storper, M. and Scott, A.J. (2016) Current Debates in Urban Theory: A critical assessment, Urban Studies, Vol. 53, No. 6, pp. 1114–1136.

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=Xf0JwRm3ve0&list=PLyqSpQzTE6M8yxZn9rJK6QfZbGqOWA5-1

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- PowerPoint preparation, based on the topics in the modules

IV Semester

	PROFESSIONAL ELECTIVE – I **3. RURAL BUSINESS MANAGEMENT**			
	Course Code	**21 PLN46.3**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

To introduce students about the application of management principles in the rural sector, planning, organization, and control of cooperatives and related organizations in the field of agriculture and also learn about the entrepreneurial activities in the rural areas.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Theory subjects and studio to go hand in hand
- Exposing the students to the Planning guidelines (URDPFI), IRC
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, physical site visits for understanding the scale and all the aspects of site planning
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Module-1

Rural Society

Basic features, Rural stratification, Values and value systems, Rural-urban differences, Rural social structure: Physical, social, cultural, regional, ideology and economic structures..

Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Module-2

Rural Community Development

Concept of community, Function of Community, community profile: Process and tools. Community development: Characteristics, Principles and scope, Panchayat Raj and community development in India.

Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Module-3

Rural Power Structures and management

Caste hierarchy, Landlord-labour relationship, Social power groups and their roles, Caste in rural Society, Tribes and their problems. Nature, Scope and challenges in marketing operations, human resources and finance in rural areas. Entrepreneurship opportunities in rural areas.

Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

	Module-4	
	Rural Administration Concept and scope, Administrative structure: State, District, Block, Gram panchayat and panchayat samities-Power, functions, elections and working problems	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module-5	
	Entrepreneurship and Small Business Introduction: Concept of entrepreneur, Entrepreneurship functions and skills, Nature and importance, Types of entrepreneurs, Entrepreneurship and economic growth Theories of Entrepreneurship, Creativity and innovation, Entrepreneur and Intrapreneur, Factors affecting entrepreneurial growth and development, Women entrepreneurs. Institutional Support and Sickness in Small Business: Institutional support for SSI, Incentives and subsidies for small units, Technological upgradation, Business incubators, Sickness in Small Business- concept. magnitude, causes, consequences and corrective measures	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Course outcome (Course Skill Set)

- Understand the Concept, Nature, Characteristic about the Rural Society
- Students get knowledge about the various Caste, Family system, history of class, changing pattern etc.
- Understand the students about the nature and changing pattern of rural economy, type of agriculture labours and their problems
- Understand the students about the Poverty Factors, Education, Health and Infrastructure, Indebtedness, Agrarian crisis and farmers suicide

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Hisrich, R.D., and Peters, M.P. “Entrepreneurship” Tata Mc Graw- Hill, New Delhi.
2. Roy, R. “Entrepreneurship” Oxford University Press, New Delhi.
3. Shukla, M.B. “Entrepreneurship and Small Business Management” Kitab Mahal, Allahabad.
4. Desai, V. “Management of Small Industry” Himalaya Publishing House, Mumbai.
5. Desai, V. “Dynamics of Entrepreneurial Development and Management.” Himalaya Publishing House, New Delhi.
6. Khanka, S.S. “Entrepreneurial Development” S. Chand and Company, New Delhi.
7. Lekhi, R.K. “The Economics of Development and Planning” Kalyani Publishers, New Delhi.
8. Desai, V. “Fundamentals of Rural Management” Rawat Publications, New Delhi.
9. Satya Sundram,
10. I. “Rural Development” Himalaya Publishing House, New Delhi.
11. Prasad, B.K. “Rural Development: Concept, Scope and Strategy” Sarup and Sons, New Delhi.
12. Chamola, S.D., and Bharti, A. “Agriculture and Rural Development in India” Global Vision Publishing House, New Delhi.
13. Singh, K. “Rural Development: Principle, Policies and Management” Sage, New Delhi.

Web links and Video Lectures (e-Resources):

- http://www.mgncre.org/pdf/publication/205%20Business%20Environment-%20English.pdf
- https://www.researchgate.net/publication/355207365_Management_Theory_and_Studies_for_Rural_Business_and_Infrastructure_Development

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Module based activity related to topics
- Presentation preparation related to the given topics
- Debate on various topics from the module or current affairs

IV Semester

	PROFESSIONAL ELECTIVE – I **4. STATISTICAL APPLICATION IN PLANNING**			
	Course Code	**21PLN46.4**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- The course will consider Markov processes in discrete and continuous time. The theory is illustrated with examples from operation research, biology and economy.
- The purpose of this course is to make students well conversant with numerical methods to solve ordinary differential equations, complex analysis, sampling theory and joint probability distribution and stochastic processes arising in science and engineering.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. Show Video/animation films to explain functioning of various machines
4. Encourage collaborative (Group Learning) Learning in the class
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with thei own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. Individual teachers can device the innovative pedagogy to improve the teaching-learning.

Module 1

Probability:

Introduction. Sample space and events. Axioms of probability. Addition & multiplication theorems, Events, Algebra of events and theorems Conditional probability, Bayes's theorem, problems.

Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Module 2

Probability Distributions:

Review of basic probability theory. Random variables (discrete and continuous), probability mass/density functions. Binomial, Poisson, exponential and normal distributions- problems (No derivation for mean and standard deviation)-Illustrative examples.

	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module 3	
	Simulation Models Basic terminology, Random Number Generation through tables, types of simulation, steps in simulation process- Monte-Carlo technique, simulation application in planning, Demand, queries, and investment analysis. Role of computers in simulation.	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module 4	
	Markov chains and Stochastic processes Stochastic Processes: Definition and examples of stochastic processes, Classifications of stochastic processes, General concepts of queuing systems, Steady state and transient behaviour, Birth and death process in queuing theory Markov chains: Definition and examples, Transition Probability matrices, Chapman-Kolmogorov equations, Random walk, Classification of states of a Markov chain, Determination of higher order transition probabilities, Graph theoretic approach, Markov chains with denumerable number of states, Reducible Markov chains, Markov Chains with continuous state spaces	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module 5	
	Application of Statistical tools using MS-EXCEL Descriptive statistics 9 Mean, Median, Mode and standard deviation, Correlation and regression-Karl Pearson's coefficient of correlation and rank correlation -problems. Regression analysis- lines of regression –problems. Testing of hypothesis - Z-test ,Chi -square test and ANOVA	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Course outcome (Course Skill Set)

At the end of the course the student will be able to:

CO1: Solve systems of linear equations using matrix algebra.

CO2: Apply the knowledge of numerical methods in modelling and solving engineering problems.

CO3: Make use of analytical methods to solve higher order differential equations.

CO4: Classify partial differential equations and solve them by exact methods.

CO5: Apply elementary probability theory and solve related problems

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. 1 Advanced Engineering Mathematics E. Kreyszig John Wiley & Sons 10th Edition, 2015
2. 2 Engineering Mathematics N. P. Bali and Manish Goyal Laxmi Publishers 7th Edition, 2007
3. 3 Engineering Mathematics Vol. I Rohit Khurana Cengage Learning 1st Edition, 2015
4. Higher Engineering Mathematics B.S. Grewal Khanna Publishers 43rd Edition, 2015
5. Advanced Engineering Mathematics E. Kreyszig John Wiley & Sons 10th Edition,2016
6. 2 Higher Engineering Mathematics B. S. Grewal Khanna Publishers 44th Edition, 2017
7. 3 Engineering Mathematics Srimanta Pal et al Oxford University Press 3 rd Edition,2016
8. 1 Advanced Engineering Mathematics C. Ray Wylie, Louis C.Barrett McGraw-Hill 6 th Edition 1995
9. 2 Introductory Methods of Numerical Analysis S.S.Sastry Prentice Hall of India 4 th Edition 2010
10. 3 Higher Engineering Mathematics B. V. Ramana McGraw-Hill 11th Edition,2010
11. 4 A Text Book of Engineering Mathematics N. P. Bali and Manish Goyal Laxmi Publications 2014
12. 5 Advanced Engineering Mathematics Chandrika Prasad and Reena Garg Khanna Publishing,2018
13. J. Medhi, *Stochastic Processes*, New Age Publishers , Second Edition, Reprint 2007.
14. S. Karlin and H. M. Taylor, *A First Course in Stochastic Processes*, Academic Press , Academic Press, 1975

Web links and Video Lectures (e-Resources):

1. 1. http://nptel.ac.in/courses.php?disciplineID=111
2. 2. http://www.class-central.com/subject/math(MOOCs)
3. 3. http://academicearth.org/
4. 4. VTU EDUSAT PROGRAMME - 20

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A site study to be made to understand process involved in the delineation of the region
- A literature study on corridor development, road development projects, port development projects, airports and metro rail projects.

IV Semester

	PROFESSIONAL ELECTIVE – I **5. SAMPLING & SURVEY TECHNIQUES IN PLANNING**			
	Course Code	**21 PLN46.5**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

The course will cover the main techniques used in actual sampling- simple random sampling, stratification, systematic selection etc. From each sampling design, mean estimation and their standard errors will be derived.

Students should be familiar with descriptive statistics, the normal and binomial distributions, chance selection, expected values, standarderors and confidence intervals.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Theory subjects and studio to go hand in hand
- Exposing the students to the Planning guidelines (URDPFI), IRC
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, physical site visits for understanding the scale and all the aspects of site planning
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyse information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Module-1

Elements of the Sampling Problems and Statistics

Technical terms, selection of sample, Design of sample survey, errors in survey, design of questionnaire, information in population and samples: Infinite Population and finite population case, Sampling Distribution .Estimations.

Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Module-2

	Simple Random Sampling Drawing the simple random sample, Estimation of a population mean and total. Selecting sample size estimation of a population mean and total, Estimation of a population proportion, Comparing Estimates.
Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module-3
	Stratified Random Sampling Estimation of a Population mean and total, Selecting sample size estimation of a population mean and total, Allocation of the sample, Estimation of a population proportion , Selecting the sample size and allocating the sample to estimate proportions. Additional comments on stratified sampling.
Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module-4
	Systematic & Cluster Sampling Estimation of a Population mean and total, estimation of a population proportion , selecting sample size, equal cluster sizes , comparison to simple random sampling, selecting sample size for estimation of a population mean and total, cluster sampling combined with stratification , cluster sampling with probabilities proportional to sizes, two - stage cluster with probabilities proportional to size.
Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module-5
	Ratio, Regression, Difference Estimation & Population Size Surveys that require the use of ratios estimators, Ratio estimation using simple random sampling, selecting the sample size , ration estimation in stratified random sampling, regression estimation, Estimation of population size using direct sampling, Estimation of a population density and size from Quadrat samples. Estimation population, Density and size from stocked Quadrats. Adaptive sampling.
Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Course outcome (Course Skill Set)

- Students who successfully complete the course should:
- understand the principles underlying sampling as a means of making inferences about a population,
- Understand the difference between randomization theory and model based analysis,
- Understand the concepts of bias and sampling variability and strategies for reducing these,
- Be able to analyse data from multi-stage surveys,
- Have an appreciation of the practical issues arising in sampling studies

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Survey Sampling **By Arijit Chaudhuri**
2. Theory and Methods of Survey Sampling
3. Elementary survey sampling 7th edition solutions

Web links and Video Lectures (e-Resources):

- https://www.coursehero.com/textbook-solutions/Elementary-Survey-Sampling-7th-Edition-9780840053619-766/
- https://luc.id/knowledgehub/methods-of-survey-sampling/
- https://www.questionpro.com/blog/probability-sampling/
- https://www150.statcan.gc.ca/n1/edu/power-pouvoir/ch13/prob/5214899-eng.htm

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Module based activity related to topics
- Presentation preparation related to the given topics
- Debate on various topics from the module or current affairs

IV Semester

	CONSTITUTION OF INDIA & PROFESSIONAL ETHICS			
	Course Code	**21PLN47**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	32	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

- The main objective of this course is to get students acquainted with various perspectives on space.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, group discussion
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking

Module-1

Introduction to the Constitution of India

The Making of the Constitution and Salient features of the Constitution. Preamble to the Indian Constitution Fundamental Rights & its limitations

Pedagogy	Taught through ppts and pdfs materials

Module-2

Directive Principles

Directive Principles of State Policy & Relevance of Directive Principles State Policy Fundamental Duties, Union Executives – President, Prime Minister Parliament Supreme Court of India.

Pedagogy	Taught through ppts and pdfs materials

Module-3

State Executives

State Executives – Governor Chief Minister, State Legislature High Court of State. Electoral Process in India, Amendment Procedures, 42nd, 44th, 74th, 76th, 86th & 91st Amendments.

	Pedagogy	Taught through ppts and pdfs materials
	Module-4	
	Special Provisions Special Provision for SC & ST Special Provision for Women, Children & Backward Classes Emergency Provisions. Human Rights –Meaning and Definitions, Legislation Specific Themes in Human Rights- Working of National Human Rights Commission in India, Powers and functions of Municipalities, Panchayats and Co - Operative Societies.	
	Pedagogy	Taught through ppts and pdfs materials
	Module-5	
	Scope & Aims of Planning Ethics, Responsibility of Planners Impediments to Responsibility. Risks, Safety and liability of Planners, Honesty, Integrity & Reliability in Planning.	
	Pedagogy	Taught through ppts and pdfs materials

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To show understanding of the idea of place and space and its relationship to city planning. To demonstrate the ability to comprehend the forces active in the formations and transformations of spaces with a particular emphasis on identity, colonization and neoliberalism.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject. Duration of the examination is 3 hours.

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 2 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Choudhry, S., Khosla, M. and Mehta, P.B. (eds.) The Oxford Handbook of the Indian Constitution, Oxford University Press, New Delhi.
2. Sivaramakrishnan, K. (2013) Revisiting the 74th Constitutional Amendment for Better Metropolitan Governance, Economic and Political Weekly, Vol. 31, No. 13, pp. 86–94.
3. Sivaramakrishnan, K.C. and Maiti, A. (2009) Metropolitan Governance in India: An Overview of Selected Cities, East West Center, Honolulu.

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=rUioc1ykCiA&list=PLyqSpQzTE6M8GOltz64mg0bB78Svn0P6b
- https://www.youtube.com/watch?v=LDgz6EmZw54&list=PLyqSpQzTE6M8GOltz64mg0bB78Svn0P6b&index=8
- https://www.youtube.com/watch?v=JEay3YNPZd4&list=PLyqSpQzTE6M8GOltz64mg0bB78Svn0P6b&index=19
- https://ncert.nic.in/textbook.php?keps2=0-10

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- PowerPoint presentations and group discussions based on the topics in the modules

IV Semester

UNIVERSAL HUMAN VALUES			
Course Code	**21PLN48/ 21UH49**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	1	Exam Hours	1

Course objectives:

- This introductory course input is intended:

1. To help the students appreciate the essential complementarity between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity which are the core aspirations of all human beings.
2. To facilitate the development of a Holistic perspective among students towards life and profession as well as towards happiness and prosperity based on a correct understanding of the Human reality and the rest of existence. Such a holistic perspective forms the basis of Universal Human Values and movement towards value-based living in a natural way.
3. To highlight plausible implications of such a Holistic understanding in terms of ethical human conduct, trustful and mutually fulfilling human behaviour and mutually enriching interaction with Nature.

This course is intended to provide a much-needed orientational input in value education to the young enquiring minds.

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. The methodology of this course is explorational and thus universally adaptable. It involves a systematic and rational study of the human being vis-à-vis the rest of existence.
2. The course is in the form of 20 lectures (discussions)
3. It is free from any dogma or value prescriptions.
4. It is a process of self-investigation and self-exploration, and not of giving sermons. Whatever is found as truth or reality is stated as a proposal and the students are facilitated to verify it in their own right, based on their Natural Acceptance and subsequent Experiential Validation – the whole existence is the lab and every activity is a source of reflection.
5. This process of self-exploration takes the form of a dialogue between the teacher and the students to begin with, and then to continue within the student in every activity, leading to continuous selfevolution.
6. This self-exploration also enables them to critically evaluate their pre-conditionings and present beliefs.

Module-1

Introduction to Value Education (4 hours)

Right Understanding, Relationship and Physical Facility (Holistic Development and the Role of Education) Understanding Value Education, Self-exploration as the Process for Value Education, Continuous Happiness and Prosperity – the Basic Human Aspirations, Happiness and Prosperity – Current Scenario, Method to Fulfil the Basic Human Aspirations

Pedagogy	Introduction to Value Education- Chalk and talk method, Discussion, Sharing of experiences, Live Examples and videos

Module-2

	Harmony in the Human Being (4 hours) Understanding Human being as the Co-existence of the Self and the Body, Distinguishing between the Needs of the Self and the Body, The Body as an Instrument of the Self, Understanding Harmony in the Self, Harmony of the Self with the Body, Programme to ensure self-regulation and Health	
	Pedagogy	Introduction to the concepts- Chalk and talk method, Discussion, Sharing of experiences, Live Examples and videos
	Module-3	
	Harmony in the Family and Society (4 hours) Harmony in the Family – the Basic Unit of Human Interaction, 'Trust' – the Foundational Value in Relationship, 'Respect' – as the Right Evaluation, Other Feelings, Justice in Human-to-Human Relationship, Understanding Harmony in the Society, Vision for the Universal Human Order	
	Pedagogy	Introduction to the concepts- Chalk and talk method, Discussion, Sharing of experiences, Live Examples and videos
	Module-4	
	Harmony in the Nature/Existence (4 hours) Understanding Harmony in the Nature, Interconnectedness, self-regulation and Mutual Fulfilment among the Four Orders of Nature, Realizing Existence as Co-existence at All Levels, The Holistic Perception of Harmony in Existence	
	Pedagogy	Introduction to the concepts- Chalk and talk method, Discussion, Sharing of experiences, Live Examples and videos
	Module-5	
	Implications of the Holistic Understanding – a Look at Professional Ethics (4 hours) Natural Acceptance of Human Values, Definitiveness of (Ethical) Human Conduct, A Basis for Humanistic Education, Humanistic Constitution and Universal Human Order, Competence in Professional Ethics Holistic Technologies, Production Systems and Management Models-Typical Case Studies, Strategies for Transition towards Value-based Life and Profession	
	Pedagogy	Introduction to the concepts- Chalk and talk method, Discussion, Sharing of experiences, Live Examples and videos

Course outcome (Course Skill Set)

By the end of the course, students are expected to become more aware of themselves, and their surroundings (family, society, nature); they would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind. They would have better critical ability.

They would also become sensitive to their commitment towards what they have understood (human values, human relationship and human society). It is hoped that they would be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction.

Therefore, the course and further follow up is expected to positively impact common graduate attributes like:

1. Holistic vision of life
2. Socially responsible behaviour
3. Environmentally responsible work
4. Ethical human conduct
5. Having Competence and Capabilities for Maintaining Health and Hygiene

6. Appreciation and aspiration for excellence (merit) and gratitude for all

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

Three Unit Tests each of 20 Marks (duration 01 hour)

1. First test at the end of 5th week of the semester
2. Second test at the end of the 10th week of the semester
3. Third test at the end of the 15th week of the semester

Two assignments each of 10 Marks

4. First assignment at the end of 4th week of the semester
5. Second assignment at the end of 9th week of the semester

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks (duration 01 hours)**

6. At the end of the 13th week of the semester.

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**

(to have less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course).

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject **(duration 01 hours)**

1. The question paper will have 50 questions. Each question is set for 01 marks.
2. The students have to answer all the questions, selecting one full question from each module.

Suggested Learning Resources:

Books

-READINGS:

<u>Text Book and Teachers Manual</u>

a. The Textbook A Foundation Course in Human Values and Professional Ethics, R R Gaur, R Asthana, G P Bagaria, 2nd Revised Edition, Excel Books, New Delhi, 2019. ISBN 978-93-87034- 47-1

b. The Teacher"s Manual Teachers" Manual for A Foundation Course in Human Values and Professional Ethics, R R Gaur, R Asthana, G

Reference Book:

1. JeevanVidya: EkParichaya, A Nagaraj, JeevanVidyaPrakashan, Amarkantak, 1999.
2. Human Values, A.N. Tripathi, New Age Intl. Publishers, New Delhi, 2004.
3. The Story of Stuff (Book).
4. The Story of My Experiments with Truth - by Mohandas Karamchand Gandhi
5. Small is Beautiful - E. F Schumacher.

6. Slow is Beautiful - Cecile Andrews
7. Economy of Permanence - J C Kumarappa
8. Bharat Mein Angreji Raj – Pandit Sunderlal
9. Rediscovering India - by Dharampal
10. Hind Swaraj or Indian Home Rule - by Mohandas K. Gandhi
11. India Wins Freedom - Maulana Abdul Kalam Azad
12. Vivekananda - Romain Rolland (English)
13. Gandhi - Romain Rolland (English)
14. Sussan George, 1976, How the Other Half Dies, Penguin Press. Reprinted 1986, 1991
15. Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, William W. Behrens III, 1972, Limits to Growth – Club of Rome's report, Universe Books.
16. A Nagraj, 1998, Jeevan Vidya Ek Parichay, Divya Path Sansthan, Amarkantak.
17. P L Dhar, RR Gaur, 1990, Science and Humanism, Commonwealth Publishers.
18. A N Tripathy, 2003, Human Values, New Age International Publishers.
19. SubhasPalekar, 2000, How to practice Natural Farming, Pracheen (Vaidik) KrishiTantraShodh, Amravati.
20. E G Seebauer & Robert L. Berry, 2000, Fundamentals of Ethics for Scientists & Engineers , Oxford University Press
21. M Govindrajran, S Natrajan & V.S. Senthil Kumar, Engineering Ethics (including Human Values), Eastern Economy Edition, Prentice Hall of India Ltd.
22. B P Banerjee, 2005, Foundations of Ethics and Management, Excel Books.
23. B L Bajpai, 2004, Indian Ethos and Modern Management, New Royal Book Co., Lucknow. Reprinted 2008.

Web links and Video Lectures (e-Resources):

1. Value Education websites, https://www.uhv.org.in/uhv-ii, http://uhv.ac.in, http://www.uptu.ac.in
2. Story of Stuff, http://www.storyofstuff.com
3. Al Gore, An Inconvenient Truth, Paramount Classics, USA
4. Charlie Chaplin, Modern Times, United Artists, USA
5. IIT Delhi, Modern Technology – the Untold Story
6. Gandhi A., Right Here Right Now, Cyclewala Productions
7. https://www.youtube.com/channel/UCQxWr5QB_eZUnwxSwxXEkQw
8. https://fdp-si.aicte-india.org/8dayUHV_download.php
9. https://www.youtube.com/watch?v=8ovkLRYXIjE
10. https://www.youtube.com/watch?v=OgdNx0X923I
11. https://www.youtube.com/watch?v=nGRcbRpvGoU
12. https://www.youtube.com/watch?v=sDxGXOgYEKM

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

-

SEMESTER V

V Semester

PLANNING STUDIO: SUB-CITY PLAN			
Course Code	**21PLN51**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:10:0:	SEE Marks	50
Total Hours of Pedagogy	160	Total Marks	100
Credits	5	Exam Hours	-

Course objectives:

- Purpose of this studio is to understand the relationship between different hierarchies of plans and to know the level of detailing required at zone or local level.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- The student is required to visit site and organizations for the collection of data
- The student is asked to do multiple surveys for Transportation and Socio economic study for understanding the Issues and concerns in order to come up with a proposed sub-city plan
- Report Presentations and Sheets on final Analysis is to be submitted at the end of the studio.

Course Contents

This studio provides a link between site level and city level plans. This level details out land allocations and planning proposals given in statutory plans at the city level. It should help students to see interrelations amongst different sectors at the city level and how these need to be translated through detailed plans so as to achieve city level statutory plan objectives.

In this studio, students also develop familiarity with the legal frameworks for planning, concepts of master plan, comprehensive development plan, structure plan, sector plan, zonal plan, and their plan making processes. We adopt the approach to develop lower hierarchy plans such as zonal plan, ward plan and town planning scheme within the framework of a given master plan and relevant town planning or development acts.

The study and development of relevant planning standards for different land uses is also carried out. Detailing of specific sites in proposed zonal plans covering different land uses and finally preparation of detailed project reports would complete the studio exercise.

Pedagogy : Site Visit to government and non-governmental organizations ,Group discussions, Presentations

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

1. To show knowledge about the hierarchy of development plans and their purposes.
2. To show knowledge about reading and interpreting master development plan documents.
3. To generate information across sectors and levels in order to develop proposals in the form of a local area plan.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

- Continuous Internal Evaluation (CIE): The CIE marks awarded in case of Studio shall be based on the weekly evaluation of progress of the studio works after the conduction of every Presentation

Semester End Examination:

- Planning Studio SEE will be conducted by the University as per scheduled time table, in a batch wise with external examiner and Internal Examiner reviewing the works of the students.

Suggested Learning Resources:

Books

1. Berke, P. and Goodschalk, D.A. (2006) *Urban Land Use Planning*, University of Illinois Press, Champaign, Illinois.
2. Talen, E. (2012) *City Rules: How regulations affect urban form*, Island Press, Washington.
3. Sanyal, B., and Deuskar, C. (2012) 'A Better Way to Grow? Town Planning Schemes as a Hybrid Land Readjustment Process in Ahmedabad, India', in G.K. Ingram and Y.H. Hong (eds.) *Value Capture and Land Policies*, pp. 149–82, Lincoln Institute of Land Policy, Cambridge, MA.

Web links and Video Lectures (e-Resources):

- ndmc.gov.in/departments/Departments/Project/Report%20NDMC.pdf
- http://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf
- https://swayam.gov.in/nc_details/NPTEL

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Site visits/ government and non-governmental organisations for data collection
- Undergoing Primary survey in different sectors for transportation, housing and other sectors.

V Semester

HOUSING			
Course Code	**21PLN52**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- This is an introductory course to housing. The objectives of the course are to provide students with an understanding of the nature of housing problems and how housing needs are assessed and how government policies and development regulations affect housing outcomes particularly for the poor.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding
- Topics will be introduced in a multiple representation

Module-1

Introduction

Housing: definition, housing as a verb and noun; Housing in relation to planning; Concepts of housing stock, need, demand, shortage; An overview of housing situation; Urban and rural housing scenario in India; Housing as a component of social and economic development; Key challenges of housing provision including housing for the poor, emergence of slums, unauthorised colonies, gentrification, displacement.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Housing development process

Understanding of factors affecting residential location, theoretical knowledge of ecological, neoclassical, Institutional approach to housing. Housing subsystems and their characteristics. Formal and non-formal housing Development options and housing, costs, standards. Process of public and private sector housing development process. Housing Market and Real Estate Development.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Housing Project Formulation

Understanding the community; Determinants of housing form including physical, social, economic, technical and aesthetic; Development options and housing; Housing costs, standards, densities and FAR; Housing projects and city level housing provisions.

Pedagogy	Chalk and talk method, PowerPoint Presentation .And settlement study in terms of housing status

Module-4	
City Level Housing Studies Components of housing, housing subsystems; Administrative, legal and financial frameworks for housing development; Processes of housing development; Analysis of housing stress; Concepts of affordability and target identification	
Pedagogy	Chalk and talk method, Power Point Presentation
Module-5	
Policy and Legislative Framework Evolution of housing policy in India; Components of housing policy at national and state level; Approaches to housing provision for the poor, special groups and other vulnerable groups.	
Pedagogy	Chalk and talk method, Power Point Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To analyze the existing housing situation in a city.
- To show familiarity with national housing policies and other related housing provisions.
- To demonstrate understanding about the relationships between housing markets, housing standards and incomes.
- To develop knowledge about housing needs for the poor in India.
- To develop Knowledge about housing programmes and projects for the poor and their outcomes.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject. Duration of SEE is 03 hours

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module.

Suggested Learning Resources:

Books

1. Hardoy, J.E. and Satterthwaite, D. (1989) *Squatter Citizen: Life in the Urban Third World*, Routledge, London.
2. Verma, G.D. (2001) *Slumming India*, Penguin, New Delhi.
3. Cedric, P. (1990) *Housing and Urbanisation: A Study of India*, Sage, New Delhi.

4. Kohli, V.K. (2007) *Housing Finance Agencies in India*, Deep and Deep, New Delhi.
5. Jenkins, P., Smith, H. and Wang, Y.P. (2007) Planning and Housing in the Rapidly Urbanizing World, Routledge, New York.
6. 6.Mukhija, V. (2003) *Squatters as Developers, Slum Redevelopment in Mumbai*, Ashgate, New York.

Web links and Video Lectures (e-Resources):

- https://nptel.ac.in/courses/124/107/124107001/ ;
- https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1538-4632.1987.tb00126.x

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Site visit to the neighbourhood /settlement understanding the various patterns of households, condition of the building and calculating the demand and supply.
- Analysis on existing government schemes on housing.

V Semester

PROJECT FORMULATION APPRAISAL AND MANAGEMENT			
Course Code	**21PLN53**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- To expose students to techniques of project formulation, appraisal and management.
- To provide inputs to students for learning project evaluation, monitoring and implementation.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve teaching-learning.

Module-1

Introduction to Project Formulation, Appraisal and Management

The concept of projects, Importance of project formulation, appraisal and management; reasons for shortfall in its performance; scientific management, lifecycle of project; detailed project report, and feasibility studies; techniques of financial appraisal, payback period, IRR, DCF, NPV, CBR.

Pedagogy	Chalk and talk method, PowerPoint Presentation, PDF notes, problem solving

Module-2

Project Formulation

Definition, objectives; Stages of project formulation and their significance; Methodology for project identification and formulation; Feasibility studies, input analysis, financial cost-benefit analysis, social-cost benefit analysis; Project appraisal and report.

Pedagogy	Chalk and talk method, Power Point Presentation, PDF notes, problem solving

Module-3	
Project Appraisals Project formulation: definition, objectives; Need for project appraisal; Project formulation: definition, objectives; Stages of project form Network analysis; CPM, PERT, resource levelling and allocation, time-cost trade off aspects; Bar charts, Milestones, Standard oriented cost control techniques; Techno-economic analysis of projects.	
Pedagogy	Chalk and talk method, PowerPoint Presentation, PDF notes, problem solving
Module-4	
Project Implementation, Monitoring and Evaluation Project implementation, stages of implementation, Teamwork, actors in project implementation; Project monitoring: meaning objectives and significance; Monitoring techniques: integrated reporting, Milestones, time and cost overrun and underrun, unit index techniques;	
Pedagogy	Chalk and talk method, PowerPoint Presentation, PDF notes, case studies on projects
Module-5	
Project evaluation Project evaluation: meaning, objectives, scope, stages, approach and steps, Life of a project; Techniques of project evaluation: input analysis, financial cost-benefit analysis, social-cost benefit analysis; case studies in urban and regional development projects.	
Pedagogy	Chalk and talk method, PowerPoint Presentation, PDF notes, case studies on projects

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To show knowledge about evaluating and monitoring of implementation of development projects.
- To demonstrate skills for the preparation of detailed reports of development projects

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.

In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject. Duration of SEE is 03 hours

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Agrawal, R. and Mehra, Y.S. (2017) Project Appraisal and Management, Taxmann Publisher, New Delhi.

2. Mattoo, P.K., (1978) Project Formulation in Developing Countries, South Asia Books, New Delhi

3. Johansson, P. and Kriström, B. (2016) Cost-Benefit Analysis for Project Appraisal, Cambridge University Press, Cambridge.

4. Gudda, P. (2011) A Guide to Project Monitoring and Evaluation, Author House, Bloomington, Indiana.

Web links and Video Lectures (e-Resources):

- https://swayam.gov.in/nc_details/NPTEL
- https://www.ihmnotes.in/assets/Docs/Ignou/TS-03/Unit 21%20Project%20Formulation%20&%20Appraisal.pdf
- http://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000438BE/P000735/M014401/ET/1456896778BSE_P16_M5Etext.pdf
- https://www.pmi.org/business-solutions/case-studies
- https://www.pmi.org/business-solutions/case-studies/astrazeneca-case-study
- https://www.pmi.org/business-solutions/case-studies/airbus-case-study
- https://www.youtube.com/watch?v=OzsJ1J0MYaw
- https://www.youtube.com/watch?v=-PpAyWW5tZE
- https://www.youtube.com/watch?v=ZWmXi3TW1yA
- https://www.youtube.com/watch?v=bt4LL_rKwFM

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students can formulate and work on a real project to apply the theory in practice. It enables them to do Project formulation and appraisal.
- Problem solving on module 1,2&3 and analysis of the different stages of project management

V Semester

SPATIAL DATA INFRASTRUCTURE FOR PLANNING – II			
Course Code	**21PLN54**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:2:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- To provide technical inputs for the use of GIS in planning and perform planning analyses using Geographic Information Systems as a tool.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve teaching-learning.

Module-1

Introduction to Geographic Information Systems (GIS)

Introduction to Geoinformatics, concepts and definitions of GIS; Components and functions of GIS; Understanding maps and layers; Understanding vector and raster datasets, map elements; Data types and requirements, sources of data and data handling techniques; Significance of GIS and its key application areas; Current developments and practices.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Introduction to GIS Software

Introduction to GIS software, exploring Graphical User Interface (GUI); Supporting files and formats; Identifying toolbar and available tools and techniques for performing spatial analysis; Introduction to geo-referencing, relevance of adding spatial information to scanned images, toposheets and satellite images; Understanding spatial and attribute data types; Creating a project in GIS software, creating or adding layers; Digitization methods, organization of layers, importing and exporting data.

Pedagogy	Chalk and talk method, PowerPoint Presentation, Group Learning

Module-3	
Data Analysis Techniques Understating data analysis tools and techniques; Learning tools and techniques available in the GIS software for spatial and attribute data analysis; Exercises on adding database in attribute table; Adding information from other sources; Creating charts and graphs; Statistics summary, calculating geometry, query builder, buffering or proximity analysis, and overlay analysis; Using relevant extensions for spatial analysis, 3D analysis, etc.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Displaying Data Understating map elements, adding and changing symbology; Labelling and annotations; Creating map layouts; Inserting map scale, legend, title, north symbol; Creating grids and saving layouts; Printing and exporting maps as images.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Spatial Analytical Tools Land Matrix, Land Utilization, Conducting a Land Suitability Analysis using GIS, Introduction to new concepts like cloud computing, crowd sourcing etc.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate knowledge and skills to prepare maps in GIS platform, and to show the ability to perform planning analyses on GIS platform.
- To develop skills to be used in a planning decision support system.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject. Duration of SEE is 03 hours

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a

maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Chang K.T. (2017) Introduction to Geographic Information Systems, McGraw Hill Education, New York.
2. Singleton, A.D., Spielman, S. and Folch, D. (2018) Urban Analytics (Spatial Analytics and GIS), Sage, Thousand Oaks, California.
3. Okabe, A. (ed.) (2005) GIS-based Studies in the Humanities and Social Sciences, CRC Press, London.

Web links and Video Lectures (e-Resources):

- https://www.coursera.org/specializations/gis-mapping-spatial-analysis.
- https://www.sciencedirect.com/science/article/pii/S0143622814001611
- https://www.esri.com/en-us/search/?q=land%20matrix
- https://www.esri.com/en-us/search/?q=graphical%20user%20interface

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students work on ArcGIS Software and execute all the tools taught in the theory to gain hands-on experience.

V Semester

PROFESSIONAL ELECTIVE -II 1. SPATIAL JUSTICE			
Course Code	**21PLN55 .1**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- Planning being a progressive profession, justice, fairness and equity has always remained its major concern. In this vein of thinking, the subject of spatial justice locates itself at the heart of planning as justice always has spatial manifestations. The chief objective of this subject is to teach students about the idea of spatial justice, which involves spatial thinking rather than land use thinking alone.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning

Module-1

Coming to terms with Justice

What is justice? What is territorial justice? What is spatial justice? John Rawls' and Amartya Sen's ideas of justice and their relevance to planning; What is a just city?

Pedagogy	Chalk and talk method, PowerPoint Presentation, Group Learning

Module-2

Planning Rights and the City

Defining planning rights; Forms of planning rights; Sources of planning rights; Utility of planning rights; The Right to the City: Expositions by David Harvey, Peter Marcuse, and Henri Lefebvre; A study of the Urban Revolution; The Right to the city and centrality.

Pedagogy	Chalk and talk method, PowerPoint Presentation, Group Learning

Module-3	
Spatializing Planning How space and place are understood in planning? Production of space according to Henri Lefebvre; Types of space: absolute, relative and relational space; Third space of Edward Soja; Power geometry as philosophy of space by Doreen Massey; Relationship between space and time.	
Pedagogy	Chalk and talk method, PowerPoint Presentation, Group Learning
Module-4	
Spatial Justice Understanding spatial justice; Forms of spatial justice; How spatial justice manifests itself in the city; Dialectics of spatial justice; Planning in divided cities; Urbanization of injustice; Segregation in the city; The creation of the urban commons; The right to land, shelter and infrastructure**.**	
Pedagogy	Chalk and talk method, PowerPoint Presentation, Group Learning
Module-5	
Governance Arrangements Politics and governance arrangements that enable and constrain effective urban planning action, governance structures (centralized versus decentralized states, local versus regional versus national authorities, participatory budgeting, etc.) and political conditions (democracy versus authoritarianism, neoliberal versus corporatist versus leftist party politics, social movements), implications of governance arrangements in different political contexts to achieve social justice and equity.	
Pedagogy	Chalk and talk method, PowerPoint Presentation, Group Learning

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate the limitations of thinking in causative ways.
- To show knowledge and understanding of analysing planning policies and projects in a dialectical way, unearthing complex and multiple links.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Dikeç, M. (2001) Justice and Spatial Imagination, Environment and Planning A: Economy and Space, https://doi.org/10.1068/a3467
2. . Dikeç, M. (2007) Badlands of the Republic: Space, Politics and Urban Policy, Blackwell Publishing, Oxford.
3. Fainstein, S.S. (2010) The Just City, Cornell University Press, Ithaca.
4. Featherstone, D. and Painter, J. (2013) Spatial Politics, Wiley-Blackwell, Oxford.
5. Harvey, D. (1996) Justice, Nature and the Geography of Difference, Blackwell Publishing, Oxford.
6. Harvey, D. (2008) The Right to the City, New Left Review, Vol. 53, pp. 23-40.
7. Marcuse, P., Connolly, J., Novy, J., Olivo, I., Potter, C. and Steil, J. (2009) Searching for the Just City: Debates in urban theory and practice, Routledge, New York.
8. . Soja, E. (2010) Seeking Spatial Justice, University of Minnesota University Press, Minneapolis.
9. Zerah, M.H., Dupont, V., and Lama-Rewal, S.T. (eds.) (2011) Urban policies and the right to the city in India: rights, responsibilities and citizenship, UNESCO, New Delhi.

Web links and Video Lectures (e-Resources):

- https://www.researchgate.net/publication/337030601_A_Rawls-Sen_Approach_to_Spatial_Injustice
- https://core.ac.uk/download/pdf/268004254.pdf
- https://swayam.gov.in/nc_details/NPTEL
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7153342/
- https://newleftreview.org/issues/i196/articles/doreen-massey-politics-and-space-time

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students can do a presentation and effectively criticize the policies and programmes initiated by the Government of India.

V Semester

PROFESSIONAL ELECTIVE-II 2. PARTICIPATORY INTEGRATED URBAN DEVELOPMENT			
Course Code	**21PLN 55.2**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- The course intends to sensitize the students to the importance of participatory processes and integrated institutional arrangements for more effective, efficient and sustainable implementation.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning

Module-1	
Understanding Public participation Understanding participation, conditions for effective participation; idea of power and representation in participatory process, Arenas of participation; Brief introduction to theories on citizen and community participation such as Arnstein’s ladder of citizen participation.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-2	

Public Participation in India

Channels of public participation in plan making, plan implementation and governance in India; Legislative provisions; mandated and claimed spaces of participation; Requirements for planning a participatory process; evolution of community participation in development projects; Pani Panchayats

Pedagogy	. Chalk and talk method, PowerPoint Presentation

Module-3

Horizontal and vertical integration

Coordination in planning, understanding various kinds of public agencies involved in urban development and coordination for the purpose of planning projects and management in urban areas and regions; Current practices of cross-sectoral development, and case studies.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Participatory and integrated urban development – Case Studies

Based on the conceptual understanding developed in the first two parts of the course, this section will develop an understanding of the idea of Participatory and Integrated Urban Development through case studies of Multi-stakeholder projects.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

PPP IN URBAN DEVELOPMENT

PPP in Urban Development-Salient features of urban services; indispensability; risk profile, constraints and preconditions; Overview of best practices in urban development. Various forms of PPP– management contract, service contract, lease, divestiture and concessions; Strengths and weaknesses of each form. Promoting PPP: Advantages of collaboration; Methods of promoting effective participation. PPP – Principles and Guidelines Cardinal principles in PPP; Regulations and guidelines; Development of project proposal; Due diligence process; Competitive bidding process and documentation (EOI, RFQ, PIM, DCA, RFP); Regulatory authority; Transaction Adviser; Survey of PPP policies. Financing PPP projects Bankability of PPP project; Equity investment; Refinancing; Sources of PPP funding.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able:
- To demonstrate an understanding of the necessity of participatory and integrated urban development.
- To demonstrate knowledge about the current mandates and practices of public participation in planning.
- To show the significance of horizontal and vertical integration of organizations, territories and plans.
- To implement participatory and integrated development processes.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this

grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Cornwall, A. (ed.) (2011) The Participatory Reader, Zed Books, London.
2. Kochi Municipal Corporation and GIZ (2019) Multi-stakeholder Ente Kochi Initiative, Kochi Municipal Corporation and GIZ India, Kochi.
3. Kumar, A. and Prakash, P. (eds.) Public Participation in Planning in India, Cambridge Scholars Publishing, Newcastle.
4. Pune Smart City Development Corporation Ltd. (2016) Smart City Development Plan, Pune Smart City Development Corporation Ltd., Pune.
5. UN Habitat (2018) Leading Change: Delivering the New Urban Agenda through Urban and Territorial Planning, UN Habitat, Nairobi.

Web links and Video Lectures (e-Resources):

- https://swayam.gov.in/nc_details/NPTEL
- https://www.eukn.eu/policy-labs/policy-lab-for-cy-public-participation-in-the-development-process/general-introduction/what-is-public-participation/
- https://www.cambridgescholars.com/resources/pdfs/978-1-4438-9707-5-sample.pdf
- http://www.fao.org/3/ad346e/ad346e06.htm#:~:text=Participatory%20planning%20is%20a%20process,needed%2C%20but%20only%20as%20facilitators.

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A project which was initiated through PPP model can be given to students to demonstrate the process and complete challenges and limitations of the project

V Semester

PROFESSIONAL ELECTIVE II- 3. SETTLEMENT SOCIOLOGY			
Course Code	**21PLN55.3**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To introduce students to the concept and principles of sociology including information about the foundations of Social thought, Society, Culture, Social Change, Social Exclusion and related Planning aspects.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Foundation of Social Thought

Positivism, functionalism; conflict and interactionism; alternate development thought feminism, Environmentalism etc.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Society, Culture and Social Change

Processes of Social Change: industrialization, modernization, globalization etc. social Stratification concepts and basis; caste, class, power and gender. Social mobility. Social Problems in India.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Social Exclusion and Planning

Concept of social exclusion and its relevance for planning. Agents of social exclusion in Indian Cities and rural areas; spatial segregation. Sociology of displacement, migration and Resettlement. Gender and Development.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Urban Sociology

Culture of cities, social environment of urban areas, social and urban fragmentation and gated communities, neighborhood as a sociological concept, process of urbanization, industrialization, globalization and their social implication on Indian cities.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Rural Sociology

Social environment of rural areas, processes of rural change -westernization, sanskritization and modernization. Sociological barriers to rural change. rural problems: poverty, unemployment, bonded labor and migrant laborers.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able:
- To demonstrate an understanding of the necessity of a Social environment in rural and urban areas.
- To demonstrate knowledge about the Social Exclusion and Planning.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Sociology: Understanding and Changing the Social World, Steve Barkan, Flat World Knowledge, 2010
2. Introduction to Sociology, Ryan T. Cragun, Deborah Cragun, Wikibooks, 2006 Sociology, T.K.Oomenand C.N Venugopal, 2004
3. Basic concepts in Sociology, D.P.Mukerji, Rupa Publications India Pvt Ltd, 2004
4. Addressing Gender Concern in India's Urban Renewal Mission, Renu Khosla, UNDP, 2010

Web links and Video Lectures (e-Resources):

- https://swayam.gov.in/nc_details/NPTEL
- https://courses.lumenlearning.com/boundless-sociology/chapter/urban-life/
- https://www.youtube.com/watch?v=5w9T1O_JE8I

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Presentation on case studies and literature study

V Semester

PROFESSIONAL ELECTIVE II- 4. CONTEMPORARY URBAN PLANNING PRACTICES			
Course Code	**21PLN55.4**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To develop ability of the students to select the most viable planning approach (es), list the steps in scheme mapping and programme implementation, refer to the relevant clause of global urban agenda, appreciate ICT application in urban planning.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1	
Structure and Practice of Contemporary Urban Planning Contemporary urban planning: the reform agenda, planning and politics, and social issues; Tools of land use planning; Smart growth; Energy planning.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-2	

Urban Planning Approaches

Approaches to land regularization and management; Green field development; Brownfield development; Compact city development; Land pooling / Town Planning scheme; Inner city development; Participatory process and partnerships; New urban forms and new urbanism

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Urban Planning Programmes and Schemes in India

Programmes and schemes in urban sectors in India: Smart Cities, AMRUT, HRIDAY, Housing for All, Total Sanitation Programme, RuRBAN Mission etc

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Future Global Agenda

New Urban Agenda, Sustainable Development Goals, Future cities, Case Studies

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Technology and Urban Planning

Need for ICT and big data in urban planning; Intelligent cities and people: Case studies

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able:
- To demonstrate an understanding of the necessity of Technology and Urban Planning
- To demonstrate knowledge about the current Urban Planning Programmes and Schemes in India.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Contemporary Urban Planning, John M. Levy, Pearson, 2013

2. The Oxford Handbook of Urban Planning, Randall Crane and Rachel Weber, Oxford University

3. Press, 2015

4. Contemporary Urban Planning, John M. Levy, Routledge, 2012

5. Urban Planning: Theory and Practice, M.P. Rao, CBS Publishers

6. Urban Planning Methods: Research and Policy Analysis, Ian Bracken, Routledge, 2007

7. Making Strategic Spatial Plans: Innovation in Europe, Patsy Healey, Routledge, 1997

8. Understanding Cities, A.R. Cuthbert, Routledge, 2011

9. Smart Cities, A. Picon, John Wiley & Sons, 2015

10. Creating Smart-er Cities, Mark Deakin (Ed.), Routledge, 2013

11. Urban Development Debates in the New Millennium (Vol. 1 & 2), K.R. Gupta, Atlantic, 2005

12. Urban Planning and the Development Process, David Adams, Routledge, 2005

Web links and Video Lectures (e-Resources):

- **http://swachhbharaturban.gov.in/**
- **http://amrut.gov.in/content/**
- **https://smartcities.gov.in/**
- **https://mohua.gov.in/cms/about-day-nulm.php?url=about-day-nulm**
- **https://nerudp.nic.in/**

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Presentation on case studies and literature study

V Semester

PROFESSIONAL ELECTIVE II- 5. PLANNING FOR SPECIAL AREAS			
Course Code	**21PLN55.5**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To develop the skills of students to delineate the functional domain of special areas, collate and tabulate the information on socio economic, geo historic, physical and political features of special areas, analyze the land management system in special areas, identify planning issues for special areas and refer to the relevant acts, standards, programme and policies for special areas

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Classification of Special Areas

Need for Special Area Planning; Defining special areas; Typology of formal and functional special areas: boarder area, hill area, coastal area, desert area, extremist affected area, Special Economic Zones, port City, aerotropolis, medi-City, knowledge City, defence area etc.; Contemporary approaches for Special Area Planning..

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2	
Characteristics of Special Area Socio economic, physiographic, geographic and political features of special areas.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	
Governance of Special Areas Governance framework of special areas; Land management in special areas; Survey of statutes Governing special areas.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Infrastructure for Special Areas Unique infrastructural needs of special areas; Planning standards for special areas.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Programmes and Projects for Special Areas Survey of programmes and projects for special areas; Best practices of Special Area Planning.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able:
- To demonstrate an understanding of the necessity Infrastructure for Special Area
- To demonstrate knowledge about the current Programmes and Projects for Special Areas.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Contemporary Urban Planning, John M. Levy, Pearson, 2013
2. The Oxford Handbook of Urban Planning, Randall Crane and Rachel Weber, Oxford University
3. Press, 2015
4. Contemporary Urban Planning, John M. Levy, Routledge, 2012
5. Urban Planning: Theory and Practice, M.P. Rao, CBS Publishers
6. Urban Planning Methods: Research and Policy Analysis, Ian Bracken, Routledge, 2007
7. Making Strategic Spatial Plans: Innovation in Europe, Patsy Healey, Routledge, 1997
8. Understanding Cities, A.R. Cuthbert, Routledge, 2011
9. Smart Cities, A. Picon, John Wiley & Sons, 2015
10. Creating Smart-er Cities, Mark Deakin (Ed.), Routledge, 2013
11. Urban Development Debates in the New Millennium (Vol. 1 & 2), K.R. Gupta, Atlantic, 2005
12. Urban Planning and the Development Process, David Adams, Routledge, 2005

Web links and Video Lectures (e-Resources):

- **http://swachhbharaturban.gov.in/**
- **http://amrut.gov.in/content/**
- **https://smartcities.gov.in/**
- **https://mohua.gov.in/cms/about-day-nulm.php?url=about-day-nulm**
- **https://nerudp.nic.in/**

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Presentation on case studies and literature study

V Semester

OPEN ELECTIVE- I **1. SUSTAINABLE CITIES AND REGIONS**			
Course Code	**21PLN56.1**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary purpose of this subject is to understand urban sustainability, measures of sustainability, and elements and intersectionality of Sustainable Development Goals. The second objective focuses on effective governance in order to ensure sustainability of a city and a region.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

The Rise and fall of Urban Sustainability

Starting with Brundtland report, different perspectives on urban and regional sustainability; Economic development and sustainability; Healthy city; Dimensions and components of sustainable urban and regional development.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Planning and Measuring Sustainability

Elements of a new and improved paradigm of sustainability; Green cities, growing cities, just cities; Urban planning and the contradictions of sustainable development; Environmental justice and the sustainable city; Understanding urban and regional sustainability indicators; Sustainability assessment with a focus on community interests, etc.; Sustainability indicators used by a city of your choice.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Governance

Genesis, history, and limits of carrying capacity; Urban ecological footprints, planning with ecological footprints; Governance and local sustainability; Problematizing the politics of sustainability; New politics of sustainability fixes.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Sustainability

Environment and the entrepreneurial city: searching for the urban 'sustainability fix'; Third wave sustainability; Sustainability schizophrenia or actually existing sustainability: toward a broader understanding of the politics and promise of local sustainability; Alternative routes to the sustainable city with examples.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Sustainable Development Goals

Understanding New Urban Agenda, Sustainable Development Goals, Paris Agreements; India's position of these global agreements; Industrial ecology, planning for eco-industrial parks, drivers and limitations for the successful development and functioning of eco-industrial parks; SEZs, and development of ports, airports and road and rail based corridors.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To illustrate understanding of theories of structure, form, and processes responsible for the growth of urban settlements.
- To show the ability to comprehend approaches to making development plans.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Pacione, M. (2001) The Internal Structure of Cities in the Third World, Geography, Vol. 86, No. 3, pp. 189-209.

2. Pacione, M. (2013) Problems and Planning in Third World Cities, Routledge, New York.

3. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London.

4. Sivaramakrishnan, K. (2013) Re-visioning Indian Cities: The Urban Renewal Mission, Sage, New Delhi.

5. Vidyarthi, S., Mathur, S. and Agrawal, S. (2017) Understanding India's New Approach to Spatial Planning and Development, Oxford University Press, New Delhi.

6. Vidyarthi, S. (2019) Spatial plans in post-liberalization India: Who's making the plans for fast-growing Indian urban regions? Journal of Urban Affairs, pp. 1-18. DOI: 10.1080/07352166.2018.1527658

7. Wu, B.S. and Sui, d. (2015) Modelling Impacts of Globalization on Desakota Regions: A case study of Taipei Metropolitan Area, Environment and Planning B: Planning and Design, pp. 1-21, DOI: 10.1177/0265813515605216

Web links and Video Lectures (e-Resources):

- https://wri-india.org/our-work/project/sustainable-cities
- https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource efficiency/sustainable-cities

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A presentation on different schemes and methods introduced by the Government of India.
- A simple case study understanding the sustainability

V Semester

OPEN ELECTIVE -I **2. GENDER SENSITIZATION: SOCIETY, CULTURE AND CHANGE**			
Course Code	**21PLN56.2**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary purpose of this subject is to understand our perception of gender, gender norms and gender roles is defined by patriarchy to a great extent. To understand and perceive gender hinges on society's patriarchal construction, and it is therefore highly flawed. There is a need to deconstruct the patriarchal understanding of society and take up gender issues with greater enthusiasm. The Gender Sensitisation: Society, Culture and Change programme discusses these topics.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Introduction

Understanding Gender and Related Concepts, The concept of gender; Sex versus Gender; Gender Boundaries, Gender Identity, Gender Stereotype, Gender Ideology

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Gender-sensitive Planning

Need for Gender Sensitive Planning; Gender-sensitive Indicators; Guide to Planning Gender-sensitive Indicators; Gender-sensitive Outcomes

Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	
Gender-Sensitive Place-making Key Concepts for place-making, Understanding Gender, safety and urban place-making; Questioning the idea of a Generic User in place-making; Applying Gender-sensitive Place-making Lens, Identifying Strategies; Advocating for gender-sensitive place-making	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Major Issues and Alternatives in Gender Planning and Gender-Sensitive Planning Political Will and Adequate Financial and Other Resources; Development Planning and Macroeconomic Policy; Institutional Concerns	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Case Studies National and International case studies which can be considered as a benchmark for inclusive and just cities around the world.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To illustrate understanding to deconstruct the prevailing patriarchal notions about women, men and other sexualities
- To build understanding of women's status in our society and identify ways to address Gender Sensitization: Society, Culture and Change.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. IGNOU : Gender Sensitization: Society, Culture and Change (2019) BGSE001, New Delhi IGNOU
2. Jane Pilcher and Imelda Whelehan (2005) : Fifty Key Concepts in Gender Studies

Web links and Video Lectures (e-Resources):

- https://www.youtube.com/watch?v=y2FSuXqnFWg&t=2s

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A presentation on different schemes and methods introduced by the Government of India.
- A simple case study understanding the sustainability

V Semester

OPEN ELECTIVE- I 3. MIGRATION, SPATIAL DISTRIBUTION AND URBANIZATION			
Course Code	**21PLN56.3**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary purpose of this subject is to understand Concepts, pattern, determinants and consequences of Urbanization, Settlements, Migration and issues related to these terms.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Urbanization and Space Urbanization and space:

Concepts and forms (formal and informal spaces); Differences between space, place and region; urbanization and space interaction: gravity model, distance decay model, forces of concentration and dispersion, urban agglomeration and spatial economy; Access to urban and right to the city

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Evolution of Spaces of Settlements

Settlement: evolution, characteristics and factors; settlement pattern and hierarchy; Urban morphology; Change in urban land use and population density; Rural-urban relationship: dichotomy or continuum; Role of urban centres in rural development.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Valuation and Adjustment of Demographic Data

Appraisal of the quality of demographic data; types and sources of errors; sampling and non-sampling errors; methods of detecting errors in population data; post-enumeration surveys; dual record system; brief introduction

to indirect methods. Evaluation and measurement of errors in age reporting; methods of adjustment for age-sex data; method of graduation**.**	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Measures of Migration Direct estimation of lifetime and intercensal migration rates from census data. Indirect measures of net internal migration: Vital Statistics Method, National Growth Rate Method and Census and Life Table Survival Ratio methods. Methods of estimating international migration. Migration surveys	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Measures of Spatial Distribution and Urbanization Selected measures of concentration of population-Density, percentage distribution and dissimilarity index; Selected measures of Degree and tempo of urbanization; Growth and distribution of urban population, Rank-Size rule and Primacy Index, Lorenz curve and Gini's concentration ratio**.**	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To illustrate understanding of measures of Spatial Distribution and Urbanization
- To build an understanding about the measures, valuation methods on the analysis.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Cohen, Robin, (1996): Theories of Migration, The International Library of Studies on Migration, Edward Elgar, Cheltenham.
2. Eduardo Arriaga, (1975): "Selected Measures of Urbanization", in Sydney Goldstein and David Sly (Eds.) Measures of Urbanization and Projections of Urban Population, IUSSP Belgium

3. United Nations, (2004): World Urbanization Prospects, The 2003 Revision, New York.
4. United Nations, (1998): World Population Monitoring 1997, International Migration and Development, New York.
5. United Nations, (1974): Methods of Measuring Internal Migration, Manual VI, UN, New York.
6. Shryock, Henry S. Jacob S. Siegel and Associate, (1980): The Methods and Materials of Demography Vol.1 & 2, U.S. Bureau of the Census, Washington D.C.

Web links and Video Lectures (e-Resources):

- https://www.yourarticlelibrary.com/population-geography/4-general-theories-of-migration-explained/43257
- https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS
- https://www.un.org/en/development/desa/population/publications/pdf/manuals/projections/manual8/chapter3.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Analysis on the different methods of demographic projections and problem solving.

V Semester

OPEN ELECTIVE- I **4. BUSINESS PLAN DEVELOPMENT**			
Course Code	**21PLN56.4**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary purpose of this subject is to understand and discuss planning in nascent firms from the perspective of nascent entrepreneurs and potential investors. It allows us to recognize opportunity and build business development models.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1	
ENTREPRENEURIAL BUSINESS OPPORTUNITIES: BASIC LEARNING Introduction to entrepreneurial management ,Launching a new business venture: CD-ROM simulation ("Venture Out")	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-2	
RECOGNIZING OPPORTUNITY AND BUILDING BUSINESS MODELS Evaluating new venture opportunities, Opportunity analysis & building business models/basic questions, Financial projections.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	

Processes involved in Business Plan
The Product Development Process and Operations ,The Management Team and Organizational Structure

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Challenges and Risks
Critical Risks and Problems in making business development models

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Financial Planning
Financing sources and Finishing Touches in framing business development plan

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To provide students with methods and tools for evaluating the entrepreneurial concept
- To understand the key elements required to write a successful business plan and the interrelationship between components
- To introduce students to aspects related to different exit routes strategies and harvesting the firm.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:
Books

1. Shepherd, D.A. and Ettenson, R. (2000). New venture strategy and profitability: a venture capitalist's assessment. Journal of Business Venturing, Vol. 15. Sykes, H.B and Dunham, D. (1995).
2. Critical assumption planning: a practical tool for managing business development risk. Journal of Business Venturing, 10. Landström, H. (1994).
3. Co-operation between venture capital companies and small firms. Entrepreneurship and Regional Development, 2(4). Hall, J. and Hofer, C.W. (1993).
4. Venture capitalists' decision criteria in new venture evaluation. Journal of Business Venturing, 9(1). Macmillan, I.C., Siegel, R., Narsimha, P.N. (1985)
5. Criteria used by venture capitalists to evaluate new venture proposals. Journal of Business Venturing, 1(1)

Web links and Video Lectures (e-Resources):

- https://economictimes.indiatimes.com/industry/banking/finance/approach-to-financial-planning-investing-and-disinvest/articleshow/86799542.cms

- https://www.franklintempletonindia.com/investor/investor-education/video/importance-of-financial-plannng-io04og31#:~:text=Financial%20planning%20is%20a%20step,money%20and%20achieve%20your%20goals.

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Literature study on framework of different business development plan

V Semester

OPEN ELECTIVE-I 5. INTRODUCTION TO ENTREPRENEURSHIP			
Course Code	**21PLN56.5**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary purpose of this subject is to understand that Entrepreneurship is a will and capability to develop, organize and manage a business venture including its risk factors to make a profit. It combines land, labour, natural resources and capital.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Introduction

The Entrepreneur; definition; Emergence of entrepreneurial class; Theories of entrepreneurship; Role of Socio-economic environment; Characteristics of entrepreneur; Leadership; Risk taking; Decision making and Business Planning

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Promotion of Venture

Types of venture; Opportunities analysis; External Environmental Analysis- economic, social, technological; Competitive factors; Legal requirements for establishment of a new unit; Raising of funds; Venture Capital sources and documentation required.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3	
Entrepreneurial Behaviour Entrepreneurial behaviour and Psycho -Theories; Innovation and Entrepreneur; Social Responsibility	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Entrepreneurial Development Programmes EDP, their role, relevance and achievements; Role of Government in organizing EDPs; Critical Evaluation	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Role of Entrepreneur Role of entrepreneur in economic growth as an evaluator; Generation of employment opportunities; Complementing and supplementing economic growth; Bringing about social stability and balanced regional development of industries; Role in export promotion and import substitution; Forex Earnings; Augmenting and meeting local demand	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To illustrate understanding of theories of structure, form, and processes responsible for the growth of urban settlements.
- To show the ability to comprehend approaches to making development plans.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded. **Continuous Internal Evaluation:**

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored shall be proportionally reduced to 50 marks
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Tendon ,C: Environment and Entrepreneur; Cliugh Publications, Allahabad.
2. Siner A David: Entrepreneurial Megabuks; John Wiley and Sons, New York.
3. Srivastava S. B: A Practical Guide to Industrial Entrepreneurs; Sultan Chand and Sons, New Delhi.
4. Prasanna Chandra: Protect Preparation, Appraisal, Implementation; Tata McGraw Hill. New Delhi.
5. Paudey I.M: Venture Capital - The Indian Experience; Prentice Hall of India, New Delhi.
6. Holt: Entrepreneurship-New Venture Creation; Prentice Hall of India New Delhi.

Web links and Video Lectures (e-Resources):

- https://byjus.com/commerce/what-is-entrepreneurship/
- https://www.tutorialspoint.com/entrepreneurship_skills/entrepreneurship_skills_roles_of_an_entrepreneur.htm

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A case study on the different personalities and famous entrepreneurs .
- A group discussion on the challenges and limitations faced by the entrepreneurs.

V Semester

PROFESSIONAL TRAINING – I			
Course Code	**21PLN57**	CIE Marks	-
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:0:0:0	SEE Marks	100
Total Hours of Pedagogy	-	Total Marks	100
Credits	3	Exam Hours	-

General Instructions:

Students will undergo professional training in a department approved organization on a project for 2 months. This will be supervised training by a senior professional from the organization. Satisfactory completion of training will be mandatory for the award of a degree. Training will be evaluated by the faculty in charge and Internship training Coordinator.

V Semester

	ENVIRONMENTAL STUDIES			
	Course Code	**21CIV 58**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	1:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	16	Total Marks	100
	Credits	1	Exam Hours	1

Course objectives:
Communicate complex environmental information to both technical and non-technical audiences; Understand and evaluate the global scale of environmental problems; and. Reflect critically on their roles, responsibilities, and identities as citizens, consumers and environmental actors in a complex, interconnected world.

Pedagogy (General Instructions)
These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Orienting Planners towards various analysis involving statistical methods
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Module 1

Ecosystems (Structure and Function):
Forest, Desert, Wetlands, Riverine, Oceanic and Lake. Biodiversity: Types, Value; Hot-spots; Threats and Conservation of biodiversity, Forest Wealth, and Deforestation

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module 2

Advances in Energy Systems (Merits, Demerits, Global Status and Applications):
Hydrogen, Solar, OTEC, Tidal and Wind.
Natural Resource Management (Concept and case-studies):
Disaster Management, Sustainable Mining, Cloud Seeding, and Carbon Trading.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module 3

Environmental Pollution (Sources, Impacts, Corrective and Preventive measures, Relevant Environmental Acts, Case-studies):
Surface and Groundwater Pollution; Noise pollution; Soil Pollution and Air Pollution.
Waste Management & Public Health Aspects:
Bio-medical Wastes; Solid waste; Hazardous wastes; E-wastes; Industrial and Municipal Sludge.

Pedagogy	Chalk and talk method, PowerPoint Presentation

	Module 4	
	Global Environmental Concerns (Concept, policies and case-studies): Ground water depletion/recharging, Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem in drinking water; Resettlement and rehabilitation of people, Environmental Toxicology.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module 5	
	Latest Developments in Environmental Pollution Mitigation Tools (Concept and Applications): G.I.S. & Remote Sensing, Environment Impact Assessment, Environmental Management Systems, ISO14001; Environmental Stewardship- NGOs. **Field work:** Visit to an Environmental Engineering Laboratory or Green Building or Water Treatment Plant or Waste water treatment Plant; ought to be Followed by understanding of process and its brief documentation.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcomes:

At the end of the course, students will be able to:

- CO1: Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
- CO2: Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
- CO3: Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components. CO4: Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50)in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

Three Unit Tests each of 20 Marks (duration 01 hour)

1. First test at the end of 5th week of the semester
2. Second test at the end of the 10th week of the semester
3. Third test at the end of the 15th week of the semester

Two assignments each of 10 Marks

4. First assignment at the end of 4th week of the semester
5. Second assignment at the end of 9th week of the semester Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for 20 Marks (duration 01 hours)
6. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be scaled down to 50 marks (to have less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE.

Each method of CIE should have a different syllabus portion of the course). CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject (duration 01 hours) Question paper pattern:

1. The Question paper will have 50 objective questions.
2. Each question will be for 01 marks
3. Students will have to answer all the questions on an OMR Sheet.
4. The Duration of the Exam will be 01 hour

Suggested Learning Resources:

Books

1. Environmental Ecology Biodiversity & Climate Change – Pratiyogita Darpan
2. Environment and Ecology – Arihant
3. Environmental Studies: From Crisis to Cure – R. Rajagopala**n**

Web links and Video Lectures (e-Resources):

- http://proxy.earlham.edu/login?url=http://earlham.worldcat.org/oclc/47009637
- http://earlham.worldcat.org/oclc/31901190
- http://proxy.earlham.edu/login?url=http://earlham.worldcat.org/oclc/228071686
- https://www.sciencedirect.com/topics/engineering/reference-environment

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Understanding the contractual and tender documents related practices.

V Semester

PHYSICAL EDUCATION (SPORTS & ATHLETICS)/ YOGA/ NSS			
Course Code	**21PE59/ 21YO59/ 21NS59**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:2:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	-	Exam Hours	-

13.09.2022

13.09.2022

SEMESTER VI

VI Semester

PLANNING STUDIO: MASTER DEVELOPMENT PLAN FOR A TOWN OR CITY			
Course Code	**21PLN61**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:10:0:0	SEE Marks	50
Total Hours of Pedagogy	160	Total Marks	100
Credits	5	Exam Hours	-

Course objectives:

- The chief objective of this studio is to train students to prepare a master development plan of a town or a city or a metropolis.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- The student is required to visit site and organizations for the collection of data
- The student is asked to do multiple surveys for Transportation and Socio economic study for understanding the Issues.
- Report Presentations and Sheets on final Analysis is to be submitted at the end of the studio

Course Contents

The study for this studio exercise shall be limited to the preparation of a comprehensive development plan of an urban settlement. The programme may carry a predetermined focus such as planning for tourism, energy conservation, heritage conservation etc. The studio programme is designed to expose the student to: Study and establish appropriate planning standards, techniques of population projection, Identification of the data to be collected and the sources thereof, organising surveys and collecting socio-economic, traffic and other data, Projecting the future with different scenarios and identification of 'action areas' (i.e., specific problems related with housing, services, circulation, etc.), Preparation and presentation of all relevant drawings and reports of complete comprehensive development plan proposal.

Practical Training

Training is an integral part of learning in real life situations. Following the closure of the 6th semester, each student is required to undertake a six-week professional training, during summer vacations, in an organization duly approved by the training coordinator. The work undertaken during this training shall be presented by the students in the training seminar before the faculty. Training will be supervised by a faculty and will be duly marked

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

1. To analyse the existing policy and planning literature on urban development plans, and to examine field survey data and information.
2. To plan and design different future scenarios, priorities of development, action areas, phasing and monitoring, and to propose governance structures for the implementation of the plan.
3. To produce spatial policies, and to make planning proposals along with a land use plan for a selected urban settlement.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

- Continuous Internal Evaluation (CIE): The CIE marks awarded in case of Studio shall be based on the weekly evaluation of progress of the studio works after the conduction of every Presentation

Semester End Examination:

- Planning Studio SEE will be conducted by the University as per scheduled time table, in a batch wise with external examiner and Internal Examiner reviewing the works of the students.

Suggested Learning Resources:

Books

1. 1.Bureau of Indian Standards (2005) National Building Code of India, Bureau of Indian Standards, New Delhi
2. Delhi Development Authority (2007) Master Plan for Delhi, 2021, DDA, New Delhi.
3. Ministry of Urban Development (1996) The Urban Development Plan Formulation and Implementation (UDPFI) Guidelines, Government of India, New Delhi.
4. 4. Ministry of Urban Development (2015) The Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines, Government of India, New Delhi.

Web links and Video Lectures (e-Resources):

- http://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf
- https://planningtank.com/urban-regional-planning/concept-characteristics-preparation-master-plan
- https://urban-regeneration.worldbank.org/node/51
- http://www.itpi.org.in/pdfs/07_01.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Feasibility Study, Strategic Framework to be worked.
- Data collection through primary and secondary study needs to be collected through site visits and visit to government and non –governmental organizations.

VI Semester

ENVIRONMENT PLANNING			
Course Code	**21PLN62**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To expose students to diverse concepts of sustainable development, community based environmental planning, environmental justice, and global environmental challenges

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Sustainable Development

Origin of the term sustainable development and its diverse interpretations; Role of different actors from bottom-up to top-down, weak versus strong sustainability; Participatory challenges: green democracy versus participatory managerialism; Mainstreaming of sustainable development and its integration with development; Sustainable development agenda and different models of planning: planning models which emphasise delivery against sustainability targets i.e. linear rational model, those which emphasise collaboration i.e. integration of different forms of knowledge and expertise, and those which see planning as arena for debate and emphasise learning for sustainability.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Environmental land use planning

Land Use Planning Relationship between land use, infrastructure and natural environment; Land use and environmental protection; Community-based environmental protection; Ecosystem management; Integrated water resource management; Hazard mitigation; Ecological restoration; Land conservation;

Pedagogy	Chalk and talk method, PowerPoint Presentation.

Module-3

Community-based Environmental Planning

A bottom-up approach; Responsive and context-sensitive plans incorporating local knowledge, enhancing local ownership; Define communities and understanding inequalities within communities; Capacities of communities; Relationships with other scales for environmental planning

Pedagogy	Chalk and talk method, PowerPoint Presentation.

Module-4

Justice and Land Use Planning

Origins of environmental justice movements; Understanding location of polluting industries in ethnic minority neighbourhoods; Distribution of environmental ills and benefits by using GIS mapping; Recognition of diversity and identities of actors; Procedural and distributive justice and participation; Economic, social and political processes in urban and regional development for creating more environmentally just society; Urban and rural poor in developing countries and environmental justice issues; Environmental Impact Assessment in India; Introduction to Strategic Environment Assessment.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Global environmental problems and local planning

Debates over climate change, forests and biodiversity depletion, water scarcity and food scarcity; International environmental negotiations and treaties like 1987 Montreal Protocol, 1992 Rio Convention on Biological Diversity, 1997 Kyoto Protocol, MDGs, SDGs, etc.; Local environmental planning issues like green building certification, non-motorised transportation infrastructure, rainwater harvesting, grey water recycling, urban agriculture, etc.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To show knowledge about the integration of sustainable development and other environmental theories into a development plan.
- To demonstrate knowledge and skills to prepare environmental plans for human settlements.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Pekmezovic, A., Walker, G. and Walker J. (2019) Sustainable Development Goals: Harnessing Business to Achieve the SDGs through Finance, Technology and Law Reform, John Wiley and Sons, New Jersey.
2. Randolph, J. (2003) Environmental Land Use Planning and Management, Island Press, Washington D.C.
3. Amanda, K. (2017) Environmental Justice and Land Use Conflict, Taylor and Francis, London.
4. Gupta, K.R. and Maiti, P. (2009) Global Environment: Problems and Policies, Atlantic Publisher, New Delhi.

Web links and Video Lectures (e-Resources):

- https://www.un.org/waterforlifedecade/iwrm.shtml
- https://www.unep.org/explore-topics/disasters-conflicts/where-we-work/sudan/what-integrated-water-resources-management
- https://www.cbd.int/gbo1/chap-02.shtml
- https://publications.gc.ca/Collection-R/LoPBdP/BP/bp317-e.htm

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group presentation and discussion on the current trends of environmental issues and mitigation measures taken against
- Literature study on the development plans such as special area plans like coastal development plan ,eco city development plan etc for better understanding

VI Semester

LAND ECONOMICS AND LOCATION THEORY			
Course Code	**21PLN63**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- Land and the institution of private property are foundational to the efficient working of the capitalist system. In this line of thinking, the primary objective of this subject is to teach students about land and property development and the functioning of their markets. On theoretical side, students will be taught the basics of land economics including location theories as they pertain to land uses and property

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Introduction to Land Economics

Economics concepts of land, objectives and scope of land economics; relevance for spatial planning; economic principles of land use; economic rent, land use and land values, market mechanism and land use pattern.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Development of Land and Real Property

Process of land development; Cost of development; Source of finance, financial calculation for private developers; Real property and its salient characteristics**.**

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3	
Real Property Markets Heterogeneity and imperfections, valuation of real property – principles and practices; private ownership and social control of land; disposal of land; land development charges and betterment levy; land use restrictions, compensation and requisition taxation of capital gain on land versus public ownerships, economic aspects of land policies at various levels of decision making.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Factors Influencing Locational Decisions and Economic Analysis Analysis of location of specific uses like residential, industrial, commercial and institutional in the light of location theories in intra-regional and inter-regional context; Techniques of cost benefit analysis of urban development programmes, social costs and benefits, monetization of various costs and benefits, difference between financial and economic analysis.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Economic Analysis Techniques of cost benefit analysis of urban development programme, social costs and benefits, Monetization of various costs and benefits, difference between financial and economic analysis.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To develop knowledge about the nature of land and property development, and real estate markets as well as land economics including location theories.
- To show the relevance and use of this knowledge for the preparation of development plans and projects.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.

2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module.

Suggested Learning Resources:
Books

1. Church, R.L. and Murray, A.T. (2009) *Business Site Selection, Location Analysis, and GIS*, Wiley, Hoboken, New Jersey.
2. Evan, A. (2004) *Economics and Land Use Planning*, Wiley-Blackwell, Hoboken, New Jersey.
3. Glatte, T. (2015) Location Strategies: Methods and their methodological limitations *Journal for Engineering, Design and Technology*, Vol. 13, Issue 3, pp. 435 – 462.
4. Harvey, J. (1996) *Urban Land Economics*, Fourth Edition, Macmillan, London.
5. Isard, W(1956) *Location and Space–Economy: A General Theory Relating to Industrial Location, Market Areas, Land Use, Trade, and Urban Structure*, MIT Press, Cambridge.
6. Nachem, I. (2007) *The Complete Guide to Financing Real Estate Developments*, McGraw-Hill, New York.
7. Ryan-Collins, J., Lloyd, T., and Macfarlane, L. (2017) *Rethinking the Economics of Land and Housing*, Zed Books, London.
8. Wu, J. and Duke, J.M. (2014) *The Oxford Handbook of Land Economics*, Oxford University Press, New York.

Web links and Video Lectures (e-Resources):

- https://www.britannica.com/topic/location-theory
- https://swayam.gov.in/explorer
- https://www.youtube.com/watch?v=6COT986SYTQ

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Case studies to understand the process of Land development and the cost benefit analysis of a project.

VI Semester

URBAN/ DEVELOPMENT FINANCE			
Course Code	**21PLN64**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- Development finance is critical to the actualization of planning policies and projects as is political prioritization. The main objective of this subject is to critically explain and discuss the idea of development finance, its various forms and sources, techniques to raise funds, and the working of financial markets. Understanding functioning of the variegated financial organizations is also one of its objectives.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Multiple Finances

Nature and composition of income and expenditure, limitations and need for revenue enhancements; Expenditure control methods and mechanisms; Budgetary allocation from central and state governments for urban development; Assistance from foreign donors and multinational agencies; Market access; Pool finance and prerequisite conditions for accessing non-traditional funds; Multilateral and bilateral funding from international organisations. An overview of plan and non-plan financing (Planning Commission, Niti Ayog and Finance Commission); Categorisation of Municipal Sources of Revenue: Internal versus external revenue, capital versus revenue receipt; Municipal finance assessment framework; Reforms in municipal finance, rationalisation of user charges; Ring fencing; Streamlining municipal tax administration; Monetary exaction, land exactions, debt financing, Public private partnerships, role of financial intermediaries, municipal bond, municipal budget, performance budget, gender budget, fiscal indicators: RDR, FAR and EDR; Municipal accounting and auditing

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Additional Funding sources

Types of partnership approaches; Privatization of civic services; public private partnership mechanisms; Types of contracts and ownerships; Emerging cost effect technology interventions; User charged projects; Pricing of services.

Pedagogy	Chalk and talk method, PowerPoint Presentation, problem solving

Module-3

Resources Based on Achievement of Urban Reforms

Role of state government and urban local bodies; City's Challenge Fund; Urban reforms; Implications on resources, incentive fund and state level pooled finance development fund.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Institutional Capacity Enhancement and Urban Reforms

Better finance management, management process; Accounting and budgeting, asset management, receivables management, cost centre approach; Computerization as tool for resource enhancement

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Role of Management Information Systems

Financial operating plan, city corporate plan; Development of urban indicators; Infrastructure pricing and financing: financing mechanisms in addition to tax and grants; Private public partnerships like BOT, BOOT, BOLT etc.; Impact fee and subsidies

Pedagogy	Chalk and talk method, PowerPoint Presentation and reference on relevant case studies

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate knowledge of development finance, its various forms and sources, techniques to raise funds, and the working of financial markets.
- To show critical understanding of the functioning of variegated financial organizations.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Biekpe, N., Cassimon, D. and Mullineux, A. (eds.) (2017) Development Finance and its Innovations for Sustainable Growth, Palgrave Macmillan, New York.
2. Mathur, O.P. (2005) 'Impact of Globalization on Cities and City-Related Policies in India', in H. Richardson, W. Harry, and C. Chang-Hee (eds.) Globalization and Urban Development (pp. 43–58), Springer, Berlin.
3. Mathur, O.P. (2006) 'Urban Finance', in 3i Network, India Infrastructure Report, Oxford University Press, New Delhi.
4. Oxford University Press, New Delhi (pp 82-105)
5. Mathur, O.P., Thakur, D., and Rajadhyaksha, N. (2009) Urban Property Tax Potential in India, National Institute of Public Finance and Policy, New Delhi.
6. Mathur, O.P. (2018) The Financing of Urban Infrastructure Issues and Challenges, Background Note, Ministry of Finance, Government of India, New Delhi.
7. Mishra, A.K. and Mohanty, P.K. (2018) Urban infrastructure financing in India: applying the benefit and earmarking principles of taxation, Journal of Social and Economic Development, DOI: 10.1007/s40847-018-0059-1
8. Mohanty, P.K. (2016) Financing Cities: Municipal reforms, fiscal accountability and urban infrastructure, Sage, New Delhi.
9. Peterson, G.J. (2007) Financing Cities: Fiscal responsibility and urban infrastructure in Brazil, China, India and South Africa, Sage, New Delhi.
10. Singh, K. and Ta'I, B. (eds.) (2000) Financing and Pricing of Urban Infrastructure, New Age Books Publishers (P) Ltd, New Delhi.

Web links and Video Lectures (e-Resources):

- https://gsdrc.org/topic-guides/urban-governance/elements-of-effective-urban-governance/municipal-capacity/urban-finance/
- http://www.kuidfc.com/
- http://www.indiaenvironmentportal.org.in/category/2049/thesaurus/urban-finance/
- https://www.youtube.com/watch?v=qrs3taWpuD8
- https://www.youtube.com/watch?v=uyK_Dv9Bmb4
- https://www.youtube.com/watch?v=pYSgMGoK_Jo
- https://www.coursera.org/lecture/financing-infrastructure-in-african-cities/the-principles-of-finance-CeN4Z
- https://www.sopact.com/perspectives/sdg-11-indicators
- https://www.youtube.com/watch?v=WYoXWNm62Zw
- https://www.youtube.com/watch?v=GkFQaTBouho
- https://www.youtube.com/watch?v=AIXiMzAXtdw

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A presentation on Municipal/corporation Budgets of the selected Municipalities/ corporations in the selected districts and also included state, central and union budgets.
- Topic wise presentation from the modules.

VI Semester

PLANNING FOR INFORMAL SECTOR AND THE URBAN POOR			
Course Code	**21PLN65**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- This course intends to develop an understanding about issues of urban poverty and the informal sector and to critically examine various policy approaches.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Urban Poverty

Dimensions of urban poverty, measurement of poverty, magnitude of problem; MDGs and SDGs, defining the poverty line, urban versus rural poverty; Causes and consequences of urban poverty, slums; Urban poverty alleviation programmes.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2	
Approaches for Alleviation of urban poverty Theoretical perspectives on poverty alleviation; Evolution of approach to poverty alleviation in global context and in India; Policies for the urban poor in India since independence; Five year plans and current policy approaches.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	
Concept, causes and consequences of Informal Sector Concept of informal sector and informality; Types of informal sector and role of informal sector in cities, Spatial focus on informal sector; Socio-economic deprivation and informal sector; Poverty and informality in historic areas; Policies and practices in dealing with the informal sector in India e.g. National Policy on Urban Street Vendors, NCEUS, others); Informal and formal networks and interdependence.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Planning for Informal sector Policy framework for addressing the challenges of informal economy; Planning provisions and norms; Policies governing informal sectors of economy e.g. household industry, street vending, etc. and its implications for city planning.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Land and Informality Spatial justice to urban informal economy – statutory allocation of urban land to urban informal activity; Identification of hot spots of urban poverty- ghettoization; The economics of location of Informal settlements.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

To demonstrate critical understanding about the concepts of urban poverty and informal sector

To evaluate critically the success of different approaches to dealing with urban poverty.
To show familiarity with various policies and programmes on urban poverty and various organizations dealing with urban poverty.
To demonstrate an understanding of how planning intervenes to deal with the issues of urban and rural poverty.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.
3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1.Agnotti, T. (2018) Metropolis 2000: Planning, Poverty and Politics, Routledge, New York.
2. Breman, J. (2016) At Work in the Informal Economy of India: A Perspective from the Bottom Up, Oxford University Press, New Delhi.
3. Bromley, R. (2013) The Urban Informal Sector: Critical Perspectives on Employment and Housing Policies, Pergamon Press, Oxford.
4. Mazumdar, D. (1976) The Urban Informal Sector, World Bank Staff Working Paper No. 43, World Bank, Washington, D.C.
5. McFarlane, C. (ed.) (2016) Urban Informalities: Reflections on the Formal and Informal, Routledge, New York.
6. Nussbaum, M. and Sen, A. (eds.) (1993) The Quality of Life, Clarendon Press, Oxford.
7. Satterthwaite, D. and Mitlin, D. (2013) Reducing Urban Poverty in the Global South, Routledge, New York.
8. Sen, A. (2000) Development as Freedom, Alfred A. Knopf, New York.
9. Sen, K. and Rajesh, R.S.N. (2016) Out of the Shadows?: The Informal Sector in Post-reform India, Oxford University Press, New Delhi.
10. Sethuraman, S.V. (1976) Jakarta: Urban Development and Employment, ILO, Geneva.

Web links and Video Lectures (e-Resources):

- https://niti.gov.in/planningcommission.gov.in/docs/plans/planrel/fiveyr/12th/pdf/12fyp_vol1.pdf
- https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/presentation/wcms_125912.pdf
- https://www.ijsr.net/get_abstract.php?paper_id=18051804
- https://mofpi.nic.in/sites/default/files/vol_2.pdf.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A presentation on the different states/country and critically analysing the legal laws available for the informal sector economy.

VI Semester

PROFESSIONAL ELECTIVE – III **1. REAL ESTATE DEVELOPMENT AND MANAGEMENT**			
Course Code	**21PLN66.1**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- The main objective of this subject is to teach students about the functioning of the real estate markets, institutions involved in the real estate sector, and financing of the real estate. Another important objective is to examine and explore how locational decisions in the real estate sector are taken by major stakeholders

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Developments of Land and Real Property

Process of land development, market mechanism and land use pattern; Cost of development; Sources of finance and financial calculations for real estate development

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Real Property Markets

Heterogeneity and imperfections, valuation of real property including principles and practices; Private ownership and social control of land; Disposal of land; Land development charges and betterment levy; Land use restrictions, compensation and requisition taxation of capital gain on land versus public ownerships; Economic aspects of land policies at various levels of decision making.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Factors Influencing Locational Decisions

Analysis of location of specific uses like residential, industrial, commercial and institutional in the light of location theories in intra-regional and inter-regional context; Techniques of cost benefit analysis of urban development programmes.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Policies, Programmes and Statutory Interventions

Real estate development: regulatory provisions, Government policies and programmes; Land development charges and betterment levy; Land use restrictions and compensations; Urban land management and marketing techniques: bidding, reserve price, land reservation, land price subsidies.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Case Studies

Case studies of real estate development in public, private, partnership sectors; Real estate as facilitator of development; Development of real estate as a tool for controlling land and property prices; Transaction and renting of real estate, Lease deeds and sale deeds, sale documents, registration; Mortgage and pledging

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

To demonstrate knowledge about the functioning of the real estate markets, working of institutions involved in the sector, financing and locational decisions taken by major stakeholders in the sector.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar.

3. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Anthony, O., Kenneth, G. (eds.) (2002) Housing Economics and Public Policy, Wiley-Blackwell, Oxford.
2. Bhargava, M.L. (2020) Real Estate Regulations and Development, Kamal Publishers, New Delhi.
3. Das, P. and Sharma, D. (2014) Real Estate Finance in India, Sage, New Delhi.
4. Lynn, D.J. and Wang, T. (2010) Emerging Market Real Estate Investment: Investing in China, India, and Brazil, Wiley, Oxford.
5. Mike, E.M., Gayle, B. and Marc, A.W. (2000) Real Estate Development: Principles and Process, Urban Land Institute, Washington, D.C.
6. Mittal, S. (2016) The ABC of Real Estate in India, Falcon Publishing.
7. Neve, G.D. and Donner, H. (2015) Revisiting Urban Property in India, Journal of South Asian Development, Vol. 10, No. 3, pp. 255-266.
8. Ratcliffe, J. and Stubbs, M. (2009) Urban Planning and Real Estate Development, Taylor and Francis, London.
9. Rouanet, H. and Halbert, L. (2015) Leveraging finance capital: Urban change and self-empowerment of real estate developers in India, Urban Studies, Vol. 53, No. 7, pp. 1401-1423.

Web links and Video Lectures (e-Resources):

- https://niti.gov.in/planningcommission.gov.in/docs/plans/planrel/fiveyr/10th/volume2/v2_ch7_6.pdf
- https://www.jstor.org/stable/20868572
- https://www.ibef.org/industry/real-estate-india.aspx

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A Group project on Real Estate Development of a specific dimensions through the project life cycle to analyze a sample project success in Bengaluru's real estate market.
- Class Debate on Future Trends Of Real Estate – based on qualitative analysis

VI Semester

PROFESSIONAL ELECTIVE – III 2. CLIMATE CHANGE, DISASTER RISK AND RESILIENCE			
Course Code	**21PLN66.2**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To understand the basic concepts of climate change, resilience, disaster management and planning.
- To expose students to relevant policies and guidelines for the reduction of climate change and disaster risks.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Basics of Climate Change and Resilience

Concepts of global warming and climate change; Factor affecting climate change, challenges and issues of climate change; Concepts of resilience community and settlements.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2	
Disaster Management: Institutional Mechanisms Disaster management: select global practices; Institutional set up for disaster management in India: NDMA, NIDM, and state / district level agencies; Agencies engaged in disaster management: NGOs / CBOs, NDRF; Community Based Disaster Preparedness (CBDP)	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	
Planning, Management, Resilience and Climate Change Global policies on climate change, national and state policies on climate change, action plan and resilience plan for state, region and urban area; Integration of climate change policy and action plan in various levels of development plans; Energy efficient development, compact city form, transit oriented development; Mechanisms and measures for mitigating and adapting to climate change at various levels; Geospatial techniques for analysing city form, solar potential utilization studies, wind flow analysis studies.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Basics of Disaster and Disaster Management Plan Definition of calamities, disaster, disaster preparedness and mitigation, concepts of risk and vulnerability; Development and disaster management; Interface contents and details of various disaster management plans for national, state and set	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Geospatial Technologies for Disaster Mitigation and Management Remote sensing and GIS for natural disasters, flood hazard zoning, landslide hazard zonation; Earthquake hazard risk and assessment; Seismic microzonation, seismic codes, land subsidence studies; Early warning systems; Geomorphology for urban areas; Thermal images for assessment of urban heat island; Urban hazard risk and analysis**.**	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate knowledge and skills for the preparation of a development plan.
- To show the ability to prepare a development plan for an area prone to climate change and disaster risks in order to reduce vulnerability.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.

2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Capolla, D.P. (2007) Introduction to International Disaster Management, Butterworth Heinemann.

2. Joshi, A.D. (2009) Text Book of Disaster Management, Lotus Publication of Private Limited, Mumbai.

3. Ministry of Home Affairs (2004) Model Amendment in Town and Country Planning Legislations, Regulation for Land Use Zoning and Building Byelaws for Structural Safety, Government of India, New Delhi.

4. Ministry of Home Affairs (2006) National Policy on Disaster Management, Government of India, New Delhi.

5. NDMA (2007) Disaster Management Guidelines, 2007-11, NDMA, Government of India, New Delhi.

6. Živković J. (2019) 'Human Settlements and Climate Change', in Leal Filho W., Azeiteiro U., Azul A., Brandli L., Özuyar P., Wall T. (eds.) Climate Action: Encyclopedia of the UN Sustainable Development Goals, Springer, Cham.

Web links and Video Lectures (e-Resources):

- http://environmentclearance.nic.in/writereaddata/online/RiskAssessment/100320177LXJK83BRISKASSESSMENTDOCUMENT.pdf
- https://ndma.gov.in/
- https://www.mha.gov.in/sites/default/files/National%20Disaster%20Management%20Plan%20May%202016.pdf
- https://www.un.org/climatechange?gclid=CjwKCAjw-sqKBhBjEiwAVaQ9a6fLDSxzPJRh3mVdK39kyz8iicfmhqFBasfTe5YX0Ae2Wv0o0Vrj-hoCb1wQAvD_BwE

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A literature study on climate change across the global countries.
- An understanding on the current scenarios of the climate change and caused disasters by collecting articles and so on

VI Semester

PROFESSIONAL ELECTIVE – III 3. LAND ECONOMICS & LOCATIONAL THEORY			
Course Code	**21PLN66.3**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To introduce students to the basic concepts of land economics, land and real property development, real property markets and factors that influence the locational decisions for any real property.
- To enable students to take decision based on the economic analysis and scenario of the real property in the markets.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Introduction to Land Economics

Economics concepts of land, objectives and scope of land economics; relevance for spatial planning; economic principles of land uses; economic rent, land use and land values, market; mechanism and land

use pattern.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-2	
Development of Land and Real Property Process, cost of development, source of finance, financial calculation for private developer	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	
Real Property Markets Heterogeneity and imperfections, valuation of real property – principles and practices; private ownership and social control of land; disposal of land; land development charges and betterment levy; land use restrictions, compensation and requisition taxation of capital gain on land versus public ownerships, economic aspects of land policies at various levels of decision making.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Factors Influencing Locational Decisions Analysis of location of specific uses like residential, industrial, commercial and institutional in the light of location theories in intra-regional and inter-regional context.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Economic Analysis Techniques of cost benefit analysis of urban development programme, social costs and benefits, monetization of various costs and benefits, difference between financial and economic analysis.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Course outcome (Course Skill Set) • To demonstrate knowledge and skills on Urban Economics. • To show the ability to prepare an Economic Analysis and factors influencing locational Decisions..	

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Urban Land Economics, Jack Harvey and Ernie Jowsey, Palgrave Mcmillan, 2004

2. Economics of Urban Property Markets: An Institutional Economics Analysis, Arvanitidis Paschalis, Routledge

3. Urban Economics and Real Estate Markets, Denise Di Pasquale and William C. Wheaton, Prentice Hall, 1995

4. Urban Planning and Real Estate Development, John Ratcliffe, Routledge, 2009

5. Real Estate Management, Howard L. Bliss, Charles H. Sill, Prentice-Hall, 1953

Web links and Video Lectures (e-Resources):

- https://www.city-journal.org/html/five-principles-urban-economics-13531.html
- https://www.ilo.org/sector/activities/topics/urban-economy/lang--en/index.htm

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A literature study on Urban Planning and real estate development in Global level.

VI Semester

PROFESSIONAL ELECTIVE – III 4. TOURISM GEOGRAPHY DEVELOPMENT AND PLANNING			
Course Code	**21PLN66.4**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To understand the basic concepts of Tourism. Eco tourism and sustainable tourism
- To expose students to relevant policies and guidelines available in the process of preparation of Tourism Development Plan.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Introduction

Levels, type and process of planning. Conceptualization, Background Analysis, In-depth Research and Analysis Phase.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Tourism policy formulation

Policy making bodies in India, National action Plan on Tourism 1992, An outline of L K Jha Committee, 1963,Tourism and Five year plans in India, The latest policy document on tourism

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3	
Tourism development Plan Tourism project feasibility study ,phase and preparation of statements in Destination planning, Involvement of Local community in tourism Development, Objective Setting, Goal setting, Strategy setting and Plan writing, Techniques of Plan Formulation. Tourism Planning at International, National and State Level.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Tourism and Environment Synergism between tourism promotion & nature conservation, Environment and tourism – areas of conflict, symbiosis and synergy, Tourism in various bio-geographic realms and specific situation of environmental concern.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Future Tourism Community based tourism, Concept of mass tourism, Future of Sustainable Tourism, Towards a New Approach to Sustainable Tourism Management, Ecotourism.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

- To demonstrate knowledge and skills for the preparation of a Tourism development plan.
- To help in successfully overcome the daily changes that occur in turbulent surrounding, planning of sustainable tourism development occurs as the only way to do it successfully

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Sustainable Tourism: A Global perspective by Rob Harris, Tony Griffin, Peter Williams , Butterworth –Heinemann.
2. Sustainable Tourism by S.P. Sing, Sustainable Development of Tourism: An Annotated Bibliography by the World Tourism Organization.
3. Cases in Sustainable Tourism; an Experiential Approach to Making Decisions by lrene Herremans.
4. Sustainable Tourism; Theory and Practice by David Weaver Powell's City of Books
5. Sustainable Tourism: Himalayan Experiences, S P Bansal & Prashant Gautam, Indus Publication

Web links and Video Lectures (e-Resources):

- http://www.bagchee.com/
- https://www.youtube.com/watch?v=fFUg-u5glBA&feature=emb_imp_woyt

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A literature study on various Tourism Development plan

VI Semester

PROFESSIONAL ELECTIVE – III 5. SUSTAINABLE MATERIALS AND GREEN BUILDINGS			
Course Code	**21PLN66.5**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	3	Exam Hours	3

Course objectives:

- To expose the students to the concepts of sustainability in the context of building and conventional engineered building materials, such as concrete, bricks, and achieving the same through lower carbon cements, superior brick kilns and recycled aggregate minimizing consumption of natural resources including water.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Introduction

Embodied energy, Operational energy in Building and Life cycle energy. Ecological foot print, Bio-capacity and calculation of planet equivalent.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Role of Material and Quality

Carbon from Cement, alternative cements and cementitious material, Alternative fuel for cements for reduction in carbon emission, Sustainability issues for concrete, minimization of natural resource utilization, High volume fly ash concrete, geo-polymer concrete etc. concrete with alternative material for sustainability'

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3	
Building Materials Clay Bricks, Types kilns, Comparative energy performance emission performance and financial performance, Paints, adhesive and sealants for use in building, volatile organic content (VOC) emission issues and indoor air quality for sustainability and health hazard.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Energy Simulation in Building Design Operational energy reduction and net zero building, Optimization for design of building for energy efficiency and example of optimization through use of Evolutionary genetic algorithm	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Advanced Techniques and Practices Radiation budget, urban heat island; Surface water balance, Effects of trees and microclimatic modification through greening, Green Performance rating, requirements of LEED, GRIHA	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

- To demonstrate knowledge and skills for the preparation of a development plan.
- To show the ability to prepare a development plan for an area prone to climate change and disaster risks in order to reduce vulnerability.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Newman, J. and Choo, Ban Sang, Advanced Concrete Technology-Processes, 1 st Edition, Elsevier, 2003

2. Newman, J. and Choo, Ban Sang, Advanced Concrete Technology-Constituent Materials, 1st Edition, Elsevier, 2003

3. Kubba, S, LEED Practices, Certification, and Accreditation Hand book, 1st ed. Elsevier, 2010.

4. Minsitry of Power, Energy Conservation Building Code 2018, Revised Version, Bureau of Energy Efficiency, 2018,

5. Architectural Energy Corporation, Building Envelope Stringency Analysis, International Institute for Energy Conservation, 2004

6. Indian Building Congress, Practical Handbook on Energy Conservation in Buildings, 1 st ed. Nabhi Publication, 2008.

7. McQuiston, F.C., and Parker, J.D. Heating, Ventilating, and Air Conditioning, Analysis and Design, Fourth Ed. John Wiley & Sons, Inc,1994.

8. Clarke, J.A., Energy Simulation in Building Design, Adam Hilger Ltd. 1985.

9. TERI-Griha's Green Design practices (www.teriin.org/bcsd/griha/griha.htm)

10.Leadership in Energy and Environmental Design (www.usgbc.org/LEED)

11.Article on Residential Green Choice(www.austinenergy.com)

12. Venkatarama Reddy, B. V., and. Jagadish, K., S. "Embodied energy of common and alternative building materials and technologies". Energy and Buildings., 35, 129-137,2003

13. Chani, P. S., Najamuddin., and Kaushik, S.K. "Comparative Analysis of Embodied Energy Rates for Walling Elements in India". Energy and Buildings., 84, 47- 50. 2003

14. Andrew, H., Buchanan., and Brian, G. "Energy and carbon dioxide implications of building construction", Energy and Buildings., 20, 205-217. 1994

15. Sartori, I., and Hestnes, A. G. "Energy use in the life cycle of conventional and low-energy buildings: A review article", Energy and Buildings., 20, 249-257.2007

16. Green Building Basics, California Integrated Waste Management Board (www.ciwmb.ca.gov/GREENBUILDING/Basics.htm#What)

17. Huberman, N., Pearlmutter, D. "A life-cycle energy analysis of building materials in the Negev desert".b Energy and Buildings., 40 ,837-848.2007.

18. Catarina Thormark. "A low energy building in a life cycle—its embodied energy, energy need for operation and recycling potential", Building and Environment., 37, 429-435.2001.

Web links and Video Lectures (e-Resources):

- https://onlinecourses.nptel.ac.in/noc19_ce40/preview
- https://igbc.in/igbc/redirectHtml.htm?redVal=showGreenEducationRatingsystemNosignin

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning
● A presentation on the case study

VI Semester

OPEN ELECTIVE – II **1. METROPOLITAN PLANNING AND DEVELOPMENT**			
Course Code	**21PLN67.1**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary objective of this subject is to expose students to theories of structure, form, and processes responsible for the growth of urban settlements,, and also to comprehend approaches to making development plan

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Urban Structure and Growth

Growth of cities; cities as engines of growth; Land values, economic attributes of location, economic forces in urban development; Structure of City Regions, area of influence, Impact of technology on urban forms; Transportation and urban form; location characteristics and impact of urban settlements.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Theories of Development and Emerging Concepts

Theories of urban structure and land use- Centre place theory, urban realm model, core frame theory; New urbanism; Territorial Development Theory - Growth pole theory, urban bias critique, secondary cities and urban diffusion; Emerging Rural Urban Relationship models – urban rural linkage, expanding city, globalisation and extended metropolitan region, Desakota model, Networked model; Territoriality of rural-urban interaction; Peri- urban Interface (PUI) case studies Geospatial techniques for analysing city form, solar potential utilization studies, wind flow analysis studies.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Planning Norms and Standards and Plan Preparation Approaches

Spatial standards for residential, industrial, commercial , institutional, transport, ecological spaces , recreational areas etc.; space standards for facility areas, utilities and networks; performance standards; Approaches for preparation of Urban development plans, Master Plans, Structure plans and Strategy Plan; Public Participation and Plan Implementation; Techniques of urban renewal and redevelopment; System approach to planning; Threshold analysis, retail location and industrial location analysis; transport system analysis

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Planning Approaches for Special Areas

Special area planning- definition, types, attributes, requirements, planning process; inner areas , peri urban areas issues and planning approaches; Smart City – Concepts, Elements, Features, planning approach and strategies, policy efforts in India;

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Inclusive planning

Concept and components, essential dimensions of inclusive planning; growth of informal sector, characteristics, linkages with formal sector, Planning interventions, Inclusive zoning, development and building regulations, slum improvement

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

- To illustrate understanding of theories of structure, form, and processes responsible for the growth of urban settlements.
- To show the ability to comprehend approaches to making development plans.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Text Books and References:

1. Pacione, M. (2001) The Internal Structure of Cities in the Third World, Geography, Vol. 86, No. 3, pp. 189-209.

2. Pacione, M. (2013) Problems and Planning in Third World Cities, Routledge, New York.

3. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London.

4. Sivaramakrishnan, K. (2013) Re-visioning Indian Cities: The Urban Renewal Mission, Sage, New Delhi.

5. Vidyarthi, S., Mathur, S. and Agrawal, S. (2017) Understanding India's New Approach to Spatial Planning and Development, Oxford University Press, New Delhi.

6. Vidyarthi, S. (2019) Spatial plans in post-liberalization India: Who's making the plans for fast-growing Indian urban regions? Journal of Urban Affairs, pp. 1-18. DOI: 10.1080/07352166.2018.1527658

Web links and Video Lectures (e-Resources):

- https://smartnet.niua.org/content/8a4b8bf6-4a72-4af7-9671-355c18058d9a
- http://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf
- https://www.yourarticlelibrary.com/planning/basic-elements-of-metropolitan-planning-of-town-and-cities/4697
- https://core.ac.uk/download/pdf/214385568.pdf
- http://www.sapatgramcollegeonline.co.in/attendence/classnotes/files/1589347995.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students present on the hierarchy of different plans existing in their native city/choice of their own
- Briefly elaborate their views on existing DPR-Development Plan Regulations and suggests their opinion by critically identification in a presentation

VI Semester

OPEN ELECTIVE – II 2. ENVIRONMENTAL SCIENCE			
Course Code	**21PLN67.2**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary objective of this subject is to expose students to theories of structure, form, and processes responsible for the growth of urban settlements,, and also to comprehend approaches to making development plan

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Ecosystem

Structure of ecosystem, Biotic & Abiotic components; Food chain and food web; Aquatic (Lentic and Lotic) and terrestrial ecosystem; Carbon, Nitrogen, Sulphur, Phosphorus cycle; Global warming - Causes, effects, process, GreenHouse Effect, Ozone depletion.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Air and, Noise Pollution

Definition of pollution and pollutant, Natural and manmade sources of air pollution (Refrigerants, I.C., Boiler); Air Pollutants: Types, Particulate Pollutants: Effects and control (Bag filter, Cyclone separator, Electrostatic Precipitator); Gaseous Pollution Control: Absorber, Catalytic Converter, Effects of air pollution due to Refrigerants, I.C., Boiler; Noise pollution: sources of pollution, measurement of pollution level, Effects of Noise pollution, Noise pollution (Regulation and Control) Rules, 2000.rural-urban interaction; Peri- urban Interface (PUI) case studies Geospatial techniques for analysing city

form, solar potential utilization studies, wind flow analysis studies.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Water and Soil Pollution

Sources of water pollution, Types of water pollutants, Characteristics of water pollutants Turbidity, pH, total suspended solids, total solids BOD and COD: Definition, calculation; WasteWater Treatment: Primary methods: sedimentation, froth floatation, Secondary methods: Activated sludge treatment, Trickling filter, Bioreactor, Tertiary Method: Membrane separation technology, RO (reverse osmosis); Causes, Effects and Preventive measures of Soil Pollution: Causes-Excessive use of Fertilizers, Pesticides and Insecticides, Irrigation, E-Waste.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Renewable sources of Energy

Solar Energy: Basics of Solar energy. Flat plate collector (Liquid & Air). Theory of flat plate collector. Importance of coating. Advanced collector. Solar pond. Solar water heater, solar dryer. Solar stills; Biomass: Overview of biomass as energy source. Thermal characteristics of biomass as fuel. Anaerobic digestion. Biogas production mechanism. Utilization and storage of biogas; Wind energy: Current status and future prospects of wind energy. Wind energy in India. Environmental benefits and the problem of wind energy; New Energy Sources: Need of new sources. Different types of new energy sources. Applications of (Hydrogen energy, Ocean energy resources, Tidal energy conversion.) Concept, origin and power plants of geothermal energy

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Solid Waste Management, ISO 14000 & Environmental Management

Solid waste generation- Sources and characteristics of: Municipal solid waste, E- waste, biomedical waste; Metallic wastes and Non-Metallic wastes (lubricants, plastics, rubber) from industries. Collection and disposal: MSW (3R, principles, energy recovery, sanitary landfill), Hazardous waste; Air quality act 2004, air pollution control act 1981 and water pollution and control act1996. Structure and role of Central and state pollution control board; Concept of Carbon Credit, Carbon Footprint; Environmental management in the fabrication industry; ISO14000: Implementation in industries, Benefits

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

- To illustrate understanding of theories of structure, form, and processes responsible for the growth of urban settlements.
- To show the ability to comprehend approaches to making development plans.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.

2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Text Books and References:

1. Pacione, M. (2001) The Internal Structure of Cities in the Third World, Geography, Vol. 86, No. 3, pp. 189-209.

2. Pacione, M. (2013) Problems and Planning in Third World Cities, Routledge, New York.

3. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London.

4. Sivaramakrishnan, K. (2013) Re-visioning Indian Cities: The Urban Renewal Mission, Sage, New Delhi.

5. Vidyarthi, S., Mathur, S. and Agrawal, S. (2017) Understanding India's New Approach to Spatial Planning and Development, Oxford University Press, New Delhi.

6. Vidyarthi, S. (2019) Spatial plans in post-liberalization India: Who's making the plans for fast-growing Indian urban regions? Journal of Urban Affairs, pp. 1-18. DOI: 10.1080/07352166.2018.1527658

7. Wu, B.S. and Sui, d. (2015) Modelling Impacts of Globalization on Desakota Regions: A case study of Taipei Metropolitan Area, Environment and Planning B: Planning and Design, pp. 1-21, DOI: 10.1177/0265813515605216

Web links and Video Lectures (e-Resources):

- www.eco-prayer.org
- www.teriin.org
- www.cpcp.nic.in
- www.cpcp.gov.in
- www.indiaenvironmentportal.org.in
- www.whatis.techtarget.com
- www.sustainabledevelopment.un.org
- www.conserve-energy-future.com

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students present on the hierarchy of different plans existing in their native city/choice of their own
- Briefly elaborate their views on existing DPR-Development Plan Regulations and suggests their opinion by critically identification in a presentation

VI Semester

OPEN ELECTIVE – II 3. RESEARCH METHODS IN PLANNING			
Course Code	**21PLN67.3**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary objective of this subject is to expose students to theories of structure, form, and processes responsible for the growth of urban settlements,, and also to comprehend approaches to making development plan

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Urban Structure and Growth

Growth of cities; cities as engines of growth; Land values, economic attributes of location, economic forces in urban development; Structure of City Regions, area of influence, Impact of technology on urban forms; Transportation and urban form; location characteristics and impact of urban settlements

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Theories of Development and Emerging Concepts

Theories of urban structure and land use- Centre place theory, urban realm model, core frame theory; New urbanism; Territorial Development Theory - Growth pole theory, urban bias critique, secondary cities and urban diffusion; Emerging Rural Urban Relationship models – urban rural linkage,

expanding city, globalisation and extended metropolitan region, Desakota model, Networked model; Territoriality of rural-urban interaction; Peri- urban Interface (PUI) case studiesGeospatial techniques for analysing city form, solar potential utilization studies, wind flow analysis studies.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	
Planning Norms and Standards and Plan Preparation Approaches Spatial standards for residential, industrial, commercial , institutional, transport, ecological spaces , recreational areas etc.; space standards for facility areas, utilities and networks; performance standards; Approaches for preparation of Urban development plans, Master Plans, Structure plans and Strategy Plan; Public Participation and Plan Implementation; Techniques of urban renewal and redevelopment; System approach to planning; Threshold analysis, retail location and industrial location analysis; transport system analysis	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Planning Approaches for Special Areas Special area planning- definition, types, attributes, requirements, planning process; inner areas , peri-urban areas issues and planning approaches; Smart City – Concepts, Elements, Features, planning approach and strategies, policy efforts in India.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Inclusive planning Concept and components, essential dimensions of inclusive planning; growth of informal sector, characteristics, linkages with formal sector, Planning interventions, Inclusive zoning, development and building regulations, slum improvement	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

- To illustrate understanding of theories of structure, form, and processes responsible for the growth of urban settlements.
- To show the ability to comprehend approaches to making development plans.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of

100 marks are proportionally reduced to 50 marks.

2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Text Books and References:

1. Pacione, M. (2001) The Internal Structure of Cities in the Third World, Geography, Vol. 86, No. 3, pp. 189-209.

2. Pacione, M. (2013) Problems and Planning in Third World Cities, Routledge, New York.

3. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London.

4. Sivaramakrishnan, K. (2013) Re-visioning Indian Cities: The Urban Renewal Mission, Sage, New Delhi.

5. Vidyarthi, S., Mathur, S. and Agrawal, S. (2017) Understanding India's New Approach to Spatial Planning and Development, Oxford University Press, New Delhi.

6. Vidyarthi, S. (2019) Spatial plans in post-liberalization India: Who's making the plans for fast-growing Indian urban regions? Journal of Urban Affairs, pp. 1-18. DOI: 10.1080/07352166.2018.1527658

7. Wu, B.S. and Sui, d. (2015) Modelling Impacts of Globalization on Desakota Regions: A case study of Taipei Metropolitan Area, Environment and Planning B: Planning and Design, pp. 1-21, DOI: 10.1177/0265813515605216

Web links and Video Lectures (e-Resources):

- https://smartnet.niua.org/content/8a4b8bf6-4a72-4af7-9671-355c18058d9a
- http://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf
- https://www.yourarticlelibrary.com/planning/basic-elements-of-metropolitan-planning-of-town-and-cities/4697
- https://core.ac.uk/download/pdf/214385568.pdf
- http://www.sapatgramcollegeonline.co.in/attendence/classnotes/files/1589347995.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students present on the hierarchy of different plans existing in their native city/choice of their own
- Briefly elaborate their views on existing DPR-Development Plan Regulations and suggests their opinion by critically identification in a presentation

VI Semester

OPEN ELECTIVE – II **4. PLACEMENT TRAINING**			
Course Code	**21PLN67.4**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary objective of this subject is to expose students to theories of structure, form, and processes responsible for the growth of urban settlements,, and also to comprehend approaches to making development plan

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1	
Goal-setting, Personality traits, Staying Positive, Self-motivation, Self-awareness, Learning skills, Effective communication skills, Time management, Interpersonal skills, Personal grooming, Emotional quotient, Body language, Human Relation, Creativity, Customer Relations Management	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-2	
Team building, Problem solving and decision-making, Leadership skills, Public Speaking, Presentation skills, Negotiating skills, Self- management Cross-culture –communication and Corporate Culture, Interview / GD skills, Finance for Non - Finance, Sales training, Business etiquette, Managing stress	

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Guest lectures:
Organizing Aptitude training programs to enhance quantitative, verbal, logical & reasoning skills
Organizing soft-skills training to improve the student's personality, Confidence level, Public Speaking skills, Conducting Mock Interviews, Group discussions.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Guest lectures:
Organizing subject/domain specific Technical Skills Training by Experts. Career counseling for pursuing higher studies. Organizing entrepreneurship development programs to motivate the Students to become Entrepreneurs.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Report presentation
At the end of the practical training, the students are required to present selected works, which are best representative of the training undergone in the form of presentation. The students are also required to submit a report describing various concepts learnt during training, experiences of site visit and estimation / costing activities/ DPR preparation and legal reports study etc. Training attendance log sheets shall also be submitted as part of the report. The report requires to be submitted for internal assessment.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

- To illustrate understanding of theories of structure, form, and processes responsible for the growth of urban settlements.
- To show the ability to comprehend approaches to making development plans.

Assessment Details (both CIE and SEE)
(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:
Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a

maximum of 3 sub questions), should have a mix of topics under that module.
The students have to answer 5 full questions, selecting one full question from each module

Text Books and References:

1. Pacione, M. (2001) The Internal Structure of Cities in the Third World, Geography, Vol. 86, No. 3, pp. 189-209.
2. Pacione, M. (2013) Problems and Planning in Third World Cities, Routledge, New York.
3. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London.
4. Sivaramakrishnan, K. (2013) Re-visioning Indian Cities: The Urban Renewal Mission, Sage, New Delhi.
5. Vidyarthi, S., Mathur, S. and Agrawal, S. (2017) Understanding India's New Approach to Spatial Planning and Development, Oxford University Press, New Delhi.
6. Vidyarthi, S. (2019) Spatial plans in post-liberalization India: Who's making the plans for fast-growing Indian urban regions? Journal of Urban Affairs, pp. 1-18. DOI: 10.1080/07352166.2018.1527658

Web links and Video Lectures (e-Resources):

- https://smartnet.niua.org/content/8a4b8bf6-4a72-4af7-9671-355c18058d9a
- http://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf
- https://www.yourarticlelibrary.com/planning/basic-elements-of-metropolitan-planning-of-town-and-cities/4697
- https://core.ac.uk/download/pdf/214385568.pdf
- http://www.sapatgramcollegeonline.co.in/attendence/classnotes/files/1589347995.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students present on the hierarchy of different plans existing in their native city/choice of their own
- Briefly elaborate their views on existing DPR-Development Plan Regulations and suggests their opinion by critically identification in a presentation

VI Semester

OPEN ELECTIVE – II **5. PROJECT ESTIMATION AND COSTING**			
Course Code	**21PLN67.5**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The primary objective of this subject is to expose students to theories of structure, form, and processes responsible for the growth of urban settlements,, and also to comprehend approaches to making development plan

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1

Introduction

Estimating road map and key success factors; Estimating workbook, Estimating matrix and budget, driver worksheet

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Work Breakdown Structure or WBS

Relevance, Creating the review WBS, Task and activity in WBS.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Phase Major Activity Exporting MS Project, Output of MS Project, Predecessor in MS Project, Scheduling formula of MS Project	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Budgeting and Resources Type of Budgeting Task Duration and Phase, Resources and Its Types, Resource Sheet and Resource Form Tools, Example of Resources	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Inclusive planning Effort Driven Scheduling, Example of Effort Driven Scheduling, Team Planner in Ms Project, Bottom up estimation preview, Overview of Project, Overview of MS Project, Resource Over Allocation and Overview, Task Set For Project Planning.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

- To illustrate understanding of theories of structure, form, and processes responsible for the growth of urban settlements.
- To show the ability to comprehend approaches to making development plans.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Text Books and References:

1. Rad, P. F. (2001). *Project estimating and cost management*. Berrett-Koehler Publishers.
2. Project Cost Estimating. (1995). United Kingdom: T. Telford.
3. Sweeting, J. (1997). Project Cost Estimating: Principles and Practice. United Kingdom: Institution of Chemical Engineers.

Web links and Video Lectures (e-Resources):

- https://smartnet.niua.org/content/8a4b8bf6-4a72-4af7-9671-355c18058d9a
- http://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf
- https://www.yourarticlelibrary.com/planning/basic-elements-of-metropolitan-planning-of-town and-cities/4697
- https://core.ac.uk/download/pdf/214385568.pdf
- http://www.sapatgramcollegeonline.co.in/attendence/classnotes/files/1589347995.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students present on the hierarchy of different plans existing in their native city/choice of their own
- Briefly elaborate their views on existing DPR-Development Plan Regulations and suggests their opinion by critically identification in a presentation.

VI Semester

PHYSICAL EDUCATION (SPORTS & ATHLETICS)/ YOGA/ NSS			
Course Code	**21PE69/ 21YO69/ 21NS69**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:2:0:0	SEE Marks	50
Total Hours of Pedagogy	32	Total Marks	100
Credits	-	Exam Hours	-

Course objectives:

-

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
- Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
- Show Video/animation films to explain functioning of various machines
- Encourage collaborative (Group Learning) Learning in the class
- Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
- Topics will be introduced in a multiple representation.
- Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
- Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
- Individual teachers can devise innovative pedagogy to improve the teaching-learning.

Module-1	
Pedagogy	

Module-2	
Pedagogy	

Module-3	
Pedagogy	

Module-4	
Pedagogy	
Module-5	
Pedagogy	

Course outcome (Course Skill Set)

-

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

3. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
4. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

4. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
5. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
6. The students have to answer 5 full questions, selecting one full question from each module

Text Books and References:

Web links and Video Lectures (e-Resources):

13.09.2022

•
Activity Based Learning (Suggested Activities in Class)/ Practical Based learning •

SEMESTER VII

VII Semester

	PLANNING STUDIO: REGIONAL PLAN			
	Course Code	**21PLN71**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:10:0:0	SEE Marks	50
	Total Hours of Pedagogy	160	Total Marks	100
	Credits	5	Exam Hours	-

Course objectives:

- The primary objective of this studio is to teach how to prepare a regional plan. Prior to the preparation of a regional plan, students will be taught about the type and nature of regions, substance of a regional plan, types of regional plans and nature of projects of regional planning importance.

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. The student is required to visit site and organizations for the collection of data
2. The student is asked to do multiple surveys for Transportation and Socio economic study for understanding the Issues.
3. Report .Presentations and Sheets on final Analysis is to be submitted at the end of the studio.

Course Contents

We begin by understanding the role and relevance of regional planning in the country including the nature of planning at district and sub district level, which would also involve critical appraisal of district and sub district plans. Formulation of goals, objectives, methodology, and identification of data sources, analysis of data available, field surveys and preparation of schedules would form another important step in the preparation of a regional plan. Field work involving visit to the field study area, conduct of field surveys, collection of data from secondary sources, sectorally and block wise is the next step. After coming back from the field, the students would perform a detailed data analysis, identification of potential thrust areas and development issues in each sector and block. Appropriate strategic planning, settlement development pattern, development programmes would be evolved. Regional planning proposals for integrated and balanced development along with desired financial commitments at block level would form a critical part of the regional development plan.

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

1. To demonstrate knowledge and skills required for the preparation of a regional development plan.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Appiah-Opoku, S. (2010) 'Urban and Regional Planning', in Barney Warf (ed.) Encyclopaedia of Geography, Sage, London. Six Volumes.
2. Calthorpe, P. and Fulton, W. (2001) The Regional City: Planning for the End of Sprawl, Island Press, Washington, D.C.
3. Glasson, J. (1978) An Introduction to Regional Planning: Concepts, Theory and Practice, University of California, Berkeley.
4. Glasson, J. and Marshall, T. (2007) Regional Planning, Routledge, London.
5. Plane, D.A., Mann, L.D., Button, K. and Nijkamp, P. (2007) Regional Planning, Edward Elgar Publishing, Cheltenham.

Web links and Video Lectures (e-Resources):

- http://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf
- https://www.ancpatna.ac.in/departments/geography/lectures/PG%20Sem-IV/M%20A%20IV%20History%20of%20reg%20plng,India%20drbhawna.pdf
- https://www.panchayat.gov.in/spatial-planning

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Site visits/ government and non-governmental organisations for data collection
- Undergoing Primary survey in different sectors for transportation, housing and other sectors.

VII Semester

	INTRODUCTION TO REGIONAL PLANNING			
	Course Code	**21PLN72**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- The main objective of this subject is to introduce regional planning to students by focussing on the idea of a region, its types, regional planning models and techniques, spatial distribution of settlements, regional development and planning processes.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. Show Video/animation films to explain functioning of various machines
4. Encourage collaborative (Group Learning) Learning in the class
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with thei own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. Individual teachers can device the innovative pedagogy to improve the teaching-learning.

Module-1

Regions and Types of Regions

Defining a region, types of regions; Delineation of regions; Metropolitan region, structure of a metropolitan region, area of influence and dominance, shadow regions; Trickle down effects; Rural-urban fringe, its structure, growth and implications.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Spatial Distribution of Settlements

Settlement in regional; context; spatial models of location, size and spacing of settlements; Central Place Theory; Characteristic of rural – urban fringe; rural– urban continuum; inter – urban inequalities; Regional interaction: Rank Size Rule, Settlement patterns and analysis; Loschian theory; Regional networks.; Gravity model, classification of settlements; Delineation of Regions, institutional scalogram

	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-3	
	Regional Development Regional development; Balanced and unbalanced development; Underdevelopment; Regional multiplier, input-output model; Cumulative causation theory; Core-periphery model; Growth poles and centers; Regional planning projects such as corridor development, road development projects, port development projects, airports and metro rail projects, etc	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-4	
	Planning Processes Regional planning processes: Identification of plan objectives; collection, classification and analysis of data; Norms and standards for regional planning; Formulation of alternative plan proposals with respect to population distribution, location of new regional economic activities, infrastructure, plan implementation, etc.; Selected case studies in regional development.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-5	
	Rural Planning Village as an organic entity; physical, social, and economic structure of village; village problems. Trans humane, accessibility of village, inter-village communication, delivery of social services, rural reconstruction and related programmes, improvement of rural sanitation, hygiene and drainage; panchayat raj institutions; district, block and village administration, Rural Planning in Relation to National and Regional Policies.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate knowledge and skills about regions and their types, regional planning models and techniques.
- To analyse spatial distribution of settlements, status of regional development and nature of planning processes.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Glasson, J. (1978) An Introduction to Regional Planning: Concepts, Theory and Practice, University of California, Berkeley.

2. Glasson, J. and Marshall, T. (2007) Regional Planning, Routledge, London University Press, New Delhi.

33. Mishra, R.P., Sundaram, K.V. and Prakasa Rao, V.L.S. (1974) Regional Development Planning in India: A New Strategy, Rawat, Jaipur.

4. Misra, R.P. (1978) Regional Development Planning in India: A New Strategy, Vikas Publishing House, New Delhi.

5. Plane, D.A., Mann, L.D., Button, K. and Nijkamp, P. (2007) Regional Planning, Edward Elgar Publishing, Cheltenham.

6. Routra, J.K. (1993) Urban and regionaln practice in India, Habitat International, Vol. 17, Issue 3, pp. 55-74 ,

Web links and Video Lectures (e-Resources):

- https://www.econstor.eu/bitstream/10419/230319/1/manuscript-Core-Periphery-Model.pdf
- https://swayam.gov.in/
- https://www.nicdc.in/about-DMICDC
-

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A site study to be made to understand process involved in the delineation of the region
- A literature study on corridor development, road development projects, port development projects, airports and metro rail projects.

VII Semester

	PLANNING LEGISLATION – I			
	Course Code	**21PLN73**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- This is an introductory course to understand the basic concepts of law and relevant constitutional provisions for urban and regional planning. This course will expose the students to urban and regional planning statutes and legal frameworks for land acquisition and development.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teachers can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Concept of Law

Sources of law including custom, legislation and precedent; Meaning of the term of law, legislation, ordinance, bill, act, regulations and byelaws; Significance of law and its relationship to urban and regional planning; Benefits of statutory backing for planning at all levels.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Indian Constitution

Concepts and contents of the Indian Constitution, article 21; Rights and their implications for planning; Fundamental provisions regarding property rights; Overview of legal tools connected with urban and regional planning and development; Model town planning laws.

Pedagogy	Chalk and talk method, PowerPoint Presentation

	Module-3	
	Statutory Framework for Planning and Development Law Evolution of town planning legislation, town planning laws, town planning as a state subject; 73rd and 74th amendment and its implications for planning law; Current amendments in planning and development laws; Related laws such as environment and infrastructure laws.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-4	
	Statutory Framework for Land Acquisition and Assembly Laws related to land assembly by public and private parties; Land acquisition legislations, eminent domain, police powers and concept of public purpose; Case studies highlighting nature of contentions, parties in dispute and decisions in specific planning disputes.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-5	
	Legislation: Urban Planning Model Town and Country Planning Acts, Urban Development Authority Acts, Housing Board Acts, Slum Improvement Acts etc. Inventory of different statutes pertinent to urban affairs; Cataloguing of urban statutes across different aspects of urban planning.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate knowledge about sources of law and basic terminologies in law.
- To show knowledge about the implications of relevant articles of the Constitution of India on town planning.
- To show understanding about the statutory nature of town and country planning.
- To examine and analyse specific case laws on land, planning and development

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Lakshimikanth, M. (2007) Indian Polity, Tata McGraw Hill, New Delhi.
2. Bhattacharya, M. (2001) New Horizons of Public Administration, Jawahar Publishers and Distributors, Gurgaon.
3. Needham, B. (2006) Planning, Law and Economics: An investigation in the rules we make for using land, Routledge, London.
4. McAuslan, P. (2019) Bringing the Law Back In: Essays in Land, Law and Development, Routledge, London.

Web links and Video Lectures (e-Resources):

- https://nhb.org.in/wp-content/uploads/2017/03/Land-Acquisition-vs.-Land-Pooling.pdf
- http://mohua.gov.in/cms/acts.php
- http://mohua.gov.in/upload/uploadfiles/files/NCRPB%20Act%201985.pdf
- https://unhabitat.org/sites/default/files/2020/09/rules_of_the_game8_0.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A presentation/literature study on the critical analysis of the bye laws
- A discussion on Arbitrators and their role.

VII Semester

	DISSERTATION AND TRAINING SEMINAR			
	Course Code	**21PLN74**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:3:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	-

Course objectives:

- The main objective of dissertation is to prepare students to develop an understanding around a planning issue through literature review.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. The student is required to visit site and organizations for the collection of data
2. The student is asked to do multiple surveys for Transportation and Socio economic study for understanding the Issues.
3. Report .Presentations and Sheets on final Analysis is to be submitted at the end of the studio.

Module-I

Dissertation Writing

Purpose of dissertation writing is to introduce to the students to learn about research methods and to develop competencies for critically examining a topic of their interest and presenting it credibly before the faculty. This is also a preparatory stage for the students to get enough knowledge and skills for carrying out a thesis project of their choice. Furthermore, the purpose is also to take students from a point at which they have general ideas about their topic for undertaking thesis project and develop research questions, structure, research strategy and present critical analysis of existing literature on a topic of their interest.

Module -II

Training

Each student shall undertake Training in a planning (or related) office during summer vacation between the Sixth and Seventh semester. The period of Training will be six weeks. The exact period and place of training will be decided in consultation with the Coordinator-in-charge of training. The objective of Training is to expose the students to live planning projects and working environments in planning offices.

Module- III

Training Seminar

Detailed guidelines for the training seminar presentation will be provided by the Training coordinator.

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

1. To develop knowledge about how to systematically organize ideas for a particular research topic.
2. To identify different perspectives on a particular research topic.
3. To examine and analyse critically literature on a particular research topic.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Healey, P. and Silva, E. (2015) The Routledge Handbook of Planning Research Methods, Routledge, New York.
2. McVoy, B.T. and Machi, A.L. (2009) The Literature Review: Six Steps to Success, Corwin Press.
3. Flyvbjerg, B., Landman, T. and Schram, S (eds.) (2012) Real Social Science, Cambridge University Press, Cambridge.
4. White, P. (2017) Developing Research Questions, Second Edition, Macmillan International, New York.
5. Ward, K. (2020) Researching the City: A Guide for Students, Sage, New York.

Web links and Video Lectures (e-Resources):

- https://www.scribbr.com/category/dissertation/
- https://ora.ox.ac.uk/
- https://www.jstor.org/
- https://www.worldbank.org

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A couple of research papers can be discussed in the classroom session to give a broader idea on selection of dissertation topics.

VII Semester

	PROFESSIONAL ELECTIVE IV **1. LANDSCAPE PLANNING AND DESIGN**			
	Course Code	**21PLN75.1**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

- To sensitize students to the idea of landscape and nature when designing and shaping built environments.

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teacher can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Introduction to Landscape

Landscape as an outcome of natural processes; Humans' evolving relationship with nature and its expression in the designed landscape; A comparative study of the major traditions of landscape design in the east and west with regards to principles and techniques of design with landform, water and vegetation; Utopias: a new vision based on equitable distribution of open spaces.

Pedagogy	Chalk and talk method, Power Point Presentation

Module-2

Place Making

Evolution of Public places including their typology, size, nature, distribution in the urban realm; Relevance of heritage districts and precincts in the modern city; Design of urban streetscape; Transformation of nature of community recreation and its impact on form of cities..

	Pedagogy	Chalk and talk method, Power Point Presentation
	Module-3	
	Landscape Planning (Regional level, Urban and Zonal Scale) Classification of green spaces at each planning level; Distinguishing the components of landscape at each of these levels; Exercises related to the current studio problem to better address landscape components.	
	Pedagogy	Chalk and talk method, Power Point Presentation
	Module-4	
	Site Planning Principles of analysis and assessment of existing landscape; Design proposals to respond to constraints and opportunities offered by the site; Study of open space structure as a basic component of a site plan, and process of arriving at a landscape concept;	
	Pedagogy	Chalk and talk method, Power Point Presentation
	Module-5	
	Landscape Design Aspects Landscape engineering: levels and grading including principles of cut and fill alignment, drainage; Plants and design: environmental benefits of planting, functional requirements, aesthetic considerations; Typical situations and criteria for design with plants and selection of species.	
	Pedagogy	Chalk and talk method, Power Point Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To investigate the role of nature in enhancing quality of life in urban settings.
- To apply landscape tools in design and planning of urban spaces.
- To develop the sensibility towards nature-inclusive development in complex urban and regional scenarios.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a

maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

11. Guha, R. (2000) Environmentalism: A Global History, Longman, New York.
2. Shaheer, M., Dua, D.W. and Pal, A. (2013) Landscape Architecture in India: A Reader, Journal of Landscape Architecture, LA.
3. Beatley, T. (2011) Biophilic cities: integrating nature into urban design and planning
4. Island Press, Washington.
5. McHarg, I. (1995) Design with Nature, Wiley, New Jersey.
6. Aruninta, A. (2016) Landscape Architectural Design and Construction Technology, Alpha Science International, Oxford.
7. Robinson, N. (2011) The Planting Design Handbook, Routledge, New York

Web links and Video Lectures (e-Resources):

- https://www.sciencedirect.com/topics/earth-and-planetary-sciences/landscape-planning
- https://www.euro.who.int/_data/assets/pdf_file/0010/342289/Urban-Green-Spaces_EN_WHO_web3.pdf%3Fua=1
- https://dors.dk/files/media/publikationer/faglige_indlaeg/classification_and_valuation_of_urban_green_spaces_0.pdf
- https://india.ul.com/download-resources/national-building-code/

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Understanding the Design of plazas
- Study on various species and site analysis

VII Semester

PROFESSIONAL ELECTIVE IV 2. HERITAGE, RENEWAL AND REDEVELOPMENT			
Course Code	**21PLN75.2**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- The key objective of this subject is to comprehend heritage, its renewal and redevelopment in the Indian context and relate it to the context of planning

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teacher can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Introduction to Heritage/ Urban redevelopment / renewal

Urban redevelopment / renewal /reconstruction / regeneration – definitions and distinctions; Urban redevelopment as a part of urban plan; Identification of areas to be redeveloped;. Conservation, rehabilitation and redevelopment – the interrelationship. Overview and introduction of the basic concepts of heritage and conservation; Values, attitudes and principles for judging the conservation importance of sites, areas and related typology; scope and basic technique of urban conservation

Pedagogy	Chalk and talk method, Power Point Presentation

Module-2

Urban Renewal

Overview and introduction of the basic concepts of urban renewal; parameters for identification of urban renewal areas; conservation, rehabilitation and redevelopment, Urban renewal policies and programmes in India; Critical appraisal of conservation, renewal and redevelopment projects,

Pedagogy	Chalk and talk method, Power Point Presentation

Module-3

Legal and Institutional Framework for Conservation, Renewal and Redevelopment

Legal and administrative aspects, archaeological acts and charters pertaining to conservation, renewal and redevelopment; organisations at central, state and local level responsible components.

Pedagogy	Chalk and talk method, Power Point Presentation

Module-4

Economic and Social Aspects

Economic and social implications of urban renewal programs, mobilization of resources; incentive zoning - management of urban renewal areas; social aspects of urban renewal projects, gentrification, displacement.

Pedagogy	Chalk and talk method, Power Point Presentation

Module-5

Housing Redevelopment

Issues of old, dilapidated, vacant stock; Infrastructure inserts in old city area and augmentation of services; land management; FSI utilisation and re-densification/DE densification issues; socio- economic issues; gentrification and de-gentrification; public Participation; Convergence of government schemes.

Pedagogy	Chalk and talk method, Power Point Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To develop sensitivity to heritage resources as a planner.
- To show understanding about how to define heritage resources.
- To demonstrate knowledge about interface of heritage and planning..

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Doustaly, C. (ed.) (2020) Heritage, Cities and Sustainable Development: Interdisciplinary Approaches and International Case Studies, P.I.E-Peter Lang S.A., Éditions Scientifiques Internationales, Paris.
2. Kalman, H. (2014) Heritage Planning: Principles and Process, Routledge, New York.
3. CPWD, Conservation Manual
4. Labadi, S. (2015) Urban Heritage, Development and Sustainability,: International Frameworks, National and Local Governance, Routledge, New York.
5. Rodwell, D. (2007) Conservation and Sustainability in Historic Cities, Wiley-Blackwell, Oxford.

Web links and Video Lectures (e-Resources):

- https://idd.karnataka.gov.in/storage/pdf-files/23.Prefea_Rejuvanance.pdf
- https://www.mcgill.ca/mchg/student/neighborhood/chapter1
- http://www.itpi.org.in/pdfs/apr07_08.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Case study on understanding the strategies that the government adopted in revitalizing the urban area and also to present the limitations and shortcomings in the project.

VII Semester

	PROFESSIONAL ELECTIVE -IV **3. WATER RESOURCE MANAGEMENT**			
	Course Code	**21PLN75.3**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

To develop the ability of the students to profile the scenario of water critical urban habitat, refer to the statutory provisions of preventing water pollution, assess the techno - environmental and socioeconomic aspects of surface and ground water management, list the demand and supply side management of urban water and interpret the dynamics of water trading and water pricing.

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teacher can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Introduction

Sources and Uses of water (primary, secondary and tertiary sector uses); Concept of virtual water; Health and environmental concerns of availability and quality of water resources.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Crisis in Water Resources

Water crisis and water stress; Protection of aquifers; Water rights and its legal implications; Politics of water sharing.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Legislation on Water

Statutes governing water resources; Legislation for preventing water pollution; Institutions managing water resources.

	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-4	
	Water Resource Augmentation Infrastructure for annual and multi-year flow regulation, multi-purpose storage; Protection of water quality and water source; An overview of dam projects; desalination techniques; modern water augmentation techniques.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-5	
	Water Management Strategies Integrated surface and groundwater management from socio – economic and techno – environmental perspectives; An overview of inter territorial water sharing; Water demand management, Water conservation measures; An overview of water trading, security, auditing and pricing.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Various components of hydrologic cycle that affect the movement of water in the earth
- Understand the institutional system under the water supply
- Apply various techniques securing the water for the future purpose.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Water Resources Planning and Management, R. Quenth Grafton and Karen Hussey, Cambridge University Press, 2011
2. Geography of Water Resources, R.K. Gurjar, Rawat Publications,
3. Water Resource System Planning and Management, Sharad Kumar Jain and Vijay Pratap Singh, Elsevier, 2012
4. Water Resources Management: Principles, Regulations, and Cases, Neil S. Grigg
5. Water Resources and Development, Clive Agnew and Philip Woodhouse, Routledge, 2011
6. Role of Technology in Water Resources Planning and Management, Perez, Elizabeth M. (Ed.), Virginia ASCE, 2009
7. Integrated Water Resources Management, Miguel A. Marino, International Association of Hydrological Sciences, 2001
8. Water Law, Poverty and Development: Water Sector Reforms in India, Cullet Philippe, Oxford University Press

Web links and Video Lectures (e-Resources):

https://www.worldbank.org/en/topic/waterresourcesmanagement#1
https://repositorio.cepal.org/bitstream/handle/11362/39542/1/FOCUSIssue4Oct-Dec2015.pdf
https://www.iucn.org/downloads/iwrm_a_new_way_forward_1.pdf
https://www.ircwash.org/sites/default/files/210-96WA-17543.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A literature study on different cities about the water resources management to learn new techniques adopted by the cities.
- An activity is given to them to learn national and international journals to understand the importance of water resources.

VII Semester

	PROFESSIONAL ELECTIVE -IV **4. SUSTAINABLE URBAN DEVELOPMENT**			
	Course Code	**21PLN75.4**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

- Sustainable Urban Development will provide a rigorous and critical understanding of the policy and practice of sustainable urban development. The course exposes students to sustainable urbanism as both an interdisciplinary and multidisciplinary subject at global, national and local scales.

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teacher can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Introduction

Sustainability Definition through Example, Three Pillars of Sustainability, Triple Bottom Line, Carrying capacity, Sustainable Development Goals (SDGs), Action Guide for Environmentally Conscious Lifestyle

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module -2

Sustainable Development

Biodiversity and its conservation, environmental pollution, air, water and soil pollution, solid waste management, social issues and environment, climate change , Global warming, Ozone layer depletion , Water conservation , rain water harvesting, rain watershed management.

	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-3	
	Place- making and urban Design Identifying the environmental, social, cultural and economic benefits of each approach, The sustainability of affordable housing and informal settlement, Community participation in sustainable development ,Case Study: Innovation for Sustainability Implementation	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module- 4	
	Financing Sustainability Decision making, Sustainability related issues in financing , Sustainability linked loans and green loans, Green bonds and Sustainable- linked bonds, climate risks and financial risks on markets Sustainable Finance through various case studies like Green Urban Housing, Off-grid Energy, Green Bonds, and many other relevant case studies on the project**.**	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-5	
	Sustainable transport Sustainable transport systems, NMT, public transport. Planning principles and process; Planning norms and standards; planning frameworks for NMT infrastructure improvements; Analytical methods - NMT site analysis; NMT network analysis. NMT Facilities - Facilities on Highways and Primary Arterials, Designs based on Roadway function, Safety and Intersections; Local Street Design with respect to NMT; Financing NMT Infrastructure. Planning for NMT - Integration of NMT into transport master plans. Planning for sustainable transport projects and global best practices	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Specialists to design of energy efficient and sustainable built environment
- Analyse and compare the potentials and challenges of technological, organisational and policy solutions
- Critically judge solutions and propose a plan towards sustainable transportation
- The ways banks can navigate to more-greener portfolios, the importance of being evaluated by rating agencies for Sustainability parameters, and what does this all mean for the financial sector's reputation and future.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Black, W.R. (2010). Sustainable Transportation: Problems and Solutions. The Guilford Press, New York, NY. Available at: http://uma.eblib.com/patron/FullRecord. aspx?p=465652.
2. Shiller, P.L., E. Bruun, and J.R. Kenworthy. (2010). An Introduction to Sustainable Transportation. Earthscan, London, Washington DC. (I will provide the url link once I have it).
3. E.!Barbour!and!B.!Deakin!(2012).!Smart!Growth!Planning!for!Climate!Protection:!An!Evaluation!of!California's!Senate!Bill!375.!Journal&of&the&American&Planning&Association,!78!(1),!70=86.
4. Urban!Land!Institute!Report!(2010).!Land!Use!and!Driving:!The!Role!Compact!Development!Can!Play! in!Reducing!Greenhouse!Gas!Emissions.!Washington,!DC.!http://www.uli.org/wp= content/uploads/ULI=Documents/Land=Use=and=Driving=Low=Res.pdf
5. U.S.!Environmental!Protection!Agency.!Smart!Growth!Principles.! http://www.epa.gov/dced/about_sg.htm.!
6. Dios Ortuzar J. (2001), Modelling Transport, Wiley, New York. 2.
7. Hook, W. (2005), Non-Motorized Transport, Federal Ministry for Economic Cooperation & Development, Germany. 3.
8. Kadiyali L. R. (2013), Traffic Engineering and Transport Planning, Khanna Publishers, New Delhi. 4.
9. O'Flaherty C.A. (1997),Transport Planning and Traffic Engineering, Elsevier, CRC Press, USA.

Web links and Video Lectures (e-Resources):

- https://www.itdp.org/our-work/sustainable-urban-development/
- https://www.asla.org/sustainableurbandevelopment.aspx
- https://www.sciencedirect.com/topics/social-sciences/sustainable-urban-development
- https://www.youtube.com/watch?v=h1sU_gOxjf4

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- A literature study on different cities about the Sustainable development to learn new techniques adopted by the cities.
- An activity is given to them to learn national and international journals to understand the importance of urban development and sustainable development.

VII Semester

	PROFESSIONAL ELECTIVE -IV **5. INCLUSIVE PLANNING**			
	Course Code	**21 PLN75.5**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

- To provide exposure to the emerging concepts and issues concerning inclusive planning. To equip the students with required knowledge, know-how & tools on people-centric related approaches towards planning. To include the disadvantaged, marginalized and other vulnerable sections/groups into the mainstream of planning.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

- Theory subjects and studio to go hand in hand
- Exposing the students to the Planning guidelines (URDPFI), IRC
- Innovative lecture methodologies to be adapted to improve the teaching and learning process
- Short videos for better understanding, physical site visits for understanding the scale and all the aspects of site planning
- Encourage collaborative (Group Learning) learning in the class
- Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking
- Adapt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it
- Discussion in class to elevate thinking level and different problem solving levels

Module-1

Elements of Inclusivity

Definition, Concepts, elements of inclusivity; Exclusion and related issues, disparities, social fragmentation, existing divisiveness; Marginalization, exclusion and access to services.

Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Module-2

Community Planning

Definition, Concepts and methods; Community participation and management; Language and discourse in planning, interactive planning, multi-directional flows in decision- making, communicative rationality and democratic processes, building consensus in planning

Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Module-3

	Poverty, Informal Sector & inequality Definition, Dimensions, deprivation, measurement, defining parameters; absolute and relative poverty; Informal Sector- Definition and dimensions; migratory impulses and their association with growth of informal sector;' Role of informal sector in housing; Housing and basic needs- lack of essential infrastructure; Poor condition of existing services.	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module-4	
	Disparities and Equal Opportunities Critiques of neo- liberalism; power and hegemony; forms of marginalization; right to the city approach; feminist planning theory: caste and religion – planning and design for the differently- able persons, elderly, children, and pregnant women.	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs
	Module-5	
	Policies Programs, Model related to Inclusive Planning Planning Legislation and related programs; Management for the vulnerable sections; formal institution of inclusion and community ; Role of central and state governments; Private and voluntary organizations; Development indicators; People- centric and participatory planning; bottom-up approaches; Incremental approach; Low cost alternatives and institutional reform approach; Public-private partnership ; PRA techniques and participatory GIS.	
	Pedagogy	Taught through chalk and talk methods, PowerPoints presentation and PDFs

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Upon the completion of this course, the students would be able: To demonstrate skills and knowledge to prepare a traffic and transportation plan, circulation plan or traffic management plan for a human settlement.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a

maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Ali Sabir (2006), Dimensions of Urban Poverty, Rawat Publications, New Delhi
2. Brown A and Kristiansen A. (2009), Urban Policies and Right to the City: Rights, Responsibilities and citizenship; UNESCO, UN- Habitat Publication.
3. Kundu , Amitabh and sharma, Alakh N (2001), Informal Sector in India: Perspectives and policies , Institute for Human Devlopment & Institution of Applied Manpower Research , New Delhi.
4. Singh R.U Thakur A.K (2009), Inclusive Growth in India, Deeo & Deep Publication Pvt. Ltd., New Delhi.

Web links and Video Lectures (e-Resources):

- https://www2.deloitte.com/global/en/pages/public-sector/articles/urban-future-with-a-purpose/inclusive-services-and-planning.html
- https://www.smartcitiesdive.com/ex/sustainablecitiescollective/inclusive-planning-how-can-indian-cities-lead-way/35817/
- https://www.wiego.org/inclusive-cities-project

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group preparations and discussions on various topics in the modules and case studies.

VII Semester

OPEN ELECTIVE III **1. INSTITUTIONS AND PLANNING**			
Course Code	**21PLN76.1**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- This subject has two objectives. The first objective is to introduce students to the multiplicity and complexity of organizations involved in the planning and development of cities and towns.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teachers can devise innovative pedagogy to improve the teaching-learning.**

Module-1

Nature of Planning Organizations

Forms and functions of planning agencies; Nature of involvement of planners in these agencies; Difference in the workings, roles and jurisdictions of development authorises. In different states; Nature of planning organizations in the private sector and the third sector.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Multiplicity of Planning Organizations

Coordination and integration among planning agencies; Nature of conflicts and contestations among planning agencies; Joined up local government; Horizontal and vertical linkages among planning agencies; Convergence among planning agencies; Complications of organizational integration due to 73rd and 74th amendments to the Constitution of India.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Laws and Plans

A study of redevelopment related laws, rules and regulations; Nature of redevelopment development plans; Brownfields versus greenfield development; Roles and motivations of the private sector in redevelopment.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Redevelopment: Resettlement

Nature of redevelopment; Consequences of redevelopment; Evictions, displacements, resettlement and rehabilitation; Gentrification of urban areas.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Gentrification

Process –consequences –causes-issues in Urban Development. Case studies relevant to the process of Gentrification.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate critical knowledge about the working of planning and development organizations including the ones involved in redevelopment.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum

of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Anjaria, J. S. and McFarlane, C. (eds.) (2011) Urban Navigations, Politics, Space and the City in South Asia, Routledge, London.
2. Bhan, G. (2009) 'This is no longer the city I once knew': evictions, the urban poor and the right to the city in millennial Delhi, Environment and Urbanization, Vol. 21, pp. 127–142.
3. Doshi, S. (2012) The Politics of the Evicted: Redevelopment, Subjectivity, and Difference in Mumbai's Slum Frontier, Antipode, https://doi.org/10.1111/j.1467-8330.2012.01023.x
4. Dupont, V. (2008) Slum demolitions in Delhi since the 1990s: An appraisal, Economic and Political Weekly, Vol. 43, No. 28, pp. 79–87.
5. Ghertner, D.A. (2011) Gentrifying the state, gentrifying participation: Elite governance programs in Delhi, International Journal of Urban and Regional Research, Vol. 35, No. 3, pp. 504-532.
6. Kidd, S. (2007) Towards a Framework of Integration in Spatial Planning: An Exploration from a Health Perspective. Planning Theory and Practice, Vol. 8, No. 2, pp. 161-181.
7. Kumar, A. (2000) Some Problems in the Coordination of Planning: Managing Interdependencies in the Planning of Delhi, India, Space and Polity, Vol. 4, Issue 2, pp. 167-185.
8. Kumar, A., Vidyarthi, S. and Prakash, P. (2021) City Planning in India, 1947 – 2017, Routledge, New York.
9. Rao, N. (2007) Cities in Transition, Growth, Change and Governance in Six Metropolitan Areas, Routledge, London.
10. Rademacher, A. and Sivaramakrishnan, K. (2013) Ecologies of Urbanism in India: Metropolitan Civility and Sustainability, Hong Kong University Press, Hong Kong.
11. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London
12. Sivaramakrishnan, K.C. (2015) Governance of Megacities: Fractured Thinking and Fragmented Setup, Oxford University Press, New Delhi.

Web links and Video Lectures (e-Resources):

- https://www.pbrdp.gov.in/documents/6205745/98348119/Panchayati%20Raj%20System%20in%20Independent%20India.pdf
- https://niti.gov.in/planningcommission.gov.in/docs/plans/mta/midterm/english-pdf/chapter-17.pdf
- https://cbpbu.ac.in/userfiles/file/2020/STUDY_MAT/POL_SC/73rd%20and%2074th-converted.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- The students will be asked to visit the institutions website and find out their services , projects planned and completed

VII Semester

OPEN ELECTIVE – III 2. BASICS OF QUALITY MANAGEMENT			
Course Code	**21PLN76.2**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- This subject has two objectives. The first objective is to introduce students to the multiplicity and complexity of organizations involved in the planning and development of cities and towns.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teachers can devise innovative pedagogy to improve the teaching-learning.**

Module-1

Introduction

Quality management introduction, Quality based definitions and concepts, International Organization for Standardization (ISO), Quality vs. Grade, Sampling Theory, Probability Theory, Sampling data types, Customer satisfaction, Mapping Quality-related Concepts

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Maturity and Continuous Improvement Models

Maturity Models, Capability Maturity Model Integrated (CMMI), Project Management Maturity Model (PMMM), Continuous Improvement Models, Application of Maturity and Improvement Models

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Quality Management Planning
Quality Management Corporate Policy, Project Quality Management Planning, Quality Management Tools and Techniques

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-4

Quality Management Implementation
Quality Management Implementation, Quality Assurance Activities, Quality Control Activities

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-5

Quality Management Improvement
Quality audits, Kaizen "Improvement", Benefits of Practicing Continuous Improvement on Projects

Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- Improve the quality of the product and ensure project success
- Measure quality and apply quality assurance
- Ensure the end-customer's quality requirements are met

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Anjaria, J. S. and McFarlane, C. (eds.) (2011) Urban Navigations, Politics, Space and the City in South Asia,

Routledge, London.
2. Bhan, G. (2009) 'This is no longer the city I once knew': evictions, the urban poor and the right to the city in millennial Delhi, Environment and Urbanization, Vol. 21, pp. 127–142.
3. Doshi, S. (2012) The Politics of the Evicted: Redevelopment, Subjectivity, and Difference in Mumbai's Slum Frontier, Antipode, https://doi.org/10.1111/j.1467-8330.2012.01023.x
4. Dupont, V. (2008) Slum demolitions in Delhi since the 1990s: An appraisal, Economic and Political Weekly, Vol. 43, No. 28, pp. 79–87.
5. Ghertner, D.A. (2011) Gentrifying the state, gentrifying participation: Elite governance programs in Delhi, International Journal of Urban and Regional Research, Vol. 35, No. 3, pp. 504-532.
6. Kidd, S. (2007) Towards a Framework of Integration in Spatial Planning: An Exploration from a Health Perspective. Planning Theory and Practice, Vol. 8, No. 2, pp. 161-181.
7. Kumar, A. (2000) Some Problems in the Coordination of Planning: Managing Interdependencies in the Planning of Delhi, India, Space and Polity, Vol. 4, Issue 2, pp. 167-185.
8. Kumar, A., Vidyarthi, S. and Prakash, P. (2021) City Planning in India, 1947 – 2017, Routledge, New York.
9. Rao, N. (2007) Cities in Transition, Growth, Change and Governance in Six Metropolitan Areas, Routledge, London.
10. Rademacher, A. and Sivaramakrishnan, K. (2013) Ecologies of Urbanism in India: Metropolitan Civility and Sustainability, Hong Kong University Press, Hong Kong.
11. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London
12. Sivaramakrishnan, K.C. (2015) Governance of Megacities: Fractured Thinking and Fragmented Setup, Oxford University Press, New Delhi.

Web links and Video Lectures (e-Resources):

- https://www.pbrdp.gov.in/documents/6205745/98348119/Panchayati%20Raj%20System%20in%20Independent%20India.pdf
- https://niti.gov.in/planningcommission.gov.in/docs/plans/mta/midterm/english-pdf/chapter-17.pdf
- https://cbpbu.ac.in/userfiles/file/2020/STUDY_MAT/POL_SC/73rd%20and%2074th-converted.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- The students will be asked to visit the institutions website and find out their services , projects planned and completed

VII Semester

OPEN ELECTIVE – III **3. SOLID WASTE MANAGEMENT**			
Course Code	**21PLN76.3**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- This subject has two objectives. The first objective is to introduce students to the multiplicity and complexity of organizations involved in the planning and development of cities and towns.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teachers can devise innovative pedagogy to improve the teaching-learning.**

Module-1	
Introduction to Environmental Science Environment, Components of environment; Lithosphere, Hydrosphere, Biosphere and Atmosphere; Natural resources, Environmental degradation	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-2	
Introduction to Waste Waste, Sources of waste, Steps involved in waste management, Ways of waste classification, importance of waste management and the health hazard associated with improper waste management.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	

Classification of Waste Classification of Waste: Waste, Collection, Segregation, Disposal, Treatment, Transportation.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Concept of Waste Management Nature of redevelopment; Consequences of redevelopment; Evictions, displacements, resettlement and rehabilitation; Gentrification of urban areas.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Sources of Waste Process –consequences –causes-issues in Urban Development. Case studies relevant to the process of Gentrification.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate critical knowledge about the working of planning and development organizations including the ones involved in redevelopment.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Anjaria, J. S. and McFarlane, C. (eds.) (2011) Urban Navigations, Politics, Space and the City in South Asia, Routledge, London.
2. Bhan, G. (2009) ‘This is no longer the city I once knew‘: evictions, the urban poor and the right to the city in millennial Delhi, Environment and Urbanization, Vol. 21, pp. 127–142.

3. Doshi, S. (2012) The Politics of the Evicted: Redevelopment, Subjectivity, and Difference in Mumbai's Slum Frontier, Antipode, https://doi.org/10.1111/j.1467-8330.2012.01023.x
4. Dupont, V. (2008) Slum demolitions in Delhi since the 1990s: An appraisal, Economic and Political Weekly, Vol. 43, No. 28, pp. 79–87.
5. Ghertner, D.A. (2011) Gentrifying the state, gentrifying participation: Elite governance programs in Delhi, International Journal of Urban and Regional Research, Vol. 35, No. 3, pp. 504-532.
6. Kidd, S. (2007) Towards a Framework of Integration in Spatial Planning: An Exploration from a Health Perspective. Planning Theory and Practice, Vol. 8, No. 2, pp. 161-181.
7. Kumar, A. (2000) Some Problems in the Coordination of Planning: Managing Interdependencies in the Planning of Delhi, India, Space and Polity, Vol. 4, Issue 2, pp. 167-185.
8. Kumar, A., Vidyarthi, S. and Prakash, P. (2021) City Planning in India, 1947 – 2017, Routledge, New York.
9. Rao, N. (2007) Cities in Transition, Growth, Change and Governance in Six Metropolitan Areas, Routledge, London.
10. Rademacher, A. and Sivaramakrishnan, K. (2013) Ecologies of Urbanism in India: Metropolitan Civility and Sustainability, Hong Kong University Press, Hong Kong.
11. Shatkin, G. (ed.) (2013) Contesting the Indian City: Global Visions and the Politics of the Local, Wiley, London
12. Sivaramakrishnan, K.C. (2015) Governance of Megacities: Fractured Thinking and Fragmented Setup, Oxford University Press, New Delhi.

Web links and Video Lectures (e-Resources):

- https://www.pbrdp.gov.in/documents/6205745/98348119/Panchayati%20Raj%20System%20in%20Independent%20India.pdf
- https://niti.gov.in/planningcommission.gov.in/docs/plans/mta/midterm/english-pdf/chapter-17.pdf
- https://cbpbu.ac.in/userfiles/file/2020/STUDY_MAT/POL_SC/73rd%20and%2074th-converted.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- The students will be asked to visit the institutions website and find out their services , projects planned and completed

VII Semester

OPEN ELECTIVE – III **4. ENERGY EFFICIENCY PLANNING**			
Course Code	**21PLN76.4**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- This subject has two objectives. The first objective is to introduce students to the multiplicity and complexity of organizations involved in the planning and development of cities and towns.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teachers can devise innovative pedagogy to improve the teaching-learning.**

Module-1

Introduction

Definitions and understanding of concepts like energy-efficiency, sustainability, eco-efficiency, eco-city, etc.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Energy-efficient infrastructure: Part 1

Tool for Rapid Assessment of City Energy (TRACE), Saving Energy through Energy Savings Performance Contracts, Policies and Regulations

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-3

Energy-efficient infrastructure: Part 2 Energy Efficiency and Public Lighting, Water and Wastewater, Energy and Solid Waste Management	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Energy-efficient infrastructure: Part 3 Energy Efficiency in Public Buildings, Integrated Urban Transport Planning	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Case Studies Detailed case studies relevant to the process of energy efficiency implementation in cities.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate critical knowledge about the working of energy efficient city planning to achieve sustainable development.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Anjaria, J. S. and McFarlane, C. (eds.) (2011) Urban Navigations, Politics, Space and the City in South Asia, Routledge, London.
2. Bhan, G. (2009) 'This is no longer the city I once knew': evictions, the urban poor and the right to the city in millennial Delhi, Environment and Urbanization, Vol. 21, pp. 127–142.

3. Doshi, S. (2012) The Politics of the Evicted: Redevelopment, Subjectivity, and Difference in Mumbai's Slum Frontier, Antipode, https://doi.org/10.1111/j.1467-8330.2012.01023.x
4. Dupont, V. (2008) Slum demolitions in Delhi since the 1990s: An appraisal, Economic and Political Weekly, Vol. 43, No. 28, pp. 79–87.
6. Kidd, S. (2007) Towards a Framework of Integration in Spatial Planning: An Exploration from a Health Perspective. Planning Theory and Practice, Vol. 8, No. 2, pp. 161-181.
7. Kumar, A. (2000) Some Problems in the Coordination of Planning: Managing Interdependencies in the Planning of Delhi, India, Space and Polity, Vol. 4, Issue 2, pp. 167-185.

Web links and Video Lectures (e-Resources):

- https://www.pbrdp.gov.in/documents/6205745/98348119/Panchayati%20Raj%20System%20in%20Independent%20India.pdf
- https://niti.gov.in/planningcommission.gov.in/docs/plans/mta/midterm/english-pdf/chapter-17.pdf
- https://cbpbu.ac.in/userfiles/file/2020/STUDY_MAT/POL_SC/73rd%20and%2074th-converted.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- The students will be asked to visit the institutions website and find out their services , projects planned and completed

VII Semester

OPEN ELECTIVE – III **5. INTELLIGENT TRANSPORTATION SYSTEM**			
Course Code	**21PLN76.5**	CIE Marks	50
Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:1	SEE Marks	50
Total Hours of Pedagogy	48	Total Marks	100
Credits	2	Exam Hours	3

Course objectives:

- This subject has two objectives. The first objective is to introduce students to the multiplicity and complexity of organizations involved in the planning and development of cities and towns.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different types of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving stations and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teachers can devise innovative pedagogy to improve the teaching-learning.**

Module-1

Intelligent Transport System

Definition, concepts, types of Intelligent Transport System (ITS); ITS technology, software, equipment, Traffic management, emergency and incident management, public transport system, terminal and depot management system, parking infrastructure management, commercial vehicle management, highway surveillance, case studies.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Application of ITS in Transport Infrastructure

Available and emerging traffic control system technology, Area traffic control, urban traffic control system technology, transportation system management, highway control and incident management, intelligent vehicle highway system, highway surveillance, Traffic regulation and enforcement; optimisation of public transport for

smart mobility; terminal management; parking management.	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-3	
Anatomy& Operations Management Information and Communication Technology, Big Data Processing And Storage, Communication Technology, Mobile Networks, Capacity Planning, Operations, Maintenance and Control, Project Management, Fleet and Commercial Vehicle Operations, Signaling and Traffic Priority, Safety and Security	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-4	
Smart Mobility Concepts and components of smart mobility, role of ITS in smart mobility and smart cities; PPPs as a tool to implement smart mobility projects; smart mobility solutions for differently-abled; Integration of smart and green mobility	
Pedagogy	Chalk and talk method, PowerPoint Presentation
Module-5	
Business Management & Case Studies Strategic Business Planning, Sustainability of Operations, Role of State and Regulatory Bodies, Emerging Trends Detailed case studies relevant to the process of ITS implementation in cities.	
Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate critical knowledge about the working of planning and development organizations including the ones involved in redevelopment.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Semester End Exam (SEE) is conducted for 100 marks and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Books

1. Anjaria, J. S. and McFarlane, C. (eds.) (2011) Urban Navigations, Politics, Space and the City in South Asia, Routledge, London.
2. Doshi, S. (2012) The Politics of the Evicted: Redevelopment, Subjectivity, and Difference in Mumbai's Slum Frontier, Antipode, https://doi.org/10.1111/j.1467-8330.2012.01023.x
4. Dupont, V. (2008) Slum demolitions in Delhi since the 1990s: An appraisal, Economic and Political Weekly, Vol. 43, No. 28, pp. 79–87.
5. Ghertner, D.A. (2011) Gentrifying the state, gentrifying participation: Elite governance programs in Delhi, International Journal of Urban and Regional Research, Vol. 35, No. 3, pp. 504-532.
6. Kidd, S. (2007) Towards a Framework of Integration in Spatial Planning: An Exploration from a Health Perspective. Planning Theory and Practice, Vol. 8, No. 2, pp. 161-181.
7. Kumar, A. (2000) Some Problems in the Coordination of Planning: Managing Interdependencies in the Planning of Delhi, India, Space and Polity, Vol. 4, Issue 2, pp. 167-185.

Web links and Video Lectures (e-Resources):

- https://www.pbrdp.gov.in/documents/6205745/98348119/Panchayati%20Raj%20System%20in%20Independent%20India.pdf
- https://niti.gov.in/planningcommission.gov.in/docs/plans/mta/midterm/english-pdf/chapter-17.pdf
- https://cbpbu.ac.in/userfiles/file/2020/STUDY_MAT/POL_SC/73rd%20and%2074th-converted.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- The students will be asked to visit the institutions website and find out their services , projects planned and completed

VII Semester

PROFESSIONAL TRAINING - II			
Course Code	**21PLN77**	CIE Marks	-
Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:0:0:0:0	SEE Marks	100
Total Hours of Pedagogy	-	Total Marks	100
Credits		Exam Hours	3

General Instructions :

Students will undergo professional training in a department approved organization on a project for 2 months. This will be supervised training by a senior professional from the organization. Satisfactory completion of training will be mandatory for the award of a degree. Training will be evaluated by the faculty incharge and Internship training Coordinator.

SEMESTER VIII

VIII Semester

	PLANNING THESIS			
	Course Code	**21PLN81**	CIE Marks	200
	Teaching Hours/Week (L:T:S:P:SM:SS)	0:0:2:16:0:0	SEE Marks	200
	Total Hours of Pedagogy	288	Total Marks	400
	Credits	9	Exam Hours	-

Course objectives:

- Creation of new knowledge is essential for innovation in any profession, planning is no different. New knowledge get created through research using credible research methods. So, building on the subject of 'Dissertation', the main objective of 'Planning thesis' is to teach students about how conduct a research systematically, starting with making a choice of a research topic through to literature review to field work, analysis of field data, synthesis of literature and field work findings, drawing conclusions and making recommendations.

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. The student is required to visit site and organizations for the collection of data
2. The student is asked to do multiple surveys for Transportation and Socio economic study for understanding the Issues.
3. Report .Presentations and Sheets on final Analysis is to be submitted at the end of the studio.

Course Contents

Each student of Bachelor of Planning is required to prepare a thesis on a subject concerning urban, rural or regional planning and development. Each research topic would be approved by the faculty and finalized through discussions within the department. Thesis will provide an opportunity to the student to synthesize knowledge and skills acquired by her through learning of various theories and practices during the last three and half year. The students will be required to present their work orally, graphically and through written report. The student will also be required to present her thesis before the external jury appointed by the concerned planning school, institute or university..

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

1. To demonstrate the ability to successfully plan and design a small research project.
2. To show the ability to critically approach the existing literature on a specific research topic in order to complete literature review.
3. To show the ability to conduct field surveys in order to fill gaps in the literature and also to answer some of the research questions.
4. To examine field data and information before arriving at the conclusions.
5. To make planning and policy proposals on a selected research topic..

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project, Viva)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks individually both in CIE and SEE to pass. Theory Semester End Exam (SEE) is conducted for 200 marks and Continuous Internal Evaluation (CIE) is conducted for 200 marks. Based on this grading will be awarded.

As per University guidelines

Continuous Internal Evaluation: The Internal marks (200 marks) evaluation shall be based on Phase wise completion of the project work, Project report, Presentation and Demonstration of the actual/model/prototype of the project.

Semester End Examination: SEE marks for the project (200 marks) shall be based on Project report, Presentation and Demonstration of the actual/model/prototype of the project, as per the University norms by the examiners appointed VTU.

Suggested Learning Resources:

Books

1. Hammersley, M. (2013) What is Qualitative Research? Bloomsbury, London.
2. Hancock, D.R. and Algozzine, B. (2006) Doing Case Study Research: A Practical Guide for Beginning Researchers, Columbia University, New York.
3. Machi, L.A. and McEvoy, B.T. (2012) The Literature Review: Six Steps to Success, Thousand Oaks, California.
4. Piccolo, F.L. and Thomas, H. (2009) Ethics and Planning Research, Ashgate, Farnham, Surrey.
5. Treiman, D.J. (2009) Quantitative Data Analysis: Doing Social Research to Test Ideas (Research Methods for the Social Sciences), Jossey-Bass, San Francisco, California
6. Wertz, F.J. (2011) Five Ways of Doing Qualitative Analysis: Phenomenological Psychology, Grounded Theory, Discourse Analysis, Narrative Research, and Intuitive Inquiry, Guilford Press, New York.

Web links and Video Lectures (e-Resources):

- https://www.scribbr.com/category/research-paper/
- https://library.iitd.ac.in/Ph-D-Thesis-tab
- http://www.itpi.org.in/journals

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students should visit the site area and do the relevant study based on their topic of interest

VIII Semester

	PLANNING LEGISLATION – II			
	Course Code	**21PLN82**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	3:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	48	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- Building on the earlier course on Planning Legislation, the main purpose of this course is to understand (i) how master plan as statutory documents interpret constitutional provisions and (b) to appreciate the interface between planning law and other laws.

Pedagogy (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teacher can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Planning and Development Law and Statutory Plans

Statutory nature of comprehensive plans and its implications, Plan Preparation and Modification process, Case laws related to matters related to plan preparation, change of land use, implementation and enforcement.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Planning Law and Environment laws

Current legislation related to the environment. Interface and conflicts between town planning, environment laws; Case laws.

	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-3	
	Planning Law and Heritage Laws Current legislation related to heritage. Interface and conflicts between town planning, and heritage legislation; Case laws.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-4	
	Real Estate and other related laws for development Real Estate (Regulation and Development) Act, 2016 and other relevant acts at a particular time, for example, Special Investment Region Act, Community Participation Law.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-5	
	Legal and administrative aspects: National and international experience National and international experience implementing urban programs. Legal and administrative Aspects of all sectors. Case studies of proposals for acts concerned with urban development in India and abroad	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate knowledge about the role of statutory master plans in translating constitutional provisions.
- To show familiarity with environment and heritage laws and other relevant acts.
- To develop knowledge about the implications of environment and heritage laws for town planning laws.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.

2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:
Books

1. Anindita, M. (2019) The Legal Right to Housing in India, Cambridge University Press, Cambridge.
2. Brand, C. (2001) Planning Law, Cavendish Publishing Limited, Singapore.
3. Jariwala, C.M. (not dated) Environmental Justice: The Directions and Outcome, Indian Journal of Environmental Law, Vol. 1, pp. 15-30.
4. Ghosh, S. (2019) (ed.) Indian Environmental Law: Key Concepts and Principles, Orient Blackswan, Hyderabad.

Web links and Video Lectures (e-Resources):

- https://nhb.org.in/wp-content/uploads/2017/03/Land-Acquisition-vs.-Land-Pooling.pdf
- . http://mohua.gov.in/cms/acts.php
- http://mohua.gov.in/upload/uploadfiles/files/NCRPB%20Act%201985.pdf
- https://unhabitat.org/sites/default/files/2020/09/rules_of_the_game8_0.pdf
- https://rera.karnataka.gov.in/home?language=en

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- The student is taken to the development board website and taught the process involved in application of land permission, RERA act and so on.
- They learn the process of TENDER and BID the project.

VIII Semester

	PLANNING PRACTICE – II			
	Course Code	**21PLN83**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:2:0:0	SEE Marks	50
	Total Hours of Pedagogy	64	Total Marks	100
	Credits	3	Exam Hours	3

Course objectives:

- The main objective of the course is to familiarise students with the nature of planning practice in the Indian context and develop an understanding of responsibility of planning professionals and ethical behaviours expected from planners. The subject also intends to make students familiar with the requirements of setting up an organization for planning practice.

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teacher can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Comprehending Planning Practices

Defining planning practices; Forms of planning practices and their implications; Debates about planning practices; What is a proper planning practice?

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Reflective planning practice

Concept of reflective practice as given by Donald Schon; Espoused-theory and theory-in-use; Reflection in and on action; Approach and methods of reflective practice, concept of reframing; Reflective practice in the Indian context..

	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-3	
	Deliberative planning practice Concept of deliberative practice; Study of decision making processes; comprehending competing interests and interest groups; Understanding power relations and group dynamics in deliberative practice; Deliberations and negotiations in development plans, policies and projects.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-4	
	Professional Engagement and Office Administration Tenders, Contracts, Formulation of Project Proposals., Scope of work and Professional fees for different types of planning practice, setting up of planning firms, official correspondence, office management practices.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-5	
	Planning Engagement : Study of decision making, role of different interest groups, deliberation and negotiation large planning project or policy modification requiring approvals, Relationship with client, developers, institutions and other professionals.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To develop knowledge about the underlying values of the planning profession and show how to recognize ethical dilemmas.
- To show knowledge about the processes of ethical decision making.
- To develop an understanding about the concept of reflective practice.
- To show the importance of dialogue among competing interests around a planning proposal.
- To list the requirements for setting up a planning practice.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.
3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:
Books

1. Barrett, C.D. (2001) Everyday Ethics for Practicing Planners, American Institute of Certified Planners, Chicago.
2. Forester, J. (1999) The Deliberative Practitioner: Encouraging Participatory Planning Processes, MIT Press, Massachusetts.
3. Kulshreshtha, S.K. (2012) Urban and Regional Planning in India: A Handbook for Professional Practice, Sage, New D

4. Saccoccia, S. (2016) Planning Practice, MIT Press, Massachusetts.

5. Schön, D. (1983) The Reflective Practitioner: How professionals think in action, Temple Smith, London.

6. Thomas, H. and Healey, P. (1991) Dilemmas of Planning Practice: Ethics, legitimacy, and the validation of knowledge, Avebury, Farnham, Surreyelhi.

Web links and Video Lectures (e-Resources):

- https://www.sciencedirect.com/topics/social-sciences/planning-practice
- https://uk.sagepub.com/sites/default/files/upm-binaries/59229_Sellars.pdf
- https://egyankosh.ac.in/bitstream/123456789/39224/1/Unit-1.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Understanding the contractual and tender documents related practices.

VIII Semester

	PLANNING ETHICS			
	Course Code	**21PLN84**	CIE Marks	50
	Teaching Hours/Week (L:T:S:P:SM:SS)	2:0:0:0:0:0	SEE Marks	50
	Total Hours of Pedagogy	32	Total Marks	100
	Credits	2	Exam Hours	3

Course objectives:

- This course intends to develop sensitivity to ethical issues in planning and development and develop an understanding of processes of ethical decision making..

Pedagogy (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching methods may be adopted to develop the outcomes.
2. Arrange visits to nearby power plants, receiving station and substations to give brief information about the electrical power generation.
3. **Show Video/animation films to explain functioning of various machines**
4. **Encourage collaborative (Group Learning) Learning in the class**
5. Ask at least three HOTS (Higher order Thinking) questions in the class, which promotes critical thinking
6. Adopt Problem Based Learning (PBL), which fosters students Analytical skills, develop thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
7. Topics will be introduced in a multiple representation.
8. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
9. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.
10. **Individual teacher can device the innovative pedagogy to improve the teaching-learning.**

Module-1

Understanding Ethics

Defining ethics; Human values and moral reasoning; Perspectives on ethics; Branches of ethics; Ethics and social identities; Defining the idea of a profession and ethics in the modern professions.

Pedagogy	Chalk and talk method, PowerPoint Presentation

Module-2

Understanding Ethical Decision Making

Understanding human behaviour; Substance of ethical behaviour; Development stages of ethical behaviour; Ethical decision making: power of frames, routines and strong situations; Examples of ethical and unethical decision making in planning organisations.

	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-3	
	Development of Ethics in Planning Distinction between professional ethics, ethics in planning and planning ethics; Learning from theory; Understanding contributions of the key planning scholars to planning ethics.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-4	
	Ethical Dilemmas in Planning Practice Defining and recognising ethical dilemmas; Planning practice and ethical dilemmas, resolution of ethical dilemmas; Cases of ethical dilemmas in planning; Code of professional conduct; Examples of codes of conduct of different countries including India.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation
	Module-5	
	Values and managements: Management by values - professional excellence, interpersonal relationships at work place, leadership and team building, conflict resolution and stress management, management of power, resolution of ethical dilemmas, code of professional conduct, public sector planner and conduct rules.	
	Pedagogy	Chalk and talk method, PowerPoint Presentation

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

- To demonstrate familiarity with different philosophical approaches to ethical behavior.
- To show knowledge about the various elements of ethical reasoning.
- To develop the ability to recognize an ethical dilemma.
- To show knowledge about the ethical decision making processes

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks of maximum marks in CIE and minimum 35% marks of maximum marks in SEE to pass, and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Theory Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Open Book test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for closed book test, open book test, Written Quiz and Seminar. In the beginning only teacher has to announce the methods of CIE for the subject.

Semester End Examination:

Theory SEE will be conducted by University as per scheduled time table, with common question papers for subject

1. The question paper will have ten questions. Each question is set for 20 marks. Marks scored out of 100 marks are proportionally reduced to 50 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub questions), should have a mix of topics under that module.

3. The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:
Books

1. Singer, P. (2010) Practical Ethics, Cambridge University Press, Cambridge.
2. Richards, J.R. (1980) The Skeptical Feminist, Routledge, New York.
3. Harding, C.G. (ed.) (2017) Moral Dilemmas and Ethical Reasoning, Routledge, New York.
4. Paul, R. and Elder, L. (2013) The Thinker's Guide to Ethical Reasoning: Based on Critical Thinking Concepts and Tools, Foundation of Critical Thinking, Tomales, CA. Second Edition.
5. Barrett, C.D. (2017) Everyday Ethics for Practicing Planners, Routledge, New York.

Web links and Video Lectures (e-Resources):

- https://www.planning.org/ethics/ethicalprinciples/
- https://rm.coe.int/16806ee0ac

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Students are asked to do a presentation by effectively criticising on the community goals, professional development etc.

ANNEXURE-I

For more details, please refer to UGC/AICTE Student Induction Program guidelines

Students' Induction Program (General Guidelines)

In the first year 21 days of the course, an induction training program is proposed, before the start of 1st and 2nd semesters formal classes, to orient the students towards planning aptitude, education, and career. Induction training should also include the introduction of faculty members, discussion with faculty members, visits to various spaces in the department/school, such as climatology lab, computer center, material museum, construction yard, students' works exhibition, etc. Subjects such as Environmental Science, Indian Constitution, Value Education, Moral Science, and essence of traditional Indian culture and knowledge may also be included in induction training.

Induction Program

Students entering an institution have diverse thoughts, backgrounds, and preparations. It is important to help them adjust to the new environment and inculcate in them the ethos of the institution with a sense of larger purpose.

In this context, at the beginning of the first semester, a 21 days long induction program are proposed for the students. Regular classes would start after the completion of the induction program. Its purpose is to make the students feel comfortable in their new environment, open them up, set a healthy daily routine, create bonding in the batch as well as between faculty and students, develop awareness, sensitivity, and understanding of the self, people around them, society at large, and nature. The Induction Program is also used to rectify some critical lacuna, like a deficiency in comprehension of the English language by many students. The following are the activities under the induction program in which the student would be fully engaged throughout the day for the entire duration of the program.

Physical Activity

This would involve a daily routine of physical activity with games and sports. It would start with all students coming to the field for light physical exercise or yoga in the morning. There would also be games in the evening or at other suitable times according to the local climate. These would help develop teamwork. Each student should pick one game and learn it for three weeks. There could also be gardening or other suitably designed activity where labor yields fruits from nature.

Creative Arts

Every student would choose one skill related to the arts whether visual arts or performing arts. Examples are painting, sculpture, pottery, music, dance, etc. The student would pursue it every day for the duration of the program. These would allow for creative expression. It would develop a sense of aesthetics and also enhance creativity which would, hopefully, flow into the planning design later.

Universal Human Values

It gets the student to explore oneself and allows one to experience the joy of learning, stand up to peer pressure, take decisions with courage, be aware of relationships with colleagues and supporting staff in the hostel and department, be sensitive to others, etc. The need for character building has been underlined earlier. A module in Universal Human Values provides the base.

The methodology of teaching this content is extremely important. It must not be through do's and don’ts, but by getting students to explore and think and by engaging them in a dialogue. It is best learned through group discussions and real-life activities rather than lecturing. The role of group discussions, however, with the clarity of thought of the teachers cannot be overemphasized. It is essential for giving exposure, guiding thoughts, and realizing values. The teachers must be from within the institute and also from outside of the Institute.

Discussions would be conducted in small groups of about 20 students with a faculty mentor each. It is to open thinking towards the self. Universal Human Values discussions and activities could even continue for the rest of the semester, and not stop with the induction program. Besides drawing the attention of the student to larger issues of life, it would build relationships between teachers and students which last for their entire 5-year stay and possibly beyond.

Literary

The literary activity would encompass reading, writing, and possibly debating, enacting a play, etc.

Proficiency Modules

This period can be used to overcome some critical lacunas that students might have, for example, English, computer familiarity, etc. These should run like crash courses so that when normal courses start after the induction program, the student has overcome the lacunas substantially.

Lectures by Eminent People

Lectures by eminent people say, once a week would give the students exposure to people who are socially active or are in public life. They could be from any field well known for their integrity.

Visits to Local Area

A couple of visits to the landmarks of the city, or a hospital or orphanage could be organized. This would familiarize the students with their city as well as expose them to the world of the underprivileged

13.09.2022

Familiarization

The students should be told about different methods of teaching and learning being used in the institute and how it is different as compared to school education or coaching. They should also be shown the laboratories, workshops & other facilities and also be introduced to the faculty, administrative staff, etc. and whom they should approach for a specific need or issue. They should be told about what becoming a planner means and the importance of the role of the planner in society, and in nation-building.

Extracurricular Activities:

The new students should be introduced to the extra-curricular activities at the college/ university. They should be shown the facilities and informed about activities related to different clubs etc. This is when selected senior students involved in or leading these activities can give presentations. Various other activities which could be included are role-playing/street play, alumni/industry interaction, etc.