MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY BATHINDA-151001 (PUNJAB), INDIA

(A State University Estb. by Govt. of Punjab vide Punjab Act No. 5 of 2015 and Approved u/s 2(f) & 12 (B) of UGC; Member AIU)

Department: **G.Z.S. SCHOOL OF ARCHITECTURE & PLANNING, MRSPTU**

Program: <u>M.Planning</u>

COURSE ARTICULATION MATRIX (STUDY SCHEME: 2016)

Subject	S Code	Semester	Credit	Duration (Hrs)	L P	COs	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
Planning History and Theory	MARPL1-101	1	3	48	3 0	CO1	Understanding the planning process, theory and practice and its role in planning of cities.	1	0	0	0	0	0	0	0	0	1	0	2	2	0	0	0
						CO2	Appreciate of the role of historical developments in planning and its evolution and trace these influences to the current situation.	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	2
						CO3	Developing the capacity to understand multiple often conflicting factors to be balanced in planning for an urban area	2	0	0	0	0	0	0	0	2	3	0	0	3	0	1	0

Subject	Code					CO	Description																
							Identifying the key paradigms that define urban planning theory	3	0	0	0	0	0	0	0	0	1	0	0	2	0	0	1
Socio-economic basis for Planning	MARPL1-102	1	3	48	3 0	CO1	Understanding the relationship between sociology & urban planning	1	0	0	0	0	0	0	2	0	0	0	0	2	0	2	0
						CO2	Developing an insight in to social, geographical, biological & economic factors that shapes the urban environment	2	0	0	0	0	0	0	1	0	3	0	0	1	3	2	0
						CO 3	Developing the relevance to Socio-economic Issues in Urban and Regional Planning	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	1
						CO4	Studying and analyzing the approaches to valuation & public finance	-	0	0	0	0	0	0	0	2	0	1	0	3	0	0	1
Planning Techniques	MARPL1-103	1	3	48	3 0	CO1	Understanding the techniques to prepare base maps , classify & delineate region	1	2	0	0	3	0	0	0	0	0	0	2	1	2	0	0
						CO2	Understanding the necessary information on town planning theories, principles, techniques & methodologies.	2	0	0	0	0	0	1	1	0	0	0	0	2	0	0	1
						CO 3	Knowing the Spatial standards, URDPFI guidelines, zoning regulations & development control rules &regulations.	2	0	1	0	0	2	0	0	0	0	0	1	1	0	2	0
						CO4	Understanding the various dimensions of urban planning in past.	2	0	0	0	0	0	1	1	0	0	0	0	1	0	0	2
Infrastructure and Transport Planning	MARPL1-104	1	3	48	3 0	CO1	The student shall be able to understand the specific techniques of analysis & evaluation for urban transportation planning	1	0	0	0	0	0	0	0	2	0	0	2	1	2	0	0

Course	Code					CO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
							The student shall be able to understand the possible means of achieving project & societal objectives.	1	0	3	0	0	0	1	0	2	0	0	1	1	1	0	0
						CO 3	The student shall be able to understand the concepts of infrastructure management at various levels.	2	0	2	0	0	0	0	1	0	0	0	0	0	1	2	1
						CO4	Students will learn about the different hierarchies of the roads. And will also be able to plan out more corridors	0	0	3	0	0	0	1	1	2	0	0	1	0	1	0	1
Housing Environments and planning	MARPL1--105	1	3	48	30	CO1	Appreciating the housing sector as an integral part of overall town planning system	1	2	0	0	0	0	0	1	0	0	0	0	2	0	0	1
						CO2	Understanding of housing at the neighborhood & City Level	0	0	0	2	0	0	0	3	0	0	0	0	1	0	0	2
						CO 3	Appreciating typologies of housing in relation to culture & environment factors	0	0	0	0	0	0	2	1	0	0	0	0	3	0	0	1
						CO4	Focusing on the role of housing development and its policy context in shaping the social & physical fabric of the contemporary city	2	0	0	0	2	0	3	2	0	0	0	0	1	0	1	2
Basic Planning Techniques	MARPL1--106	1	3	48	30	CO1	Understanding fundamentals of remote sensing and GIS and its application in the field of urban & regional planning	0	1	1	2	3	0	0	0	0	0	0	0	0	2	1	0

Course	Code					CO	CO Description															
							A comprehensive understanding of the concepts, techniques, methods used by an urban planner to treat spatially cities. by preparing urban land use models using GIS	0	2	2	0	3	0	0	0	0	0	0	0	2	2	0	0
						CO3	Knowing to prepare urban land use models using GIS	0	0	2	0	3	0	0	0	0	0	0	0	0	3	0	1
						CO4	Knowing the usage of various modern tools/software's of urban planning in preparation of development plans.	0	1	0	0	3	0	0	0	0	0	0	1	0	2	1	1
Planning Studio	MARPL1-107	1	8	192	0 12	CO1	Critically analyzing relevant literature and field conditions	2	1	0	0	0	0	0	0	0	0	0	2	1	0	3	0
						CO2	Appling planning techniques and prepare of plans at layout/zone/part of settlement level	0	0	3	2	0	0	0	0	0	0	0	0	0	2	1	0
						CO 3	Developing capacity to understand complex and interrelated factors to be considered in spatial planning	0	0	0	0	0	0	0	1	2	1	0	0	1	0	0	2
						CO4	Developing planning insight and make acquaintance with various planning related exercises, such as, Layout Planning, Neighborhood Planning, Urban Renewal / Redevelopment, etc.	0	0	1	0	2	0	0	0	1	2	0	0	1	0	1	2
City and Metropolitan planning	MARPL1-201	2	3	48	3 0	CO1	Gaining understanding of the city-region linkages and inter-dependency between city and region.	3	0	2	0	0	1	0	0	0	0	0	0	2	0	0	0

Subject	Code					CO	Outcome																
						CO3	Getting familiar with acts and legal tools relevant to city planning.	1	0	1	0	0	2	0	0	0	0	0	0	1	0	3	0
							Understanding the complex nature of environmental issues and development processes specifically at metro and mega cities scale.	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	1
						CO4	Becoming capable of working for societal development addressing fulfillment of needs of all, improving the quality of life of residents.	1	0	1	0	0	0	0	3	0	0	0	0	0	0	0	2
Infrastructure Planning	MARPL1-202	2	3	48	30	CO1	Students will learn to address urban infrastructure challenges.	2	0	3	0	0	0	0	0	0	0	0	1	1	1	0	2
						CO2	Students will be able to do short and long range planning for alternative infrastructure systems while designing for present and future cities and regions	0	0	2	0	0	0	1	0	0	0	0	2	1	0	1	1
						CO3	Students will have an understanding of the infrastructure network like water supply, roads, sewer, solid waste and street lighting to enable them to evolve spatial strategy for cities and towns	1	0	2	0	0	0	1	0	0	0	0	0	1	0	0	1
						CO4	Students will learn to identify the gaps and requirements of the infrastructure in a particular city/town and will come out with a way outs to give proper infrastructure in each and every society.	1	0	3	0	0	0	1	0	0	0	0	1	0	2	2	0

Course	Code					CO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		2	3	48		CO1	Students will be able to developed understanding of mapping and recording of physical and social layering in the city.	1	2	0	1	0	0	0	0	0	0	0	2	1	0	2	1
						CO2	Student will gain an insight into theoretical concepts of cultural variation and diversity in urban context	1	1	0	2	0	0	2	0	0	2	0	0	0	2	1	3
						CO3	Students will be able to develop the understanding to identify the key attributes of cultural significance in the built environment.	0	2	0	1	0	0	0	2	0	0	0	1	1	0	0	1
						CO4	Student will come up with the knowledge of the past history of a city and will learn the importance of the heritage and will try out the methods for conservation.	1	1	0	1	0	0	2	1	0	0	0	1	0	2	1	0
Advanced Planning Techniques	MARPL1- MARPL1-204	2	3	48	3 0	CO1	Knowing the in depth knowledge about the planning techniques and assessment methods	0	0	1	2	2	0	0	0	0	0	0	0	2	0	0	1
						CO2	Developing the ability to form research questions worthy of informing public policy.	0	1	2	2	0	0	0	0	0	0	0	0	1	0	0	1
						CO3	Generating more equitable outcomes through policies and planning interventions.	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1
						CO4	Ability to conduct various investigations through the use of research techniques.	0	1	2	2	0	0	0	0	0	0	0	0	1	2	0	0
Urban Planni ng studio MARPL1-205		2	10	240	3 12	CO1	Understanding of GIS concepts, techniques and real world applications.	0	0	1	2	3	0	0	0	0	0	0	0	1	2	0	0

Course	Code					CO	Course Outcome																
							Understanding of various technical languages of GIS	0	0	0	2	3	0	0	0	0	0	0	0	1	2	0	0
						CO 3	Understanding the concept of geography necessary to efficiently and accurately use GIS technology.	1	0	1	0	2	0	0	0	0	0	0	0	1	2	0	0
						CO4	Ability to use the various modern software's for the preparation of development plans.	0	0	1	0	3	0	0	0	0	0	0	0	0	2	1	1
Inclusive Urban Planning	MARPL1-206	2	3	48	30	CO1	Gaining the knowledge about the importance of Inclusiveness of Public irrespective of any discrimination grounds in Urban Planning.	1	0	2	0	0	1	0	3	0	0	0	0	0	0	0	2
						CO2	Ability to incorporate the concepts of equity at different stages during the planning process.	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0
						CO 3	Becoming familiar with Legislative procedures involved in Urban Planning.	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0
						CO4	Learning ability to plan for public, addressing fulfillment of needs thus improving the quality of life of residents.	2	0	1	0	0	0	0	2	0	0	0	0	0	0	0	2

Course	Code					CO	Course Outcome																
		2	10	240			Analyzing components such as physical characteristics, natural resources, demographic characteristics, economic base, employment, shelter, transportation, social & infrastructure facilities, finance, institutional set-up, regional interdependencies etc	1	3	1	0	0	0	0	0	0	0	0	0	0	0	1	2
						CO2	Caring out surveys and frame proposals	0	0	0	0	0	0	0	0	1	2	0	0	1	0	0	1
						CO3	Understanding local problems through planning surveys	0	0	0	1	0	0	2	1	0	0	0	1	1	0	2	0
						CO4	Understanding of spatial and non-spatial data collection, presentation and interpretation in context for physical planning.	0	2	2	0	2	0	0	0	0	0	0	0	2	1	1	0
Planning for Tourism	MARPL1-207	2	3	48	3 0	CO1	Students will be able to understand the strategies to develop an infrastructure development plan for tourist.	1	0	2	0	0	0	0	0	0	0	0	1	0	1	2	0
						CO2	Students will be able to mark the tourist spots which are less identified and can increase the flow tourist flow	0	0	1	0	0	0	2	0	0	2	0	0	2	0	0	2
						CO 3	Can developed more tourist infrastructure related strategies.	1	0	0	0	0	0	1	0	0	2	0	0	1	0	1	1
						CO4	Students will identify the abundant heritage sites and will revive the site and will always try to develop the tourist inflow over the site.	1	0	2	0	0	0	1	0	0	0	0	1	2	2	1	0

Subject	Code				CO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		3	3	48		Understanding the process of developing any land project; from demand, development and management.	0	0	3	0	0	1	0	0	0	0	1	0	2	0	0	0
					CO2	Gaining knowledge of the finances involved and fiscal management of land development.	0	0	0	0	0	1	0	0	0	0	2	0	0	0	1	0
					CO 3	Understanding the Legislative regulations relating to development of land.	0	0	1	0	0	2	0	0	0	0	0	0	0	0	3	0
					CO4	Ability to gain knowledge of Environment responsive processes for developing the projects.	0	0	0	0	0	1	2	0	0	0	0	0	2	0	0	1
Project Planning and Management	MARPL1-302	2	3	48	CO1	Understanding the working involved in formulating, appraising and managing the planning project.	0	0	0	3	0	0	0	0	2	0	2	0	2	0	0	0
					CO2	Ability to understand the process of evaluating the project, checking its feasibility in context of all inputs used.	0	0	0	2	0	0	0	0	0	1	2	0	0	0	2	0
				3 0	CO 3	Developing the capability of grasping of the main issues arising in the planning process and creative strategies for implementation.	0	0	0	0	0	0	0	0	2	0	1	0	2	0	0	0
					CO4	Understanding the relationship between Projects and governing fiscal planning at various Levels.	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	2

Subject	Code					CO	Course Outcome															
		3	3	48			Understanding the practical aspects of planning processes, and the political, institutional and legal systems that direct and/or inform planning	1	0	0	0	0	3	0	0	0	1	0	0	1	0	2	0
						CO2	Creating awareness about the critical laws used in India and their salient features.	0	0	0	0	0	3	0	2	0	0	1	0	1	0	2	1
						CO 3	Making the students aware of the governance mechanisms involved in development planning, administration and management.	0	0	0	0	0	2	0	0	1	0	1	0	0	0	2	1
						CO4	Understanding the structure of local bodies and the role of an individual and of a team in the whole process of development.	0	0	0	0	0	0	0	2	1	1	1	0	1	0	2	0
Politics and Planning	MARPL1-304	3	3	48		CO1	Understanding the relation between politics and planning	1	0	0	0		1	0	1	0	0	1	0	1	0	1	0
						CO2	Developing the capacity for resource optimization	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
						CO 3	Developing a comprehension of the interplay of politics in the planning process	1	0	1	0	0	1	0	0	0	0	0	0	1	0	1	1

3 0

Course	Code					CO	Course Outcome																
							Understanding the social, economic, and cultural contexts of Politics and Planning and its influence on development/ provision/ financial/ management of resources and other basic infrastructure	2	0	1	0	0	0	0	0	1	0	1	0	0	0	1	1
Urban Planning Studio - II-Geo-Informatics – II	MARPL1-305	3	10	240	0 15	CO1	Understanding of geo-informatics and its applications in planning of cities	0	0	1	2	3	0	0	0	0	0	0	0	1	2	0	1
						CO2	Ability to appreciate the role of historical developments in the field of geo-informatics	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0	1
						CO 3	Developing capacity to understand how studies can be done using GIS	0	1	1	0	2	0	0	0	0	0	0	0	1	1	0	0
						CO4	Using the various modern software's for the preparation of development plans.	1	1	1	0	2	0	0	0	0	0	0	0	0	2	1	1
Urban Planning Studio - II-Management and Governance Plan	MARPL1-305A	3	10	240	0 15	CO1	Understanding the phasing, funding and implementation mechanism.	0	0	3	1	0	0	0	0	1	2	0	0	1	0	3	0
						CO2	Preparing DPR covering Physical, Environmental aspects, sequence of tasks, Cost Estimates, Project Benefits etc.	1	2	0	0	1	0	0	0	0	0	1	0	0	0	2	1
						CO 3	Developing capacity to analyze issues and evolve solutions at urban level	2	2	0	0	0	0	0	0	0	0	0	1	2	1	0	1

Course	Code	L	T	P	Cr	CO	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
							Understanding the implication of law relating to planning & land development and local government, with an emphasis on statutory authority, finance, & land use control.	0	0	1	0	0	2	0	0	1	0	2	0	1	0	1	3
Environment, Development and Disaster Management(Elective)	MARPL1-306	3	3	48	3 0	CO1	Understanding the various factors of development and its effect on the environment	0	0	0	2	0	0	1	0	3	0	0	0	1	2	0	0
						CO2	Understanding the different facts of environmental planning, development control, impact assessment methods, eco cities development, environmental improvement etc	0	2	0	0	1	0	0	0	0	0	0	0	1	0	2	1
						CO3	Developing the capacity to understand the environmental consideration in spatial planning backed by theoretical understanding	0	1	0	2	0	0	1	0	0	0	0	0	1	0	0	1
						CO4	Identifying the inter-linkages between environmental management & disaster management	0	0	0	0	2	0	1	0	0	3	0	0	2	0	0	1
Energy, Climate change & Urban development (Elective)	MARPL1-307	3	3	48	3 0	CO1	Implementing sustainability in planning process at different spatial scales	2	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
						CO2	Familiarizing students with basic concept of economics of energy, environment and their interaction with reference to climate change.	0	0	0	0	0	0	2	0	1	0	0	0	2	0	0	1
						CO3	Understanding the impact & adaptation of climate change.	0	2	0	0	0	0	1	0	2	0	0	0	0	0	1	2

Course	Code	L	T	Hrs		CO	Course Outcome																
							Understanding mitigation strategy of climate change.	0	1	0	0	0	0	1	0	0	0	0	1	1	0	2	1
Review of Six Weeks Mandatory Training during Summer Vacation	MARPL1-308	3	3	48	3 0	CO1	Participating in practical activities related with various aspects / domains of Urban and Regional Planning.	1	1	0	0	0	0	0	3	0	0	0	0	1	0	0	2
						CO2	Obtain practical field experience / exposure	0	0	0	3	0	0	0	1	0	0	0	0	1	0	0	1
						CO3	Understanding the functioning of urban local bodies	0	0	0	0	0	0	2	1	0	0	0	0	2	0	0	1
						CO4	Learning the current practices and able to use it in their professional self design.	2	0	0	0	2	0	1	1	0	0	0	0	2	0	1	1
Development Finance	MARPL1-401	4	3	48	3 0	CO1	Gaining ability to explore efforts to regulate the finances involved in delivery of services in planned units	0	0	2	0	0	1	0	0	0	0	3	0	1	0	2	0
						CO2	Understanding the governance structure and financial background of the various planning bodies and tools to strengthen them.	0	0	1	0	0	2	0	0	0	0	2	0	1	0	2	1
						CO3	Gaining understanding of Municipal Finances and Investment Planning.	0	0	1	0	0	2	0	0	0	0	3	0	0	0	1	0
						CO4	Knowledge to understand the flow of finances from Central to State Governments for any planning project.	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	1

Course	Code					CO	Course Outcome																
		4	3	48		CO2	Developing ability to demonstrate knowledge of how planning intentions are implemented through policies, instruments and controls.	0	0	0	0	0	3	0	0	1	0	1	2	2	0	2	0
							Applying awareness of the importance of evidence and argument in preparing planning proposals for sustainable development.	0	0	0	0	0	2	0	1	0	0	2	0	1	0	0	2
						CO 3	Ability to propose planning solutions within the domain of various acts controls & legislations.	0	0	0	0	0	3	0	0	1	0	0	3	0	0	0	1
						CO4	Capability to work for development addressing fulfillment of needs of all, improving the quality of life of residents.	0	0	0	0	0	0	0	2	0	0	1	1	0	0	0	2
Thesis	MARPL1-403	4	16	384	0 24	CO1	Conceptualizing problems from complex, real-world situations so the problems are meaningful to the intended audience and research-worthy	0	0	0	0	0	0	0	0	2	1	0	2	1	0	3	1
						CO2	Identifying and summarize appropriate peer-reviewed literature relevant to a proposed area of research	2	1	0	0	1	0	0	0	0	0	0	0	2	2	1	0
						CO 3	Preparing constructive, tactful feedback to help colleagues improve their writing	0	1	0	2	1	0	0	0	0	0	0	0	0	1	0	1
						CO4	Using various techniques for effective data identification and collection through current practices.	0	0	2	0	0	0	0	0	0	2	0	3	2	0	0	1

Enter Correction levels 1, 2 or 3 as defined below:

1. Slight (Low) - upto 30%   2. Moderate (Medium) – above 30% and upto70%   3. Substantial (High) – above 70%