Model Curriculum
for
M.Plan (Urban and Regional Planning)

(Effective from the Academic year 2024-25)

Semester- III

Dissertation Phase I

Course Code	MURP301	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	08 hrs (2:6:6)	VIVA VOCE	50
Total Hours of Pedagogy	80	Total Marks	100
Credits	05	Exam Hours	--

Course Learning objectives:

By taking this course Students will be able to inculcate by understanding:

- The student is required to visit site and organizations for the collection of data.
- Equip students with the ability to conduct independent and rigorous scientific research in the field of Urban & Regional Planning.

- 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 projects and develop research questions, structure, research strategy and present critical analysis of existing literature on a topic of their interest.
- Each student is required to undertake a Dissertation project on a subject related to any topic broadly connected to Urban or Regional Planning, in consultation with the allotted guide. The students are required to select a topic of their choice in consultation with the Dissertation Coordinator/Special Officer/Head of the Department and carry out the research based on primary and secondary data analysis / interpretation followed by identification of issues and potentials culminating in policies, plans and proposals or in proving the formulated hypothesis or research questions.
- The Dissertation Coordinator/Special Officer/Head of the Department shall identify the potential topics and assign the Guides/co-Guides to each student for aiding their research. The students are to maintain regular meetings with the Guides (in person/Online) to update on their progress and imbibe the Guide's suggestions into their research. The students have to mandatory maintain the Guide meeting log in the prescribed format by the department.
- Students are to draw upon the learning from the Research Methodologies & IPR course from I Semester to prepare their research methodology/research proposal.
- Project identification, Research proposal, literature review, Research Methodology and Case studies shall be the basis of marking in the viva-voce during the semester examination. There shall be at least 2 reviews during the semester to present the data gathered and confirm with the guides/ reviewers the adequacy of preparatory work leading to Dissertation Stage II in IV Semester.

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Viva Voce is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in Viva is 50% of the maximum marks of SEE. 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 50% in the sum total of the CIE (Continuous Internal Evaluation) and Viva- Voce taken together.

Continuous Internal Evaluation:

CIE marks shall be awarded by a committee comprising of Principal/Dean, Special Officer/ Special Officer/ PG Course Coordinator/HOD and Guide/Co-guide of the department. The CIE marks awarded for IDC (Integrated Dissertation Course), shall be based on the progress of the student throughout the semester, presentation skills in seminars and submission of the report.

Viva Voce Examination:

1.The student needs to submit his/her report done throughout the semester, including the data collection for the Viva examination, at least one day prior to the Viva examination to the PG course coordinator/HOD.

2. The Viva-voce will be evaluated by two external examiners appointed by the University along with PG Course coordinator/ guide/ co-guide or an internal examiner.

3. The viva-voce marks awarded, shall be based on the evaluation of report submission, presentation skill and performance in Question-and-Answer session in the ratio 30:10:10.

The viva-voce marks list generated is to be signed by both internal and external examiners and submitted to VTU in the sealed cover through the Principal of the institution**.**

Suggested Learning Resources:

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

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Develop and test hypotheses through rigorous data analysis and interpretation	L4
CO2	Design comprehensive research methodologies integrating primary and secondary data sources.	L4
CO3	Formulate evidence-based policies and proposals based on research findings	L5
CO4	Conduct in-depth literature reviews of peer reviewed journals	L5

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5
6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✔			✔	✔		✔		✔
CO2	✔			✔	✔		✔		✔
CO3	✔		✔	✔		✔	✔		✔
CO4	✔			✔		✔	✔		✔

✔ **-High Impact**

Professional Elective I

1.Climate change and funding

Course Code	MURP312A	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:

By taking this course Students will be able to inculcate by understanding:

- This course explores the science of climate change, climate system working; factors causing climate change across different time scales and their interactions
- It covers international climate finance, key stakeholders, and various funding instruments.
- Finally, the course looks at the connection between human activity and the current warming trend and considers some of the potential social, economic and environmental consequences of climate change and funding.

Module 1

Earth Systems

Atmosphere, Hydrosphere, Lithosphere, Biosphere and their linkage. Earth's geological history and development and evolution of the atmosphere; Gaia Hypothesis.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Human Impacts on climate:

(i) Causes and consequences of Global warming: Greenhouse effect; Global and regional trends in greenhouse gas emissions; Sea level rise; role of oceans and forests as carbon sinks (ii) Ozone depletion stratospheric ozone shield; Ozone hole.

Wind, stability and turbulence; Monsoons; El Nino, Southern Oscillations, cyclones. Natural climate changes: Records of climate change (glacial cycles, ocean sediments, corals, tree rings).

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Introduction to Climate Funding/ Finance & International Mechanism Definition and importance, Historical context and evolution, Key principles and frameworks. United Nations Framework Convention on Climate Change (UNFCCC), Green Climate Fund (GCF), Global Environment Facility (GEF), Adaptation Fund.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
Module-4	
National, local climate finance and Private sector Nationally Determined Contributions (NDCs), National climate funds and policies, Subnational and local funding initiatives. Role of private investments, Public-private partnerships, Green bonds and sustainable investing.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
Module-5	
Challenges and Opportunities with Case Studies & Best Practices Barriers to accessing climate finance, Innovative financing solutions, Successful climate finance projects, Lessons learned from various regions.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one module.
4. Each full question will have a sub-question covering all the topics under a module.

5. The students will have to answer five full questions, selecting one full question from each module

BOOKS AND REFERENCES

1. Barry, R. G., 2003. Atmosphere, weather and climate. Routledge Press, UK
2. Critchfield, Howard J., 1998, General climatology, Prentice Hall India Pvt. Ltd., New Delhi.
3. Firor, J., and J. E. Jacobsen, 2002. The crowded greenhouse: population, climate change and creating a sustainable world. Yale University Press.
4. Glantz, M. H., 2003. Climate Affairs: a primer. Island Press.
5. Harvey D., 2000, Climate and Global Climate Change, Prentice Hall.
6. Kump, L. R., Kasting, J.F., and Carne, R. G., 2004. The Earth System. 3 rd Ed. Prentice-Hall
7. "Climate Finance: Regulatory and Funding Strategies for Climate Change and Global Development" by Richard B. Stewart, Benedict Kingsbury, and Bryce Rudyk.
8. "Climate Finance: Theory and Practice" by Venkatachalam Anbumozhi and Kaliappa Kalirajan.

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Demonstrate a solid understanding of the climate system.	L6
CO2	Overview of various factors that shape climate funding.	L5
CO3	Recognition of the consequences, risks, and uncertainties of climate change & funding	L2
CO4	Case studies of an innovative financing solutions.	L5

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2

3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5
6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✔	✔				✔			✔
CO2	✔	✔				✔			✔
CO3	✔	✔				✔			✔
CO4	✔	✔			✔	✔			✔

✔ **-High Impact**

Professional Elective I

2.Advanced GIS Applications in Planning

Course Code	MURP312B	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	03 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:

By taking this course Students will be able to inculcate by understanding:

- Understand concept of Remote Sensing and Satellite Images
- Perform satellite image interpretation
- Apply techniques for environmental monitoring
- Understand & interpret hydrology of an area
- Perform modeling and basic programming.

Module 1

Remote Sensing of Environment

Definition of Remote Sensing, electromagnetic spectrum; Energy budget; Introduction to Satellite Images: Concepts of Projection, Datum & spheroid; platforms and sensors, bands, types of resolution, Panchromatic vs Multispectral images.

Teaching- Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.* ***Data Collection & Analysis.*** ***Student Presentations:*** Student Group presentations.

Module-2

Satellite Image Analysis

Preprocessing of the data: Georeferencing of an image; Merge & Mosaicing; Image Enhancement techniques. Image Interpretation: Introduction to Erdas Imagine supervised and unsupervised classification.

Teaching- Learning Process	***Blended learning:*** *PowerPoint presentation to elaborate more on key topics.* ***Data Collection & Analysis.*** ***Student Presentations:*** Student Group presentations.

Module-3	
Tools for Environmental Analysis Urban Heat Island Effect, Normalized Difference Vegetation Index (NDVI), Normalized Difference Vegetation Build up Index (NDBI), Digital change detection. Etc.	
Teaching- Learning Process	***Blended learning:*** *PowerPoint presentation to elaborate more on key topics.* ***Data Collection & Analysis.*** ***Student Presentations:*** Student Group presentations.
Module-4	
Tools for Hydrological Analysis Application of flow direction & flow accumulation techniques, basin and watershed delineation, extraction of stream network and stream order.	
Teaching-Learning Process	***Blended learning:*** *PowerPoint presentation to elaborate more on key topics.* ***Data Collection & Analysis.*** ***Student Presentations:*** Student Group presentations.
Module-5	
Automation and Basic programming Model Builder: Creating a model in Graphical User Interface (GUI); Introductory python programming	
Teaching- Learning Process	***Blended learning:*** *PowerPoint presentation to elaborate more on key topics.* ***Data Collection & Analysis.*** ***Student Presentations:*** Student Group presentations.
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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1.The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.

2.The question paper will have ten full questions carrying equal marks.

3.Each full question is for 20 marks. There will be two full questions (with a maximum of four sub- questions) from each module. Some subjects can choose to have a compulsory question under any one module.

4.Each full question will have a sub-question covering all the topics under a module.

5.The students will have to answer five full questions, selecting one full question from each module

Suggested Learning Resources:

1. Concepts and Techniques of Geographic Information Systems by Chor Pang Lo; Prentice-Hall of India Private Ltd.,2006.
2. Getting to know ArcGIS Desktop by Tim Ormsby; ESRI Press, 2010.
3. Mastering ArcGIS by Maribeth Price; McGraw Hill, 2015.
4. Remote Sensing and Image interpretation by Thomas Lillesand, Ralph Kiefer., Wiley publication, 2015.

Web links and Video Lectures (e-Resources):

- https://ellipsis-drive.com/blog/how-gis-helps-to-save-the-environment/
- https://www.youtube.com/watch?v=BfyLnklrlAc

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Perform supervised and unsupervised classification of satellite images.	L6
CO2	Familiarize with tools of environmental analysis including NDVI, NDBI & digital change detection.	L6
CO3	Acquire skills related to tools for hydrological analysis.	L6
CO4	Get an introduction to python programming	L6

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5

6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1			✔	✔					✔
CO2			✔	✔					✔
CO3			✔	✔					✔
CO4			✔	✔					✔

✔ **-High Impact**

Professional Elective I

3. Advanced Solid Waste Management

Course Code	MURP312C	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:
By taking this course Students will be able to inculcate by understanding:

- To make students understand the description of solid waste; different types: waste flows in society: amounts and composition of waste.
- Problems due to waste generation and strategies to minimize these problems; Consumption and waste, waste hierarchy (waste prevention, recirculation etc), product development, problem solving with a system analysis approach.
- Legal and economical means of control for waste management (Sweden and EU suggestions). Waste treatment and handling: thermal and biological methods, landfill, handling of hazardous waste.

Module 1

Municipal Solid Waste Management:

Legal and Organizational foundation: Definition of solid waste – waste generation– major legislation, monitoring responsibilities, sources and types of solid waste – sampling and characterization – Determination of composition of MSW – storage and handling of solid waste
– Future changes in waste composition.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Collection and Transport of Solid Waste:

Waste collection systems, analysis of collection systems – alternative techniques for collection systems. Need for transfer operation, transport means and methods, transfer station types and design requirements.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Process of Solid Waste and Energy recovery:
Unit operations for separation and processing, Materials Recovery facilities, Waste transformation through combustion and aerobic composting, anaerobic methods for materials recovery and treatment – Energy recovery – Incinerators

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-4

Disposal of Solid wastes
Land farming, deep well injections. Landfills**:** Design and operation including: site selection, Geo-environmental investigations , engineered sites, liners and covers, leachate control and treatment, gas recovery and control, including utilization of recovered gas (energy), and landfill monitoring and reclamation, , Requirements and technical solution, designated waste landfill remediation – Integrated waste management facilities. TCLP tests and leachate studies. Economics of the on-site v/s off site waste management options. Natural attenuation process and its mechanisms.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-5

Household Hazardous Waste Management:
Design practices of solid wastes. Definition and identification of hazardous wastes-sources and characteristics – hazardous wastes in Municipal Waste – Hazardous waste regulations – minimization of Hazardous Waste-compatibility, handling and storage of hazardous waste collection and transport. Regulatory requirements for identification, characterization and disposal of hazardous, non hazardous and domestic wastes.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one

module.

4. Each full question will have a sub-question covering all the topics under a module.
5. The students will have to answer five full questions, selecting one full question from each module

Suggested Learning Resources:

1. Handbook of Solid Waste Management by Frank Kreith, George Tchobanoglous, McGraw Hill Publication
2. Bagchi, A., Design, Construction, and Monitoring of Landfills, (2nd Ed). Wiley Interscience, 1994. ISBN: 0-471-30681-9.
3. Sharma, H.D., and Lewis, S.P., Waste Containment Systems, Waste Stabilization, and Landfills: Design and Evaluation. Wiley Interscience, 1994. ISBN: 0471575364.
4. George Techobanoglous et al, "Integrated Solid Waste Management", McGraw- Hill Publication, 1993.
5. Charles A. Wentz; "Hazardous Waste Management ", McGraw-Hill Publication, 1995.

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Analyse the major legislation and organizational responsibilities in municipal solid waste management	L4
CO2	Evaluate different waste collection systems and techniques for efficiency and effectiveness.	L5
CO3	Design processes for solid waste and energy recovery, including materials recovery facilities and incinerators	L6
CO4	Develop comprehensive landfill management plans, covering site selection, design,operation, and monitoring	L6
CO5	Assess the regulations and practices for the identification, handling, and disposal of hazardous wastes in municipal solid waste management.	L5

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5
6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✔				✔	✔			✔
CO2	✔			✔	✔	✔			✔
CO3	✔			✔	✔	✔			✔
CO4	✔	✔	✔	✔	✔	✔			✔
CO5	✔				✔	✔	✔		✔

✔ **-High Impact**

Professional Elective II

1.Regional Transport Planning

Course Code	MURP313A	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:
By taking this course Students will be able to inculcate by understanding:

- To introduce regional elements in the domain of transport planning and equip students towards enhancing regional connectivity.

Module 1

Overview of Regional Planning
Approach to regional planning, types of regions and their characteristics, delineation of region for transport planning; backwardness and regional disparity in development; role of connectivity and regional transport in development and backwardness.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Regional Transport Systems
Regional transport system, types, characteristics, regional transport supply, regional traffic and travel pattern, emerging issues.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Regional Travel Demand
Regional travel demand determinant, regional demand models, regional accessibility, sequential travel demand models, econometric models, regional public transport demand.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-4

Regional Network Analysis
Regional network system, rural road network planning, graph theory applications- connectivity and Accessibility measures.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
Module-5	
Regional Transport Policy Regional transport infrastructure, system planning imperatives, integration aspects, system selection, Policy aspects at regional level.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one module.
4. Each full question will have a sub-question covering all the topics under a module.
5. The students will have to answer five full questions, selecting one full question from each module

Suggested Learning Resources:

1. Blonk, W.A.G. (1979), *Transport and Regional Development.* Saxon House, Farnborough.
2. Verma A. *(2010), Integrated Public Transportation System: Planning and Modelling.* Vdm Publishing House, Mauritius.
3. Vinod K. T. M. (2000), *Micro Regional Transport Planning / Research.* School of Planning and Architecture, Delhi.

Web links and Video Lectures (e-Resources):

- https://www.tmr.qld.gov.au/regionaltransportplans
- https://www.gnrc.org/194/Regional-Transportation-Plan

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Analyse various approaches to regional planning and their impact on regional transport development	L4
CO2	Evaluate different types of regional transport systems and their characteristics	L5
CO3	Apply regional travel demand models to assess travel patterns and demand determinants.	L4
CO4	Design rural road network plans using regional network analysis and graph theory applications.	L6
CO5	Formulate comprehensive regional transport policies considering infrastructure, system integration, and selection.	L6

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5
6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✔					✔			✔
CO2	✔					✔			✔
CO3	✔			✔	✔	✔	✔		✔
CO4	✔	✔	✔	✔	✔	✔	✔		✔
CO5	✔	✔	✔	✔	✔	✔	✔		✔

✔ **-High Impact**

Professional Elective II
2.Logistics and Freight Management

Course Code	MURP313B	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:

By taking this course Students will be able to inculcate by understanding:

- This subject takes a broad view of management of logistics and freight when we examine its role in trade and how this is then connected to the business concept of supply chain management.
- In this, students will learn the methods used in strategic logistics management along with the various techniques of financial analysis for operation efficiency and legislative aspects as well.

Module 1

Introduction to Logistics Management

Logistics Management: Concepts, Definition, Evolution and Importance; Urban Logistics Ecosystem; Logistics Planning: The Actors and Their Contributions; Logistics Parks/ Hubs; Warehousing and Material Procurement;
Material Storage, Handling, Processing, Packaging and Transportation; Third Party and Fourth Party Logistics; Reverse Logistics and Logistics in Trade.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Management of Freight Transport

Logistics and Mode Choice; Mode Characteristics and Key Features of Different Modes; Inter-Modal and Multi-Modal Transport; Shipping Business Environment and Containerization; Transport Cost Drivers; Freight Rate Structures; Freight Transport Best Practices: Vehicle Access and Loading / Unloading Operations, Low Emission Zones, Night Deliveries, Nearly Delivery Areas, ITS Applications.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Strategic Logistic Management

Determinants of Freight Demand; Distribution Channels and Distribution Costs; Logistics Acquisition and Production; Sourcing and Contracting; Logistics Network Planning: Vehicle Routing and Scheduling, Fleet Sizing, Location Decisions.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-4

Supply Chain Management Fundamentals of Supply Chain Management (SCM): Concept and Components; Supply-Demand Variables; Customer Services; Drivers of Supply Chain Performance; Supply Chain Segmentation: Product, Demand, Supply and Market Segmentation; Emerging Trends and Global Practices of SCM; e-commerce and Logistics.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
Module-5	
Legal Aspects and Liabilities Statutes and Policies for Different Logistics Operations in India and Abroad; Liabilities and Liabilities Resolution; Marine / Cargo Insurance; Freight Quality Partnerships: Case Studies.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one module.
4. Each full question will have a sub-question covering all the topics under a module.
5. The students will have to answer five full questions, selecting one full question from each module.

Suggested Learning Resources:

Logistics Planning and Management

- Transport Logistics: Past, Present, and Predictions, I. Baluch,Winning Communications, 2005
- Managing Transport Operations, Edmund J. Gubbins,Kogan Page Ltd,2003
- Urban Goods Movement – A guide to policy and planning, KW Ogden, Ashgate Pub., 1992
- Logistics Operations and Management by R.Z. Farahani, S. Rezapour, L. Kardar, Elsevier Inc.,2011
- Logistics - An Introduction to supply chain Management, Donald Waters,Palgrave Macmillan,2003
- Urban Transportation and Logistics- Health, Safety and Security Concerns, CRC Press, Taylor &

Francis Group,2014
- Optimising Transport Logistics process with Multi agent Planning & Control,Max Gath, Springe, 2015
- The Handbook of Logistics and Distribution Management, A. Rushton, P.Chroucher, P. Beker, Kogan Page Ltd, Fourth edition 2010.

Web links and Video Lectures (e-Resources):

- https://www.intekfreight-logistics.com/complete-guide-freight-management-service-solutions
- https://www.cafworldwide.com/blog/what-is-freight-management-logistics#:~:text=Freight%20management%20logistics%20encompass%20the,on%20budget%2C%20and%20on%20time.

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Analyse the components and significance of urban logistics ecosystems, including logistics parks and hubs	L4
CO2	Evaluate the best practices in freight transport, including mode choice, inter-modal transport, and ITS applications	L5
CO3	Develop strategic logistics plans addressing vehicle routing, scheduling, and fleet sizing.	L6
CO4	Assess the drivers and emerging trends in supply chain performance, including the impact of e-commerce.	L5
CO5	Examine the legal aspects, policies, and liabilities associated with logistics operations domestically and internationally.	L4

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5

6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✓				✓	✓			
CO2	✓			✓	✓	✓			
CO3	✓	✓	✓	✓	✓	✓			
CO4	✓			✓	✓	✓	✓		✓
CO5	✓			✓	✓	✓		✓	✓

✓ **-High Impact**

Professional Elective II
3.Transport Policy and Institutional Framework

Course Code	MURP313C	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:
By taking this course Students will be able to inculcate by understanding:

- To understand the various Stakeholders in Transport Policy Preparation
- To understand the regulatory and management systems in the transport and logistics sector
- To give a base on the legal provisions for the development of transport sector

Module 1

The evolution of Transport Policy and Planning

Early improvements in roads and rail and water ways, motorway age, industrialization and demand for urban mobility, Urban Transport planning and traffic in towns, establishment of freeways, extension of railways, paradigm shift in transport policy and sustainable development.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Transport governance and institutional arrangements
State and its role in transport and logistics development, Monopolies in Transport, Market failure and its regulation , Public private ownership, Bus deregulation and Rail privatization.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Transport Policy and Regulatory control
Impact of Globalization, Deregulation and privatization in urban transport, Command and Control and economic incentives based policy implementation.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-4	
Plans, procedures and contemporary policy agenda National Planning, NUTP, TOD Policy, Low carbon Mobility Plans, National Urban Transport Fund.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
Module-5	
Legislative Approach to National Transportation Policy Unified Metropolitan Transport Authority Act, National highways act, Metro Act.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one module.
4. Each full question will have a sub-question covering all the topics under a module.
5. The students will have to answer five full questions, selecting one full question from each module

Suggested Learning Resources:

- Transport policy and planning in Great Britain, by Headicar, P. Routledge 2009, London.
- Introduction to sustainable transportation: policy, planning and implementation by Schiller, Preston L. Earthscan 2010, London.
- Integrated transport: from policy to practice by Givoni, Moshe. Routledge 2010, London.
- Journal of transport economics and policy, Bath The London School of Economics & the University of Bath.

Web links and Video Lectures (e-Resources):

- https://link.springer.com/chapter/10.1007/978-981-13-9620-5_2
- https://slocat.net/ato/

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Comprehension of problems in the formulation of transport policy.	L2
CO2	Identification of alternative policy options and their evaluation.	L5
CO3	Evolution of the transport governance and institutional mechanisms.	L5
CO4	Understanding of the legal framework which impacts transport policy	L2

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5
6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✓	✓				✓			✓
CO2	✓	✓	✓			✓			✓
CO3	✓	✓				✓			✓
CO4	✓	✓				✓			✓

✓ **-High Impact**

Professional Elective III
1.Housing for Special Areas and Groups

Course Code	MURP314A	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:
By taking this course Students will be able to inculcate by understanding

- Characteristics of fringe areas and development process.
- Settlement & shelter characteristics.
- Characteristics of aging population, profile & growth of elderly persons.

Module 1

Inner city Housing –
Evolution & Historical Background, community, spatial Characteristics, housing transformation of core city, impact of transformation, Problems of inner cities, policies and programmes
Fringes / Peri-urban / Sub-urban Housing Rural urban linkages , characteristics of fringe areas, development process, various modes of land Supply in fringe areas, case study with special emphasis on housing.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Arid / Coastal / Hilly Region Housing-

Settlement & shelter characteristics, Materials & technology, design standards, climatic factors, danger of hazards, Settlement planning, development policies and programmes.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Housing for Aged/Physically Challenged - concept & definition of old age characteristics of aging population, profile & growth of elderly persons, classification of elderly population, problems of elderly planning and design considerations for elderly, case study with special reference to housing.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-4

Housing for Women/Children – Importance of gender in housing, housing planning & design considerations with women perspective – hierarchy of spaces at macro and micro level, shelter for low income women, design considerations for urban and rural women, housing options for different categories for single women, government schemes, case study with special reference to housing.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
Module-5	
Housing for Refugees/Oustees – Concept of refuges, types of refugees, norms for treatment of refugees, refugees law, refugees and housing, problems of refugees, planning considerations for the refugees, case study areas with reference to housing. Shelterless - Shelterless in the context of urban poor, psychological & social implications of poverty on homeless, homeless in metropolis, problems of homelessness, various interventions, night shelters, case studies. Tribal Housing – Socio cultural & economic profile, settlement characteristics, housing typology, housing schemes, policies & programmes, for tribal upliftment, case study area.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one module.
4. Each full question will have a sub-question covering all the topics under a module.
5. The students will have to answer five full questions, selecting one full question from each module.

Suggested Learning Resources:

- Buildings and Society by Anthony D. King (2003).

Web links and Video Lectures (e-Resources):

- https://onlinecourses.nptel.ac.in/noc21_ar16/preview
- https://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20Vol%20I(2).pdf

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Analyse the evolution, transformation, and problems of inner-city housing, including policies and programs	L4
CO2	Evaluate housing development processes, land supply modes, and rural-urban linkages in fringe and peri-urban areas.	L5
CO3	Design housing solutions for arid, coastal, and hilly regions considering settlement characteristics, materials, and climatic factors.	L6
CO4	Assess the planning and design considerations for housing the elderly, including their unique problems and needs	L5
CO5	Plan housing solutions that address the specific needs of women and children, considering gender perspectives and government schemes.	L6
CO5	Develop comprehensive housing plans for refugees, considering legal norms, planning considerations, and specific problems faced by refugees.	L6

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5

6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✔					✔			✔
CO2	✔					✔			
CO3	✔		✔	✔	✔	✔			
CO4	✔					✔			
CO5	✔		✔	✔	✔	✔			
CO6	✔		✔	✔	✔	✔			

✔ **-High Impact**

Professional Elective III
2.Inclusion and Community Participation

Course Code	MURP314B	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:
By taking this course Students will be able to inculcate by understanding

- Role of effective communication in society.

Module 1

Role and Importance
Importance of communication for town planners, role of effective communication in society.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Community Participation
Understanding concept of inclusion, community based organizations, NGOs, RWAs, SHGs, understanding participatory processes.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Techniques of Participation
Techniques of participation, methods of communication, written, oral and visual communication, objective of communication, developing a communication strategy, writing technical reports.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-4

Stakeholders
Social audit, community participation law, preparing maps and other documents, conducting communication with small groups, stakeholders and the masses, organization of consultative meetings, managing community / participatory processes.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-5	
Participatory Processes Role of elected representatives in participatory processes, community participation in project formulation, best practices and case studies.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one module.
4. Each full question will have a sub-question covering all the topics under a module.
5. The students will have to answer five full questions, selecting one full question from each module.

Suggested Learning Resources:

- Support Community Participation and Social Inclusion by CAQA Publications.

Web links and Video Lectures (e-Resources):

- https://www.citizenlab.co/blog/civic-engagement/6-good-practice-examples-for-inclusive-community-engagement-2/
- https://www.researchgate.net/publication/259199775_Social_Inclusion_and_Community_Participation_of_Individuals_with_IntellectualDevelopmental_Disabilities

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)
At the end of the course the student will be able to:

Sl. No.	Description	Blooms Level
CO1	Effective communication of planners with small groups.	L3
CO2	Grasp of the stakeholders in town planning, as represented by community organizations.	L5
CO3	Techniques of communication for planners.	L1
CO4	Participatory processes in planning.	L2

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4
5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5
6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1		✓			✓	✓			✓
CO2		✓			✓	✓			✓
CO3		✓			✓	✓			✓
CO4		✓			✓	✓			✓

✓ **-High Impact**

Professional Elective III

3.Disasters and Settlements

Course Code	MURP314C	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	3 hrs (3:0:0)	SEE Marks	50
Total Hours of Pedagogy	30	Total Marks	100
Credits	03	Exam Hours	03

Course Learning objectives:

By taking this course Students will be able to inculcate by understanding:

- Typology of disasters in India
- Action plans and procedures

Module 1

Introduction Natural disasters

Concepts, processes, and perceptions of Disasters – natural– causes and consequences. Disaster and the natural environment: Floods and flash floods-urban floods- causes and consequences-flood controls. Land Slides, mudflow, forest fires, wildlife fires, and winter storms Cyclones-cyclone preparedness and Risk Management landslides, soil erosion, earthquakes, tremor, tsunami, cloud bursts, etc.

Using technology to monitor and predict Disaster

Damage to people and property due to disaster. Case studies from across the world. Disaster Recovery.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-2

Disaster Management

Disaster preparedness, prevention, displacement and development; Government structure and disaster mitigation, Health Issues-Evacuation behaviour-current measures- vulnerability assessment- Evacuation planning in all types of natural disasters. Emergency management-alerts and warning-Role of Communications in Alerts and warnings. Role of NDRF

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-3

Planning and Resource Management

Human response to the disaster – short term and long-term effects; Integrating disaster mitigation in the spatial planning process: micro zoning, building bye-laws, norms, and standards, density variations, provisions of infrastructure for disaster mitigation; vulnerability index and mapping; Disaster insurance at various levels: village, district, and town/city level. Geo-informatics-use of Remote Sensing in Disaster Management. Role and preparedness of Local Governments and NGOs in mitigating Urban Disasters.

Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*

Module-4	
Man-Made Disaster and Management Man-made disasters-Chemical spills, Terrorism and Urban Violence. Action plans to minimize the risks. Special Regulations. Identification of Special Areas for Development-Flood Prone Areas; Drought Prone Areas, Desert Land, and Saline Lands-Planning Appraisal and Planning Strategies.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
Module-5	
Disaster Education Community awareness and participation at various levels; Role of ULBs, NGOs/CBOs and communities in disaster education; Relevance of disaster management with relevant to development and environment; Use of technology and media for spreading disaster awareness.	
Teaching-Learning Process	***Blended learning:*** *Powerpoint presentation to elaborate more on key topics.*
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 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. 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 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

The Internal Marking shall be done for 100 which will be scaled down to 50, the faculty in charge of the particular course can decide on any change in the structure of the internal examination which is to be conducted on 5th, 10th, and 15th weeks of the academic calendar preferably. The Internals shall be from a choice of written examinations/ Assignments/ Presentations allotted to students.

Semester End Examination:

1. The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.
2. The question paper will have ten full questions carrying equal marks.
3. Each full question is for 20 marks. There will be two full questions (with a maximum of four sub-questions) from each module. Some subjects can choose to have a compulsory question under any one module.
4. Each full question will have a sub-question covering all the topics under a module.
5. The students will have to answer five full questions, selecting one full question from each module.

Suggested Learning Resources:

- Human Settlement and Natural Disasters, displayed by UN-Habitat.
- Climate Change, Disaster Risk and Urban Poor by Judy L. Baker (2012**).**

Web links and Video Lectures (e-Resources):

- https://ndma.gov.in/
- https://www.youtube.com/watch?v=9WIwlljva_s

Skill Development Activities Suggested

- Guest Lectures.
- Case Studies

Course outcome (Course Skill Set)
At the end of the course the student will be able to:

Sl. No.	Description	Blooms Level
CO1	Analyse natural and man-made disasters using global case studies	L4
CO2	Assess strategies for disaster preparedness, prevention, and evacuation across various natural disasters	L5
CO3	Incorporate disaster mitigation into spatial planning through zoning, infrastructure provisions, and vulnerability mapping	L5
CO4	Assess the planning and design considerations for housing the elderly, including their unique problems and needs	L5
CO5	Foster community awareness and participation in disaster education through NGOs/CBOs, leveraging technology and media for outreach	L4

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
2	Encompass the ability to work in collaboration with interdisciplinary teams and stakeholders.	PO2
3	Demonstrate creativity in the problem-solving process through professional quality graphic presentations, use of GIS software, and Policy decisions.	PO3
4	Acquire outstanding knowledge & software skills for redesigning, monitoring, and improving Cities and Regions' functioning.	PO4

5	Understanding the diverse needs of values and systems of society and providing Smart, Sustainable, and data-centric solutions.	PO5
6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✔				✔		✔		✔
CO2	✔				✔				
CO3	✔				✔				
CO4	✔		✔	✔	✔	✔	✔	✔	✔
CO5	✔		✔		✔	✔		✔	
CO6	✔	✔	✔		✔	✔	✔		✔

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PROFESSIONAL TRAINING / INTERNSHIP

Course Code	MINT385	CIE Marks	50
Teaching Hours/Week (L:S: SDA)	-----	VIVA VOCE	50
Total Hours of Pedagogy	-----	Total Marks	100
Credits	07	Exam Hours	15 mins per student

Course Learning objectives:

By taking this course Students will be able to inculcate by understanding:

- To undergo professional training in any Government departments or Private firms/organizations involved in Infrastructure/ Smart City Projects/ Town Planning / Transport Planning and policies/ Urban Design/ Infrastructure development projects to get an on-site experience of handling services pertaining to Urban Planning discipline
- To utilize the forum to discuss key issues in City Planning, engage with different stakeholders
- Apply analytical skills developed in the coursework over the two semesters into practice.

COURSE CONTENT

• A Candidate shall undergo Professional Training for 12 weeks immediately after the completion of 2nd-semester examinations and before the commencement of 3rd-semester course work.

• The training shall be undertaken in any Government departments (Town Planning/ Governance/ Traffic Police Command (or similar)/ Urban Local Bodies/ Planning and Development Authorities/firms/organizations involved in Infrastructure/ Smart City Projects/ Town Planning / Transport Planning and policies/ Urban Design/ Infrastructure development projects. The training certificate shall be signed by an authorized signatory of the Government department/ Firm/ Company or Agency.

• Each student has to maintain a weekly log in the prescribed format by the department. And shall submit the same to the department during the Internal Assessments.

• Every candidate shall compile and submit a report of their Professional Training, which is signed by the authorized signatory at the Interning Organization. Professional Training report shall consist of the certificate, project details (including work/survey maps/drawings/study etc., done by the student), Critical Self-Evaluation of the training and Manager feedback at the interning organization and enclosing the weekly log maintained.

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Viva Voce is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in Viva is 50% of the maximum marks of SEE. 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 50% in the sum total of the CIE (Continuous Internal Evaluation) and Viva- Voce taken together.

Continuous Internal Evaluation:

Based on monthly reviews held by internship coordinator /Special Officer/faculties at 5th 10th and 15th week of the academic calendar CIE assessment will be based on the progress made at internship. The student must maintain an internship journal as per the prescribed format from the department.

Viva Voce Examination:

1. Marks shall be awarded based on Viva Voce (15 mins per student) by One External Examiner and One Internal Examiner as appointed by the University.
2. The SEE marks awarded for the Internship shall be based on the evaluation of the Internship Report, Internship Presentation skill, and understanding of the student work at the Interning organization.
3. Critical self-evaluation of the students work in the organization will be the top criteria on which the student is awarded the SEE marks.

Skill Development Activities Suggested

- Subjected to the Activities at the Internship organization.

Course outcome (Course Skill Set)

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

Sl. No.	Description	Blooms Level
CO1	Implement theoretical planning principles in real-world settings within government departments or firms involved in urban project	L4
CO2	Apply advanced planning knowledge and soft skills to contribute effectively to complex urban planning initiatives	L5
CO3	Formulate practical solutions and policies for urban planning challenges based on internship experience	L5
CO4	Prepare professional reports, including work, survey maps, drawings, and studies conducted during the internship	L4

Program Outcome of M. Plan (URP) program:

Sl. No.	Description	POs
1	Acquire outstanding fundamental knowledge in the field of Urban Planning.	PO1
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6	Demonstrate design and policy solutions that integrate contextual, social, economic, cultural, ethical, and environmental concerns.	PO6
7	Ability to undertake independent/option-based research and exploration of advanced and emerging topics.	PO7
8	Appraise professional standards and ethical responsibilities as a team member/stakeholder.	PO8
9	Acquire outstanding knowledge and understanding of the current trends in Urban Planning.	PO9

Mapping of COs and POs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	✔	✔		✔	✔	✔		✔	✔
CO2	✔	✔	✔	✔				✔	✔
CO3	✔	✔		✔			✔	✔	✔
CO4	✔	✔	✔	✔				✔	✔

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