Name of the Department: Architecture.

Paper UC/BTHU-101/18 Communicative English

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Design research PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. Have proficiency in reading & listening, comprehension, writing and speaking skills.					√					√		√				Understand	Yes	Group Discussions, Indiviual Presentations, MST, End Term Examination
CO 2: Understand spoken and written English language, particularly the language of their chosen technical field.					√					√	√					Understand	Yes	Group Discussions, Indiviual Presentations, MST, End Term Examination
CO 3: Converse fluently.					√					√		√				Understand	Yes	Group Discussions, Indiviual Presentations, MST, End Term Examination
CO 4: Produce clear and coherent texts on their own.					√					√		√				Understand and Analyse	Yes	Group Discussions, Indiviual Presentations, MST, End Term Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BTHU-102/18 Workshop-I

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Design research PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. Gain the basics knowledge of the carpentry tools and its joints.	√		√		√		√		√		√		√		√	understanding	Yes	University Viva-Voce
CO 2: 2. Attain skill to work with different materials for making architectural model		√		√		√		√		√		√		√		Analysis	Yes	University Viva-Voce

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
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Name of the Department: Architecture.

Paper UC/HSMC-122/18 Human Value and Professional Ethics

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Design research	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. Gain the basics knowledge of the carpentry tools and its joints.	v		v		v		v		v		v		v			Understanding	YES	Group Discussions, Indiviual Presentations, MST, End Term Examination
CO 2: 2. Attain skill to work with different materials for making architectural model		v		v		v		v		v		v		v	v	Anaylsis	YES	Group Discussions, Indiviual Presentations, MST, End Term Examination

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-201/19 Architectural Design - II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Design research	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. Develop a basic understanding of function, form, structure in the design of small structure.	√	√	√	√		√	√			√		√	√		√	Understanding	YES	Group Discussions, Indiviual Presentations, MST, End Term Examination
CO 2: 2. Understand & gain a fundamental knowledge of architecture design process and its principles.	√	√	√	√		√		√		√		√	√	√		Application	YES	Group Discussions, Indiviual Presentations, MST, End Term Examination

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC-BARCH202-19 Architectural Drawing - II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Design research	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. Understand the fundamental techniques of technical drawing used in 3-D.	✓	✓	✓		✓			✓	Individual	✓		✓	✓			Understanding /Application	Yes	Sheet Work/ Mid term Exam/End Term Exam
CO 2: 2. Analyse the 3-dimensional drawings of the building with Sciography.	✓	✓	✓		✓			✓	Individual	✓		✓	✓			Understanding /Application/Analysis	Yes	Sheet Work/ Mid term Exam/End Term Exam/Neptel-Swayam Courses

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Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-203/19 Architectural Graphics - II

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Design research PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Gain a fundamental knowledge of architecture Graphics and its principles.	√			√					√	√		√	√			Understanding	Entrepreneurship	University End Term Examination
CO 2: Attain the knowledge about the role of colours in presentation drawing and rendering techniques used in architectural design.		√	√			√	√					√	√		√	Applicatiion	Yes	University End Term Examination

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-204/19 History of Architecture - II

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Design research PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop an understanding of architecture as an outcome of various social, political and economic influences and as a response to the cultural and climate conditions.	√		√		√		√	√		√		√		√		Understanding	Yes	Sheet work, site study
CO 2: Develop an understanding of the physical experience of buildings in order to appreciate the complexity of the physical and metaphysical influences bearing on architecture.		√	√	√		√	√		√		√		√		√	Application	Yes	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-205/19 Building Construction and Materials - II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Design research	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:Comprehend timber as a building material and its application in building components and Gain knowledge on construction of Door, window, roof made out of it.	√			√		√		√		√		√	√	√		Application	Yes	Sheet work, site study
CO 2: Understand various surface finishes for single storey building and the fundamental knowledge for water proofing details in simple structures.		√	√		√		√		√		√	√				Understanding	Yes	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
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Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-206/19 Theory of Structures- I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop techniques for analysing forces in statically determinate structures.	✓	✓	✓					✓	✓	✓		✓	✓			understanding,Analysis	Yes	Minor Exams, Quiz, End Term Exams
CO 2: Apply basic knowledge of Maths and Physics to solve real life problems related to structures	✓	✓	✓					✓	✓	✓		✓	✓			understanding,Analysis	Yes	Minor Exams, Quiz, End Term Exams
CO 3: Describe Hooke's law relationships and perform calculations	✓	✓	✓					✓	✓	✓		✓	✓			understanding,Analysis	Yes	Minor Exams, Quiz, End Term Exams

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-207/19 Theory of Design - I

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Desi PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop a basic understanding of spatial organisation.	√		√		√				√			√				Application	Yes	Sheet work, site study
CO 2: Learn about the inter-dependence of function, structure and form in architectural design.		√		√		√	√	√			√	√	√	√	√	Analysis	Yes	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-204/19 History of Architecture - II

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Design research PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-I	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop an understanding of architecture as an outcome of various social, political and economic influences and as a response to the cultural and climate conditions.	v		v		v		v	v		v		v		v		Understanding	Yes	Sheet work, site study
CO 2: Develop an understanding of the physical experience of buildings in order to appreciate the complexity of the physical and metaphysical influences bearing on architecture.		v	v	v		v	v		v		v		v		v	Application	Yes	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-206/19 Theory of Structures - I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - D	PO-e Use of Modern tool	PO-f Socially responsible architectur	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop techniques for analysing forces in statically determinate structures.	✓	✓	✓					✓	✓	✓		✓	✓			understanding,Analysis	Yes	Minor Exams, Quiz, End Term Exams
CO 2: Apply basic knowledge of Maths and Physics to solve real life problems related to structures	✓	✓	✓					✓	✓	✓		✓	✓			understanding,Analysis	Yes	Minor Exams, Quiz, End Term Exams
CO 3: Describe Hooke's law relationships and perform calculations	✓	✓	✓					✓	✓	✓		✓	✓			understanding,Analysis	Yes	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-207/19 Theory of Design - I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Design	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop a basic understanding of spatial organisation.	√		√		√				√			√				Application	Yes	Sheet work, site study
CO 2: Learn about the inter-dependence of function, structure and form in architectural design.		√		√		√	√	√			√	√	√	√	√	Analysis	Yes	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:Propose solutions to environmental problems related to resource use and management.		✓					✓	✓	✓			✓			✓	Understanding	Yes	Group Discussions, Individual Presentations, MST, End Term Examination
CO 2: Interpret the results of scientific studies of environmental problems		✓				✓		✓	✓			✓			✓	Application	Yes	Group Discussions, Individual Presentations, MST, End Term Examination
CO 3: Describe threats to global biodiversity, their implications and potential solutions.		✓					✓	✓	✓						✓	Analysis	Yes	Group Discussions, Individual Presentations, MST, End Term Examination

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-210/19 Mentoring & Professional Development- I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - D	PO-e Use of Modern tool	PO-f Socially responsible architectu	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Personality Development and Holistic Development		√					√	√	√	√		√				Understand	Yes	Individual Presentations, Group Discussions and Activities

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Note: Provide Mapping for all courses of all programs offered by the Department

Director
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Name of the Department: Architecture.

Paper UC/BARCH-301/19 Architectural Design - III

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pr	PO-e Use of Modern tool	PO-f Socially responsible archit	PO-g Environment and Sustaina	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: The students will able understand the nuances of house, school, cafeteria and post office design.	∨	∨	∨	∨	∨	∨	∨	∨	∨	∨	∨	∨	∨	∨		Understanding	Employability / Entrepreneurs	University End Term Examination
CO 2: They will also be well versed with various physical factors of architecture design and equipped with the norms of barrier free design.	∨	∨	∨			∨	∨	∨	∨		∨	∨	∨		∨	Application	Employability / Entrepreneurs	University End Term Examination

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-302/19 Building Construction & Materials-III

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/Pr	PO-e Use of Modern tool	PO-f Socially responsible archite	PO-g Environment and Sustaina	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course student will able to become aware of the different types of timber roofing systems and trusses.	✓			✓		✓		✓		✓		✓		✓		Understanding, Application	Yes	Sheet Work/ Problem Solving/ Mid term Exam/End Term Exam
CO 2:Understand details for trusses, staircases, sliding doors, sliding folding doors, partitions, panelling, work out and apply appropriate details for building construction of the same.	✓	✓							✓			✓		✓		Understanding, Application	Yes	Sheet Work/ Problem Solving/ Mid term Exam/End Term Exam

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Note: Provide Mapping for all courses of all programs offered by the Department

Course Outcome	Architectural Knowledge (PO-a)	Problem Solving (PO-b)	Design development (PO-c)	Conduct Investigations (PO-d)	Use of Modern tool (PO-e)	Socially responsible ar (PO-f)	Environment and Susta (PO-g)	Ethics (PO-h)	Individual and team wo (PO-i)	Communication (PO-j)	Management and finan (PO-k)	Life-long Learning (PO-l)	Analysis and Design S (PSO-m)	Research and Innovati (PSO-n)	Sustainable Outlook (PSO-o)	Learning Level	Focus on Employability / Employability	Assessment Tools to Measure Attainment of
CO1: At the end of the course, the students will be able to gain ability to comprehend the Design erection process and application of large span structures.				✓	✓	✓			✓		✓	✓	✓	✓	✓	Understanding	Employability	University Viva-Voce
CO2: To understand the need and importance of prefabricated components	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓		✓	Application	Employability	University Viva-Voce
CO 3: process. To understand the needs, requirements, and selection for various types of structures systems.	✓		✓		✓				✓		✓	✓	✓	✓	✓	Analysis	Employability	University Viva-Voce

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-304/19 Structure Design - 1

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre -	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Design timber beams by applyinB codal provisions, DesiSn Masonry foundation and retaining walls'	√	√	√		√			√	√	√	√	√	√			uderstanding, analysis	yes	Minor Exams, Quiz, End Term Exams
CO 2: Analyse indeterminate structures and to calculate shear force and bending moment in determinate structures'	√	√	√		√			√	√	√		√	√			uderstanding, analysis	yes	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

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Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre -	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:courseoutcomes:At the end of the course,the students will able to do chain survey in,compass survey, plane table survey, levelling, contourinS' Students will have knowledge of survey instruments also.	v	v						v	v	v		v				understanding	Yes	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre -	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:At the end of the course, the students will able to understand the fundamental of climatology as important consideration in architecture design and it will orient his/ her proposal accordingly. Like thermal comfort, design sensitivity towards climate and climatic zones'	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding	Yes	Assignment, Group work, model MST

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

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Name of the Department: Architecture.

Paper UC/BARCH-307/19 Computer Application-I

Course Outcome		PO Code	Description	CO1	CO2
CO1:At the end of the course, the students will able to understand basics of Computers hardware, operating systems and operative languages, being a fundamental course the students will be introduced to the basic of hardware and software. CO2: They will be introduced to 2D presentation...		PO-a	Architectural Knowledge		✓
		PO-b	Problem Solving	✓	
		PO-c	Design development	✓	
		PO-d	Conduct Investigations/ Pre -	✓	
		PO-e	Use of Modern tool	✓	
		PO-f	Socially responsible architecture	✓	
		PO-g	Environment and Sustainability	✓	
		PO-h	Ethics	✓	
		PO-i	Individual and team work	✓	✓
		PO-j	Communication	✓	
		PO-k	Management and finance	✓	
		PO-l	Life-long Learning	✓	
		PSO-m	Analysis and Design Skill	✓	
		PSO-n	Research and Innovation	✓	
		PSO-o	Sustainable Outlook	✓	
		Learning Level		understanding	Application
		Focus on Employability / Entrepreneurship		Yes	Yes
		Assessment Tools to Measure Attainment of CO		Minor Exams, Quiz, End Term Exams	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-309/19 Educational Tour I/Summer Training-I / Vacation Assignment-I

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Design research	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: The education tour is encouraged to be undertaken by the students under faculty supervision. During or after the semester the tour report shall be submitted to the class coordinator for assessment. The students should be encourage undertaking approx. 04 week summer training in a design / construction/allied office. Alternatively student should also be encouraged to do any online course of similar duration during the summer vacation.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	understanding, Application & Analysis	YES	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-I

Name of the Department: Architecture.

Paper UC/BARCH-401/19 Architectural Design -IV

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1 At the end of the course, the students will able to Study Social and Physical environment and methods of construction in Vernacular/Rural Architecture, emerging out of the traditional way of life of the people in a given place with special reference to Punjab	v	v	v		v		v	v		v			v			v	Understanding	YES	Sheet work, site study, Minor Exams, Quiz, End Term Exams
CO2: understand the principles of design in vernacular/ traditional architecture w.r.t to thermal comfort, climate, and topography.	v	v	v		v		v	v		v			v			v	Application	YES	Sheet work, site study, Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-402/19 History of Architecture-III

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to approach the architectural structures provided by their ancestors and co-relate them with the contemporary scenario.	v			v		v		v	v			v		v		Understanding and application	Yes	Sheet work, site study, Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-403/19 Building Construction & Materials-IV

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course student will be able to become aware of the roof and floor coverings.	v	v		v	v		v		v	v		v	v	v		understanding	Employability / Entrepreneurship	University End Term Examination
CO2:2. Understand details for trusses, staircases, sliding doors, sliding folding doors, partitions, paneling, work out and apply appropriate details for building construction of the same.	v	v	v	v			v		v		v		v		v	Applications	Employability / Entrepreneurship	University End Term Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper: UC/BARCH-404/15 Structure Design -II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to – design RCC Beams, Slabs, Columns, and footings with different loads for one-story simple buildings.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	understanding	YES	Sheet work, site study, Minor Exams, Quiz, End Term Exams
CO2: At the end of the course, the students will able to – design RCC Beams, Slabs, Columns, and footings with different loads for one-story simple buildings.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Application	Minor Exams, Quiz, End Term Exams	Sheet work, site study, Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-405/19 Building Services-I

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Understand the terminology and basic principles of water supply, stormwater drainage, and sanitation.	v			v		v				v	v				v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2: Understand water requirements in various types of buildings, types of water storage and distribution systems, sanitary & drainage system requirements, and their integration in architectural design.		v				v		v	v			v		v		Application	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams
CO3: Understand the functions of various sanitary fittings and fixtures and be aware of the different types of materials and specifications of the same.			v		v	v			v			v		v		Understanding	Employability / Entrepreneurship	Sheet work, site study
CO4: Develop design skills for water supply and drainage systems in buildings and prepare architectural drainage layouts.	v			v			v		v			v				Application	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-406/19 Climate & Architecture-II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to understand advanced climatology and ventilation as an important consideration.	v		v	v		v				v		v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study, Minor Exams, Quiz, End Term Exams
CO2: At the end of the course, the students will able to analysis the climate data.	v				v				v			v		v		Application	Employability / Entrepreneurship	Sheet work, site study, Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper U-C/BARCH-407/19 Computer Application -II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop skills required for using Computers as a tool for design, 3D modeling, and rendering.	√		√		√		√	√	√			√		√		Understanding	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams
CO2: Familiarize themselves with 3D model design and rendering techniques using different software for building visualization/design representation.		√		√		√		√		√	√		√		√	Application	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams
CO3: Produce 3D models and renderings of simple and complex buildings using CAD and other software programs.					√			√				√		√	√	Application	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams

Note: Provide Mapping for all courses of all programs offered by the Department

(Signature of Head of Department)

SLI

Name of the Department: Architecture.

Paper UC/BARCH-408/19 Mentoring and Professional Development-II

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: Personality Development and Holistic Development		√						√	v	v		v			√	Application	Yes	Individual and Group Presentations, Discussions, Activities

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-409/19 Constitutional Law

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:At the end of the course, the students will able to get the basic knowledge of law and constitution.	✓	✓				✓		✓				✓				Understanding	Employability / Entrepreneurship	MST, Assignments, End Semester Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-501/19Architectural Design -V

Course Outcome		PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1.1: At the end of the course, the students will able to understand the nuances of commercial and public buildings.	<	<	<			<		<	<		<		<		<	<	Understanding	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams
CO2.2: They will also be well versed with various physical factors of architecture design and equipped with the norms of barrier-free design and design of building with respect to site topography.	<	<	<	<		<		<	<		<		<		<	<	Application	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U.
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-502/19 Building Construction & Materials-V

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:1. At the end of the course student will able to Become aware of the different types roofing systems and trusses.	v	v		v	v		v		v	v		v	v		v	understanding	Employability / Entrepreneurship	University End Term Examination
CO2:2. Understand details for trusses, staircases, sliding doors, partitions work out and apply appropriate details for building construction of the same.	v	v	v	v			v		v		v	v			v	Applications	Employability / Entrepreneurship	University End Term Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P...
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-503/19 Structure Systems-III

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: After completing this course, the student will be able to Understand the basic principles of structures.	v		v		v	v			v		v	v	v	v	v	Understanding	Employability	University Viva-Voce
CO2 Realize the fundamental requirements of long span structures Understand the architectural features and necessity of shells and plate structures Comprehend the design principles and applications of pneumatic and tensile structures.	v	v		v	v		v	v		v		v	v		v	Application	Employability	University Viva-Voce

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-504/15 Structure Design-III

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Design Beams, Compression members, trusses for different conditions by applying code provisions along with the knowledge of Riveted and welded joints	<	<	<					<	<	<		<	<			understanding and a	Yes	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-505/19 Building Services-II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Understand the terminology and basic principles MEP Services.	✓								individ ual	✓		✓				Understanding	yes	Sheet Work, Mid-Term /End Term Examination
CO2: Develop design skills for MEP layouts in architecture design			✓						individ ual			✓	✓	✓		Understanding	yes	Sheet Work, Mid-Term /End Term Examination

Note: Provide Mapping for all courses of all programs offered by the Department

(Signature of Head of Department)

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Name of the Department: Architecture.

Paper UC/BARCH-506/19 Theory of Design-III

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able to understand, appreciate and learn the design principles, philosophy of design used by masters of modern architects.	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-507/19 Landscape Architecture

	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook			
Course Outcome CO1: At the end of the course, the students will able to understand and appreciate the elements, principle and need of design and apply the same in landscape design solutions.	√		√	√	√	√	√	√			√	√	√	√	√	understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G. PTU
Mohali Campus...

Name of the Department: Architecture.

Paper UC/BARCH-508 (A)/19 Green Buildings & Rating System

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to Understand Green buildings and their rating systems.	v	v	v	v	v	v						v		v		Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Understand Green buildings and their rating systems.	√		√	√	√	√	√	√	√	√		√	√	√	√	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-508 (C)/19 Emerging Technologies in Architecture

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigation/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Understand use of various emerging technologies and their application in Architectural Design and Construction.	v		v		v		v		v	v	v	v			v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2:Know about technical advances and advantages of computational technologies through the use of computer modelling, rendering and digital fabrication, with focus on the exploration of space and place making through the use of computer modelling and design construction		v			v							v		v		Understanding	Employability / Entrepreneurship	Sheet work, site study
CO3: Have an understanding of Building Automation for building types and their applicability to different building services.			v	v	v		v		v		v					Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-508 (D)/19 Product Design

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to gain knowledge of product design.	v		v		v	v	v	v	v		v	v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UG/BARCH-508 (E)/19 Architecture Acoustics

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to understand the concept on architecture acoustics.	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

681

Name of the Department: Architecture.

Paper UC/BARCH-509 (A)/19 Sociology for Architects / Fundamentals of Sociology

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to the aspects of sociology for architects and its fundamentals.	v		v		v	v	v	v	v	v		v	v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-509 (B)/19 Health Education- I

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able understand the importance of health education.	v		v		v	v		v	v	v		v	v		v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-509 (C)/19 Music (Vocal, Instrumental)

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to relate music with architecture and distinguish between good not so good music.	v		v		v	v	v		v	v		v	v		v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
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Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-509 (D)/19 Laser/ Printing Technology

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: The learning outcome of this course is expected that after completion of this course the students will be having the detail knowledge of various printing processes and the recent development in this industry and they will implement their knowledge for print production operations	v		v		v	v	v	v	v	v			v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper: UC/BARCH-509 (E)/19 Creative Writing

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: In Creative Writing will write poems, short stories, plays, news stories, comic strips, children's books, an autobiography and other types of writing that express creativity	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓		Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2: Students will also study writing samples from professional writers.	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓		Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-510 /19 Educational Tour II/ Summer Training-II/Vacation Assignment-II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:The education tour is encouraged to be undertaken by the students under faculty supervision. During or after the semester the tour report shall be submitted to the class coordinator for assessment. The students should be encourage undertaking approx. 04 week summer training in a design / construction/allied office. Alternatively student should also be encouraged to do any online course of similar duration during the summer vacation.	<		<		<	<	<	<	<	<		<	<	<	<	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-601 /19 Architectural Design -VI

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able understand Design of Public Buildings with complex functional demands and technical inputs.	v	v	v		v		v	v		v		v		v	v	Understanding	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams
CO2:Nature of urban complexes, scale and other elements of urban design to be incorporated.	v	v	v		v		v	v		v		v		v	v	Application	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams
CO3:They will also be well versed with various physical factors of architecture design and equipped with the norms of barrier free design.	v	v	v		v		v	v		v		v		v	v	Understanding	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-602 /19 History of Architecture-III

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Develop a holistic approach to architecture s an integral component of the built environment.	v		v			v	v			v	v	v		v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2: Develop an understanding of architecture as an outcome of various social, political and economic influences and as a response to the cultural and climate conditions.	v		v		v				v		v	v		v	v	Analysis	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams
CO3: Understand the physical experience of buildings in order to appreciate the complexity of the physical and metaphysical influences bearing on architecture.	v	v		v	v				v		v			v		Application	Employability / Entrepreneurship	University end term examinations

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-603 /19 Estimating Costing & Specifications- I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:At the end of the course, the students will able Scope of the subject limited to preparing detailed estimates and cost of two-storeyed residential buildings in masonry and reinforced cement concrete.	v		v			v	v		v	v	v			v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper: UC/BARCH-604 / 19 Architecture Legislation - I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able Scope of the subject limited to preparing detailed estimates and cost of two-storeyed residential buildings in masonry and reinforced cement concrete	v		v			v	v			v	v	v		v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
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Mohali Campus-II

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Name of the Department: Architecture.

Paper UC/BARCH-605 /19 Building Construction & Materials-VI

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course student will able to Become aware overall intent is to make students understand construction/detailing of work associated with interior finishes and works.	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-it

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Name of the Department: Architecture.

Paper UC/BARCH-606 /19 Structure Design (Project) -IV

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: At the end of the course student will able to become aware overall intent is to make students understand construction/detailing of work associated with interior finishes and works.	v	v	v	v	v			v	v	v		v	v			understanding and a	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
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Name of the Department: Architecture.

Paper UC/BARCH-607 /19 Building Services-III

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: Know about the working principles of the building.	√	√	√		√			√	Individu √			√			√	understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination
CO2: Understand the role of services and would be able to design appropriate space, location for it.	√							√	Individual			√				understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination
CO3: Know about the acoustics materials where, how and why we are using these materials	√	√	√		√			√	Team work		√	√	√			understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination
CO4: Understand the importance of intelligent buildings.	√						√	√	Individual			√				understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-607 /19 Building Services-III

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-I	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: Know about the working principles of the building.	√	√	√		√			√	Individu √		√	√			√	understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination
CO2: Understand the role of services and would be able to design appropriate space, location for it.	√							√	Individual		√					understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination
CO3: Know about the acoustics materials where, how and why we are using these materials	√	√	√		√			√	Team work		√	√	√			understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination
CO4: Understand the importance of intelligent buildings.	√						√	√	Individual		√					understanding	Employability / Entrepreneurship	Sheet Work, Mid-Term /End Term Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-608 /19 Climate & Architecture (Sustainable Design) -III

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:1. At the end of the course student will able to Become aware overall intent is to make students understand construction/detailing of work associated with interior finishes and works.	v		v		v	v			v	v	v		v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

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Name of the Department: Architecture.

Paper UC/BARCH-619 /19 Mentoring and Professional Development-III

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: Personality Development and Holistic Development								√	v		v					Understanding	Yes	Indivial and Group Presentations and Discussions, Activities

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-701 /19 Practical Training

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:1. At the end of the course, the students will able to learn the intricacies of Architectural Profession by joining and working with practicing Architects/Architectural firms for one complete semester.	v	v	v	v		v	v		v	v		v	v		v	Understanding	Employability / Entrepreneurship	University Viva- Voce

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-801 /19 Architectural Design -VII

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1.1. At the end of the course, the students will able to will be able to design complex health care academic projects, design for pandemics situations, design Terminals of air/railway/bus, design Light Industrial buildings for different uses.	v	v	v	v		v	v		v	v		v	v		v	Understanding	Employability / Entrepreneurship	University Viva- Voce

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-802 /19 Comprehensive Smart Village Development-I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to deal with environment, policy making and analysis, governance, and rehabilitation and resettlement issues for smart village development.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-803 /19 Urban Design

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	
CO1:1. At the end of the course, the students will able to will be able to create awareness and promote understanding of the nature, role and importance of Urban Design in the making of quality Built Environment and Human Settlements.	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-804 /19 Housing

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:1. At the end of the course, the students will able to will be able to Analyze what are the housing issues we are facing. Understand how we can contribute to eliminate this housing problem.	v		v	v	v	v	v	v	v			v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2:2. Know about what our government is doing to provide basic comfortable environment for the	v		v	v	v	v	v	v	v			v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-805/19 Building Construction & Materials-VII

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will be able to familiar with special constructional details, finishing & furnishing, extension & expansion joints and basements with details.	v	v	v	v		v	v		v	v		v	v	v		Understanding	Employability / Entrepreneurship	University End Term Examination
																		Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-806 (A) /19 GIS/ Remote sensing/ Geospatial Technologies/Geomatics Techniques for Architects

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:The course will enable the students understand The Principles of Remote sensing, satellite images and Applications of remote sensing.				√									√				√	MST, Assignments and End Semester Examination
CO2:The GIS and its Data models.				√							√						√	MST, Assignments and End Semester Examination
CO3:The Global Navigation Satellite System.				√									√				√	MST, Assignments and End Semester Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Paper UC/BARCH-806 (BI)/19 Indian Architecture/ Vastu Shastra

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO11: At the end of the course, the students will able to will be able to Analyze the different principles and systems of vastu shastra.	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	Understanding	Employability / Entrepreneurship	Sheet work, site study

Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-806 (C)/19 Advance Building Materials

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to will be able to understand various advanced building materials in respect of their, composition, uses, properties and applications in the construction sector.	v		v	v	v	v	v	v	v	v		v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study
																	Minor Exams, Quiz, End Term Exams	

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
I.K.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-806 (D)/19 Retail Design

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to design retail outlet.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
																	Minor Exams, Quiz, End Term Exams	

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

215

Name of the Department: Architecture.

Paper UC/BARCH-806 (E)/19 Advance Structure Systems

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:1. It addresses the contemporary exterior envelope with an emphasis on their performance attributes and advanced technologies.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2:2. Understand how we can contribute to eliminate this housing problem. Know about what our	v		v	v	v	v	v	v	v			v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

216

Name of the Department: Architecture.

Paper UC/BARCH-807 (A)/19 Ekistics

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. This course intends to develop an understanding the evolution of settlement planning.																	Sheet work, site study	
																	Minor Exams, Quiz, End Term Exams	

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

217

Name of the Department: Architecture.

Paper UC/BARCH-807 (B)/15Art Appreciation

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will be able to gain knowledge and understanding of the universal and timeless qualities that identify all great art.	V	V	V	V	V	V	V	V	V	V		V	V	V	V	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2: To introduce the students to the importance of art in today's world and the purposes art has served.	V		V		V		V		V			V	V	V	V	Application	Employability / Entrepreneurship	Sheet work, site study
CO3: To understand artistic intent and expression through basic element of art and architecture and to increase appreciation of art in today's society.	V											V	V	V	V	Analysis	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-807 (C)/19 Industrial / Prefab Technologies

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PC-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to describe various structural systems and standard organizing requirements.	v		v	v	v	v	v	v	v			v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2:Identify and differentiate structural behaviour of building elements. Design building elements and	v		v	v	v	v	v	v	v			v	v		v	Application	Employability / Entrepreneurship	Sheet work, site study
CO3: Identify and describe working principles of various joints. Design and detail precast and activities by innovation.	v		v	v	v	v	v	v	v			v	v		v	Analysis	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-807 (E)/19 Building Information Modelling (BIM)/ Advance Computer Software's

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able to Understand that BIM is used to collaboration between engineers, owners, architects and contractors in a three dimensional environment (common data environment), and it shares information across these disciplines.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2: BIM is the management of information through the whole life cycle of a built asset, from initial design all the way through to construction, maintaining and finally de-commissioning.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

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Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-808 A- E /19 Open Elective- III/Mooc Swayam

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:The list of major domain of MOOC's courses are attached in the preamble & the department will have a MOOC coordinator who will display the list of MOOC in every semester.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

222

Name of the Department: Architecture.

Paper UG/BARCH-901 /19 Architectural Design -VIII

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Design large scale campus environments with efficient circulation and understanding the significance of user experience in built environments.	√	√	√	√		√	√	√	√		√	√	√	√	√	Understanding	Employability / Entrepreneurship	University End Term Examination
CO2: Evolve design focusing on form generation and appropriate structural system.	√	√	√	√	√	√	√	√	√		√	√	√	√	√	Application	Employability / Entrepreneurship	University End Term Examination
CO3: Conduct simple architectural research as the basis for architectural design projects. Develop skills to design large urban level built environments and perceive future needs.	√	√	√	√	√	√	√	√	√	√		√	√	√	√	Application	Employability / Entrepreneurship	University End Term Examination

Note: Provide Mapping for all courses of all programs offered by the Department

(Signature of Head of Department)

Name of the Department: Architecture.

Paper UC/BARCH-902 /19 Research Methodology & Dissertation

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:The end of the course, the students will able to – explain key research concepts and issues read, comprehend, and explain research articles in their academic discipline.	v		v	v	v	v	v	v	v	v		v	v		v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-903 /19 Construction Management

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able to Do CPM analysis. Control cost of the project. Know about their role in construction industry. Know about safety and quality.	v					v		v	v	v	v	v				understanding	Minor Exams, Quiz, End Term Exams	

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-904 /19 Building Construction & Materials-VIII

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to will be able To make students aware and familiar with special constructional details involving finishing and furnishing, extension and expansion joints and basements with details.	v		v	v	v	v	v	v	v			v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Paper UG/BARCH-905 (A) Town & Country Planning

Course Outcome

	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will be able to will be able to make students aware and familiar with special constructional details involving finishing and furnishing, extension and expansion joints and basements with details.	✓	✓	✓			✓	✓	✓	✓			✓	✓	✓	✓	Understanding and A/yes		Mid term exam, sheets, end term exam

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH- 905 (B) Art & Architecture

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:At the end of the course, the students will able to – explain key research concepts of Art in Architecture.	v		v	v	v	v	v		v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH- 905 (C) Building Maintenance

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to – Comprehend the concept of retrofitting in buildings, its needs and methods. Acquire knowledge on the various techniques of retrofitting for various building components like beams, slabs, column etc.	v		v	v		v		v	v		v		v	v		understanding	Employability / Entrepreneurship	University End Term Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH- 905 (D) Graphics & Communication Design

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:Detailed syllabus for the subject shall be finalized on year to year basis depending upon the expertise available. The experts in the field will deliver lectures and demonstrate the latest techniques for development of skills.	v		v	v	v	v	v		v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH- 905 (E) Advance Digital Architecture

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able to – understand the fundamental of digital architecture with the help of application to software.	v		v	v	v	v		v	v			v	v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH- 906 (A) Traffic & Transportation

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:At the end of the course, the students will able to -- Exposure to basic understanding of transport planning and management in urban areas.	v	v			v	v		v	v	v		v	v			understanding	Employability / Entrepreneurship	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

232

Name of the Department: Architecture.

Paper UC/BARCH- 906 (B) Contemporary Indian Architecture (Modern Trends)

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able to – Ability to understand the role of societal developments as predicators of change in architectural paradigms through the study of Modern Architecture in the sub-continent and contemporary architecture of India and the world.	v		v	v	v	v	v	v	v	v		v	v	v		v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH- 906 (C) Building System Integration & Management

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able to – Understanding of approach for effective energy management in building through automated systems and sensors.	v		v		v	v	v		v	v			v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Director
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Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH- 906 (D) Cost effective Construction

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre – Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1:At the end of the course, the students will able to – understand the Low Cost Building Techniques in architecture.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

235

Name of the Department: Architecture.

Paper UC/BARCH- 906 (E) Building Industry

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to gain the knowledge of building industry.	√		√	√	√	√	√	√	√	√		√	√	√	√	Understanding	Employability / Entrepreneurship Minor Exams, Quiz, End Term Exams	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UG/BARCH-907 (A)-907 (E)/19 Open Elective- IV/Mooc Swayam

Course Outcome		PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
		Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook			
CO1:The list of major domain of MOOC's courses are attached in the preamble & the department will have a MOOC coordinator who will display the list of MOOC in every semester		√		√	√	√	√	√	√	√	√		√	√	√	√	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-1001/19 Architectural Design (Thesis Project) -IX

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to design Social and Physical environment and methods of construction in.	v		v	v	v	v	v	v		v	v	v	v		Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-1002/19 Professional Practice

Course Outcome	Architectural Knowledge	Problem Solving	Design development	Conduct Investigations/ Pre - Des	Use of Modern tool	Socially responsible architecture	Environment and Sustainability	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Design Skill	Research and Innovation	Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o			
CO1: At the end of the course, the students will able to - Become aware and understand the professional and legal aspects of architectural practice and profession in India.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2: Understand the duties and liabilities of an architect, his client and the contractor with respect to the	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO3:Become aware of Arbitration and laws pertaining to it, Valuation and its application in the professional practice	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO4:Understand the Tendering & Contract process applicable to the architectural profession.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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LK.G.P.T.U
Mohali Campus-II

Name of the Department: Architecture.

Paper UC/BARCH-1003/19 Disaster Management

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:At the end of the course, the students will able to – understand various types of disasters their causes, significance and effects of disaster.		√										√						MST's, assignments, End Semester Examination
CO2:Students will gain an understanding of various Disaster Preparedness, Response, management and		√			√		√		√	√		√		√	√		√	MST's, assignments, End Semester Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-1004 (A) Building Economics

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to, Recognise mud as an alternate material and to understand its properties and construction techniques.	√		√	√		√		√	√		√		√	√		understanding	Employability / Entrepreneurship	University End Term Examination
CO2:Comprehend the various types of alternate construction blocks.		√		√	√	√		√	√	√		√	√		√	Application	Employability / Entrepreneurship	University End Term Examination
CO3:Gain knowledge on the applications of natural materials such as bamboo and straw in building construction.	√		√	√	√		√	√		√		√	√		√	Application	Employability / Entrepreneurship	University End Term Examination
CO4:Appreciate the applications of alternate cement based building materials.	√	√	√	√		√	√	√		√		√	√	√	√	Analysis	Employability / Entrepreneurship	University End Term Examination
CO5:Critically analyse the cost effective construction techniques through case studies.	√	√		√	√	√	√	√	√		√	√	√			Analysis	Employability / Entrepreneurship	University End Term Examination

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: Architecture.

Paper UC/BARCH-1004 (B) Contemporary World Architecture

Course Outcome	Architectural Knowledge PO-a	Problem Solving PO-b	Design development PO-c	Conduct Investigations/ Pre - Des PO-d	Use of Modern tool PO-e	Socially responsible architecture PO-f	Environment and Sustainability PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Design Skill PSO-m	Research and Innovation PSO-n	Sustainable Outlook PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to – Knowledge about contemporary phase of architecture .	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2:Understandings of current trends and styles in architecture.	v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-1004 (C) High Rise Buildings

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-l Analysis and Design Skill	PSO-m Research and Innovation	PSO-n Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1.1 At the end of the course, the students will able to - Relate the performance of buildings subjected to various loadings and examine the significance of diverse structural components in a high-rise structure.	√	√			√	√	√	√	√	√	√					Understanding	Employability / Entrepreneurship	Sheet work, site study
CO2.2 Safeguard the stability of a structure through approximate methods.	√		√		√							√	√			Understanding	Employability / Entrepreneurship	Sheet work, site study
CO3.3 Understand the importance of service core design and analyse the relation of service planning.													√	√	√	Understanding	Employability / Entrepreneurship	Sheet work, site study

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-1004 (D) Architecture Journalism & Photography

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Des	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:Detailed syllabus for the subject shall be finalized on year to year	v	v	v	v	v	v	v	v	v	v		v	v	v	v	Understan	Employability / Entrepreneurship	Sheet work, site study

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: Architecture.

Paper UC/BARCH-1004 (E) Futuristic Architecture

Course Outcome		PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-d Conduct Investigations/ Pre - Design research	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-g Environment and Sustainability	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	PSO-o Sustainable Outlook	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to use the knowledge of futuristic material and architecture in the projects.		v		v	v	v	v	v	v	v	v		v	v	v	v	Understanding	Employability / Entrepreneurship	Sheet work, site study

Note: Provide Mapping for all courses of all programs offered by the Department

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2. In the syllabus of M. Planning IVth semester, it was suggested to increase the credits of M. Planning final thesis from 15 to 19. Further, it was suggested that it should be desirable that students shall publish a research paper from their thesis in peer reviewed Journals/Conference proceedings etc. In line with M. Arch IVth semester syllabus. Changes were made and syllabus is attached as Annexure-II

3. It was informed by chairperson that institute is in process of approval of M. Planning course from ITPI, New Delhi and it is the requirement that word planning shall be added to the nomenclature of Department, BoS, and Faculty etc. It was further discussed that there is a possibility of commencement of Design related courses at Mohali Campus-II in near future. BoS members were apprised of 15 years plan submitted earlier to the University. In view of this it was suggested that BoS shall be redesignated as **BoS Architecture, Planning & Design.**

4. The expert members discussed that in view of the vast syllabus of the theory subjects, in terms of contemporary needs many a times question papers set up by examiners are not specific. The chairperson informed the esteemed members that it has been proposed in the syllabus of the theory subjects to submit the question bank within one month of commencement of semester by the concerned faculty to the HoD architecture, who further shall be submitting the same to the Controller examination. This practice will be very beneficial for improving the quality of teaching and evaluation. For this suggestion, members were of opinion that all prepared Question Banks shall be submitted in next BoS meeting for information. The entire exercise is to incorporate the contemporary needs of the profession in teaching process.

The agenda taken up by BoS chairperson was approved by members BoS.

The meeting ended with vote of thanks to the chair.

Ar. Jyoti Singh
Coordinator BoS (Arch)

Dr. Prabhjot Kaur,
(Director) Chairperson BoS

Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-101/20 Studio I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Have a fairly good idea of the scenario of architecture education in the country	✓		✓		✓		✓	✓	✓	✓	Understanding	yes	Sheet work, site study
CO 2: Understand the basic issues and challenges of imparting Architecture Education in India.		✓		✓		✓	✓	✓			Application	yes	MST Exams, Quiz, End Term Exams
CO 3: They will also be clear about the perception of society (general public) about the Architecture and architect and the role and responsibility & the need to update Architecture education continuously to cope with dynamic practice.							✓	✓	✓	✓	Analysis	yes	MST Exams, Quiz, End Term Exams

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department:
M.Arch (Architecture Education & Research)

Paper UC/MARCH-102/20 Contemporary Architecture-I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:Understand various trends of contemporary architecture in their immediate surroundings.			√	√		√	√	√			Understanding	yes	Sheet work, site study
CO 2: It will be possible To identify & point out various influences (social, political, cultural, etc) on the architecture of India in general & northern region in particular.	√	√	√	√	√	√	√	√			Application	yes	Minor Exams, Quiz, End Term Exams
CO 3: They will understand the impact of globalization and the contribution of material & new technologies in shaping the architecture.	√	√	√	√	√	√	√	√	√	√	Analysis	yes	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-103/20 Educational Technology

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: Incorporate innovative instructional technologies through project-based activities.	✓			✓	✓		✓	✓	✓		Application, Understanding	yes	Sheet work, site study
CO 2: Collaborate in online discussions about the field of educational technology.		✓	✓	✓			✓	✓	✓		Application	yes	Minor Exams, Quiz, End Term Exams
CO 3: Synthesize information from various texts and online sources				✓	✓	✓	✓	✓		✓	Analysis	yes	Minor Exams, Quiz, End Term Exams
CO 4: Deliver oral presentation through collaborative, online learning software applications.		✓	✓	✓	✓		✓	✓	✓		Analysis	yes	Minor Exams, Quiz, End Term Exams
CO 5: Be equipped to prepare MOOC'S	✓	✓	✓								Application, Understanding	yes	End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-104/20 Research Methodology - I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship CO	Assessment Tools to Measure Attainment of CO
CO1:1. Design framework/ techniques for the research process	√	√	√	√	√	√	√	√	√		Understanding	YES	Sheet work, site study
CO 2: 2. Demonstrate knowledge of research processes (reading, evaluating, and developing)	√		√	√				√		√	Application	YES	Minor Exams, Quiz, End Term Exams
CO 3: 3. Perform literature reviews using print and online databases			√			√	√	√			Analysis	YES	Minor Exams, Quiz, End Term Exams
CO 4: 4. Explain the rationale for research ethics		√	√		√	√		√	√		Analysis	YES	Minor Exams, Quiz, End Term Exams
CO 5: 5. Formulate the research in the form of thesis/ report				√			√	√			Application	YES	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH/ PE-106-10/20 Fundamentals of the built environment and resource conservation

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. Ability to identify the sustainability of the built environment.	v	v		v		v	v	v			Understanding	YES	Sheet work, site study
CO 2: 2. Ability to identify the best practice in sustainable development.	v	v	v	v	v	v	v	v	v		Application	YES	Minor Exams, End Term Exams
CO 3: 3. Ability to evaluate and form a proposal of an existing urban development based on the concept of sustainable development.	v	v	v	v	v	v	v	v	v	v	Analysis	YES	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-201/20 Studio II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to Differentiate between various models of architecture education prevalent world over.	✓	✓	✓		✓	✓		✓	✓		Understanding	YES	Sheet work, site study
CO 2: 2. Thoroughly understand the broad curriculum of major Indian schools of Architecture institutes of national		✓	✓	✓	✓		✓	✓		✓	Application	YES	Minor Exams, Quiz, End Term Exams
CO 3: 3. Understand Pedagogy and establish its relation with Architecture.	✓		✓	✓	✓	✓	✓	✓	✓	✓	Analysis	YES	Minor Exams, Quiz, End Term Exams

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch
(Architecture Education & Research)

Paper UC/MARCH-202/20 Dissertation-I

Course Outcome	PO-a	PO-b	PO-c	PO-e	PO-f	PO-h	PO-i	PO-l	PSO-m	PSO-n	Learning Level	Focus on Employability / Entrepreneurship of CO	Assessment Tools to Measure Attainment of CO
	Architectural Knowledge	Problem Solving	Design development	Use of Modern tool	Socially responsible architecture	Ethics	Individual and team	Life-long Learning	Analysis and Design Skill	Research and Innovation			
CO1:1. Able to formulate any research project & present it in the standard format.	√	√	√	√	√	√	√	√	√	√	Understanding		Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-203/20 Psychology of Learning and Teaching

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship CO	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to equip the students with the psychological theories and techniques of learning, motivation, and creativity, hence adding to teaching skills.	✓	✓	✓		✓	✓		✓	✓		Understanding	YES	Sheet work, site study
CO 2: 2. Apply learning theories and models to classroom situations	✓	✓		✓		✓	✓	✓			Application	YES	Minor Exams, End Term Exams
CO 3:3. Compare and contrast the various factors that cognitive, behavioural, and humanistic theorists believe influence the learning process.	✓	✓	✓		✓	✓	✓	✓	✓	✓	Analysis	YES	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-204/20 Architecture Research Methodology - II

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1.1. At the end of the course, the students will able to develop the skill to identify, translate, and interpret issues relating to an architecture based on research inquiry methods.	√		√	√	√	√	√	√	√		Understanding	YES	Sheet work, site study
CO 2: 2. The student will gain knowledge of different methods of conducting research and research writing.	√	√	√	√	√	√	√	√			Application	YES	Minor Exams, Quiz, End Term Exams
CO 3: 3. An ability to craft a thesis statement and produce an appropriate program of inquiry.	√	√		√		√	√		√	√	Analysis	YES	Minor Exams, End Term Exams
CO 4: 4. An ability to evaluate and apply information.	√	√	√	√	√	√	√	√	√	√	Analysis	YES	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-206-10/20 Elective I (Architecture Appreciation)

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. After the completion, of course, the students will be able to Explore and understand the traditional architecture in the Indian context regarding the six major climatic zones prevalent in the country and appreciate the centuries-old wisdom of creating a Human Responsive Built Environment.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding	YES	Sheet work, site study
CO 2:2. Generate and utilize the information for use in design decisions.	✓		✓	✓			✓	✓	✓		Application	YES	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-301/20 Studio - III

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship of CO	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to have a fairly good idea of the scenario of architecture education in the country.	✓	✓		✓			✓	✓	✓	✓	Understanding	YES	Sheet work, site study
Curriculum prescribed as [per CoA regulations and compare them in detail for various types of architecture institute.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Application	YES	Minor Exams, Quiz, End Term Exams
CO 3: 3. Understand the basic issues and challenges Higher Education Scenario with special focus on Technical / Arch Education because of the Education	✓						✓	✓	✓		Analysis	YES	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

PaperUC/MARCH-302/20 Architecture Appreciation

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship of CO	Assessment Tools to Measure Attainment of CO
CO1:1. After the completion of course, the students will be able to Explore and understand the traditional architecture in Indian context with reference to the six major climatic zones prevalent in the country and appreciate the centuries old wisdom of creating Human Responsive Built Environment.	√	√	√	√	√	√	√	√	√	√	Understanding	YES	Sheet work, site study
CO 2: 2. Generate and utilize information for use in design decisions.	√	√	√	√	√		√	√	√	√	Application	YES	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch
(Architecture Education & Research)

Paper UC/MARCH-303/20 Instructional methods

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to Incorporate innovative instructional technologies through project-based activities.	✓										Understanding	YES	Sheet work, site study
CO 2: 2. Develops methods/strategies that encourage self-directed thinking and learning in nurturing and supportive	✓	✓	✓	✓	✓						Application	YES	Minor Exams, Quiz, End Term Exams
CO 3: 3. Deliver oral presentation through collaborative, online learning software applications.		✓	✓	✓	✓	✓	✓	✓	✓		Analysis	YES	Minor Exams, Quiz, End Term Exams
CO 4: 4. To make the students learn the techniques and skill of conducting teaching in the formal classroom.	✓			✓	✓		✓	✓	✓	✓	Analysis	YES	Minor Exams, Quiz, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-304/20 * Educational Tour I/Summer Training-I / Vacation Assignment-I

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. The education tour to one day to one or two-week duration be encouraged to be undertaken by the students under faculty supervision. During or after the semester the term report shall be submitted to the class coordinator for assessment.	√	√	√	√	√	√	√	√	√	√	Understanding	YES	Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-305-10 /20 Professional Elective- I
Guidance and Counselling

Course Outcome	PO-a	PO-b	PO-c	PO-e	PO-f	PO-h	PO-i	PO-l	PSO-m	PSO-n		Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Architectural Knowledge	Problem Solving	Design development	Use of Modern tool	Socially responsible architecture	Ethics	Individual and team work	Life-long Learning	Analysis and Design Skill	Research and Innovation				
CO1:1. : At the end of the course, the students will able to Develop the skill of administration and interpretation of psychological tests.	√	√	√	√	√	√	√	√	√	√		Understanding	YES	Sheet work, site study, End term exam and assignment

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-309/19 Open Elective- I Digital Architecture

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to develop an understanding of the various digital software used in Architecture.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding, Application and Analysis	Yes	Project, Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-311-15 /20 Open Elective- I Life Skill /Soft Skill

Course Outcome	PO-a	PO-b	PO-c	PO-e	PO-f	PO-h	PO-i	PO-l	PSO-m	PSO-n	Learning Level	Focus on Employability / Entrepreneurship / Measure Attainment of CO	Assessment Tools to Measure Attainment of CO
	Architectural Knowledge	Problem Solving	Design development	Use of Modern tool	Socially responsible architecture	Ethics	Individual and team work	Life-long Learning	Analysis and Design Skill	Research and Innovation			
CO1:1. : At the end of the course, the students will able to Develop an awareness of the self and apply well-defined techniques to cope with emotions and stress.	✓	✓	✓	✓	✓	✓	✓	✓	✓		Understanding	YES	Sheet work, site study
CO2:2. Use appropriate thinking and problem-solving techniques to solve new problems.										✓	Application	YES	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-308/19 Open Elective- I GREEN BUILDINGS

Course Outcome	PO-a Architectural Knowledge	PO-b Problem Solving	PO-c Design development	PO-e Use of Modern tool	PO-f Socially responsible architecture	PO-h Ethics	PO-i Individual and team work	PO-l Life-long Learning	PSO-m Analysis and Design Skill	PSO-n Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to Identify major challenges facing the planet earth and human society.	v		v	v	v	v	v		v		Understanding	YES	Sheet work, site study
CO2:2. Perform detail performance evaluation of a building based on green rating standards.		v						v		v	Application	YES	Minor Exams, Quiz, End Term Exams

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch (Architecture Education & Research)

Paper UC/MARCH-401/20 Teaching Practice (Institutional Experience)

Course Outcome		Architectural Knowledge	Problem Solving	Design development	Use of Modern tool	Socially responsible architecture	Ethics	Individual and team work	Life-long Learning	Analysis and Design Skill	Research and Innovation	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
		PO-a	PO-b	PO-c	PO-e	PO-f	PO-h	PO-i	PO-l	PSO-m	PSO-n			
CO1:1. The subject aims to culminate all teaching procedures, techniques, and experiences learned and practiced in an array of subjects undertaken during the course.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding, Application and Analysis	Yes	Record of training, report, Sheet work, site study

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Arch
(Architecture Education & Research)

Paper UC/MARCH-402/20 Dissertation-II

Course Outcome	PO-a	PO-b	PO-c	PO-e	PO-f	PO-h	PO-i	PO-l	PSO-m	PSO-n	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Architectural Knowledge	Problem Solving	Design development	Use of Modern tool	Socially responsible architecture	Ethics	Individual and team work	Life-long Learning	Analysis and Design Skill	Research and Innovation			
CO1:1. To understand and Analysis the project and find the solution.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding, Application and Analysis	Yes	Thesis report, Sheet work, site study

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC-MURP101 Planning Studio -

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: To enable the students to understand the socio-economic and political context along with the land-use dynamics of the study area in relation to the city. The focus of this studio will be to develop the students' skills in area appreciation and mapping techniques.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			Analysis	Yes	Sheet work, site study,Minor Exams, End Term Exams

PO descriptions:
- **PO-a:** Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.
- **PO-b:** Problem Solving
- **PO-c:** Planning development
- **PO-d:** Conduct Investigations/ Pre - Planning research
- **PO-e:** Use of Modern tool
- **PO-f:** Socially responsible Planning
- **PO-g:** Environment and Sustainability outLook
- **PO-h:** Ethics
- **PO-i:** Individual and team work
- **PO-j:** Communication
- **PO-k:** Management and finance
- **PO-l:** Life-long Learning
- **PSO-m:** Analysis and Planning Skill
- **PSO-n:** Research and Innovation
- **PSO-o:** gain advanced knowledge in Planning practices

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC-MURP102
Geoinformatics Systems - I

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: To introduce the information systems and develop basic computing skills relevant to planning			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	A understanding g	Yes	Minor Exams, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC-MURP103 History of Human Settlements

Code	Program Outcome	Mapping
PO-a	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	
PO-b	Problem Solving	
PO-c	Planning development	✓
PO-d	Conduct Investigations/ Pre - Planning research	✓
PO-e	Use of Modern tool	
PO-f	Socially responsible Planning	✓
PO-g	Environment and Sustainability outLook	✓
PO-h	Ethics	✓
PO-i	Individual and team work	
PO-j	Communication	✓
PO-k	Management and finance	✓
PO-l	Life-long Learning	✓
PSO-m	Analysis and Planning Skill	✓
PSO-n	Research and Innovation	✓
PSO-o	gain advanced knowledge in Planning practices	✓

Course Outcome:

CO1: To equip the students with the required knowledge of conventional and contemporary planning thought, pluralistic nature of values in the profession, planning approaches and models. And to focus on integrating procedural and substantive elements of planning theory to current and future planning practices.

Learning Level: Understanding

Focus on Employability / Entrepreneurship:

Assessment Tools to Measure Attainment of CO: Minor Exams, End Term Exams.

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: M.Plan

Paper UC-MURP104 Planning Techniques and Quantitative Methods

Course Outcome	PO-a Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	PO-b Problem Solving	PO-c Planning development	PO-d Conduct Investigations/ Pre - Planning research	PO-e Use of Modern tool	PO-f Socially responsible Planning	PO-g Environment and Sustainability outLook	PO-h Ethics	PO-i Individual and team work	PO-j Communication	PO-k Management and finance	PO-l Life-long Learning	PSO-m Analysis and Planning Skill	PSO-n Research and Innovation	PSO-o gain advanced knowledge in Planning practices	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: To acquire proficiency in statistical techniques and able to conduct empirical studies employing statistical software.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Understanding	Yes	Minor Exams, Quiz, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC-MURP105 Environment Planning

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: To give insights on global and local issues of environmental concern and introduce fundamental concepts and policies related to housing.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Understanding	Yes	Sheet work, site study,Minor Exams,End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC-MURP106 Infrastructure
Planning -I

Course Outcome	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas. PO-a	Problem Solving PO-b	Planning development PO-c	Conduct Investigations/ Pre - Planning research PO-d	Use of Modern tool PO-e	Socially responsible Planning PO-f	Environment and Sustainability outLook PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Planning Skill PSO-m	Research and Innovation PSO-n	gain advanced knowledge in Planning practices PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: To provide exposure to infrastructure and its sub-sectors relevant to physical planner in planning and design of urban and regional Infrastructure .	√	√	√	√	√	√	√	√		√	√	√	√	√	√	Understanding	Minor Exams, End Term Exams	

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Name of the Department: M.Plan

Paper UC-MURP107 Socio-Economic Planning

Course Outcome	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas. PO-a	Problem Solving PO-b	Planning development PO-c	Conduct Investigations/ Pre - Planning research PO-d	Use of Modern tool PO-e	Socially responsible Planning PO-f	Environment and Sustainability outLook PO-g	Ethics PO-h	Individual and team work PO-i	Communication PO-j	Management and finance PO-k	Life-long Learning PO-l	Analysis and Planning Skill PSO-m	Research and Innovation PSO-n	gain advanced knowledge in Planning practices PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: To provide exposure to concepts, theory and issues relating to socio-economic aspects towards planning of settlements. Also provide understanding of the society and the economy of the nation and its importance in spatial planning.	√		√	√	√	√	√	√		√	√	√	√	√	√	Analyzing		Minor Exams, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP - 201/19 Planning
Studio -II (Urban Planning)

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to Analyse urban situations and develop logical decision-making skill.	√	√	√	√	√	√	√	√	√	√	√	√	√		√		Sheet work, site study	
CO 2: 2. To address the complex overlays of conceptualisation, implementation and finance.			√	√	√	√	√	√		√	√	√	√	√	√		Minor Exams, End Term Exams	

Column headers (PO descriptions):
- PO-a: Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.
- PO-b: Problem Solving
- PO-c: Planning development
- PO-d: Conduct Investigations/ Pre - Planning research
- PO-e: Use of Modern tool
- PO-f: Socially responsible Planning
- PO-g: Environment and Sustainability outLook
- PO-h: Ethics
- PO-i: Individual and team work
- PO-j: Communication
- PO-k: Management and finance
- PO-l: Life-long Learning
- PSO-m: Analysis and Planning Skill
- PSO-n: Research and Innovation
- PSO-o: gain advanced knowledge in Planning practices

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus

Name of the Department: M.Plan

Paper UC/MURP - 202/19 Geoinformatics Systems - II																		
Course Outcome	PO-a (Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.)	PO-b (Problem Solving)	PO-c (Planning development)	PO-d (Conduct Investigations/ Pre - Planning research)	PO-e (Use of Modern tool)	PO-f (Socially responsible Planning)	PO-g (Environment and Sustainability outLook)	PO-h (Ethics)	PO-i (Individual and team work)	PO-j (Communication)	PO-k (Management and finance)	PO-l (Life-long Learning)	PSO-m (Analysis and Planning Skill)	PSO-n (Research and Innovation)	PSO-o (gain advanced knowledge in Planning practices)	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to Apply concepts of geo-informatics and computing skills in the relevant software.		√	√	√	√	√	√	√	√	√		√				Application	Yes	Minor Exams, End Term Exams
CO 2: 2. Understand their relevance and applicability in urban and regional planning.			√	√	√	√	√	√		√		√	√	√	√	Understanding	Yes	Minor Exams, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

Paper UC/MURP - 203/19 City and Metropolitan Planning

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship / Attainment of CO	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1:1. At the end of the course, the students will able to Understand City – Region Linkages and problems of Metro and Mega Cities and role of urban development policies and problems.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding	Yes	Minor Exams, End Term Exams

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Name of the Department: M.Plan

Course Outcome	PO-a (Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.)	PO-b (Problem Solving)	PO-c (Planning development)	PO-d (Conduct Investigations/ Pre - Planning research)	PO-e (Use of Modern tool)	PO-f (Socially responsible Planning)	PO-g (Environment and Sustainability outLook)	PO-h (Ethics)	PO-i (Individual and team work)	PO-j (Communication)	PO-k (Management and finance)	PO-l (Life-long Learning)	PSO-m (Analysis and Planning Skill)	PSO-n (Research and Innovation)	PSO-o (gain advanced knowledge in Planning practices)	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
Paper UC/MURP - 204/19 Infrastructure Planning -II																		
CO1:1. At the end of the course, the students will able to Prepare schemes and programmes related to infrastructure development as a component for inclusive development.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Understanding	Yes	Minor Exams, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

Name of the Department: M.Plan

Paper UC/MURP - 205/19 Planning Legislations and Governance

Course Outcome	PO-a (Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.)	PO-b (Problem Solving)	PO-c (Planning development)	PO-d (Conduct Investigations/ Pre - Planning research)	PO-e (Use of Modern tool)	PO-f (Socially responsible Planning)	PO-g (Environment and Sustainability outLook)	PO-h (Ethics)	PO-i (Individual and team work)	PO-j (Communication)	PO-k (Management and finance)	PO-l (Life-long Learning)	PSO-m (Analysis and Planning Skill)	PSO-n (Research and Innovation)	PSO-o (gain advanced knowledge in Planning practices)	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to To learn plan preparation with respect to planning legislation.	√	√	√	√	√	√	√	√	√	√	√	√				Application	Yes	Minor Exams, End Term Exams
CO2:2. Understand the working of government at central- state and local level.			√	√	√	√	√	√		√	√	√	√	√	√	Understanding		Minor Exams, End Term Exams
CO3:3 To learn how to advise on governance of cities and their regions.	√	√	√	√	√	√	√	√	√	√			√	√	√	Application	Yes	Minor Exams, End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-211/19 (EL- I) Demography and Planning																		
Course Outcome	PO-a (Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.)	PO-b (Problem Solving)	PO-c (Planning development)	PO-d (Conduct Investigations/ Pre - Planning research)	PO-e (Use of Modern tool)	PO-f (Socially responsible Planning)	PO-g (Environment and Sustainability outLook)	PO-h (Ethics)	PO-i (Individual and team work)	PO-j (Communication)	PO-k (Management and finance)	PO-l (Life-long Learning)	PSO-m (Analysis and Planning Skill)	PSO-n (Research and Innovation)	PSO-o (gain advanced knowledge in Planning practices)	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1:1. At the end of the course, the students will able to Prepare demographic data of the country.	√	√	√	√	√	√	√	√	√	√	√	√		√	√	Application	Yes	Minor Exams,End Term Exams
CO2:2. Understand the requirements of the population		√	√	√	√	√	√	√		√	√	√	√	√	√	Understanding		Minor Exams,End Term Exams

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Note: Provide Mapping for all courses of all programs offered by the Department

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Mohali Campus-II

Name of the Department: M.Plan

Paper UC/MURP-212/19 (EL- I) Urban Development Programs

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1:1. At the end of the course, the students will able to Appreciate Indian art and architecture and salient features of its heritage sites.	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	Understanding	Yes	Minor Exams, End Term Exams
CO2:2. Understand the institutional framework of the country.			v	v	v	v	v	v	v	v	v	v	v	v	v	Understanding	Yes	Minor Exams, End Term Exams

Name of the Department: M.Plan

Paper UC/MURP-213/19 (EL- I)
Planning of New Towns

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1:1. At the end of the course, the students will able to Understand the use and power of emerging new technologies and social networks among communities.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding	Yes	Minor Exams, End Term Exams
CO2:2. Understand the paradigm shift in the spatial planning outlook and governance edge.			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	Understanding		

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-214/19 (EL- I) Land Economics and finance																		
Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1:1. At the end of the course, the students will able to Examine and explain both theoretical and practical applicability of the different theories of urban growth.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					Analysis	Yes	Minor Exams, End Term Exams
CO2:2. Identify and Examine different problems faced on land and the built environment.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Analysis		Minor Exams, End Term Exams
CO3:3. Explain possible approaches of dealing with different problems identified on land and the built environment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Application		Minor Exams, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-301/19 Planning Studio -III (Regional Planning)

Program Outcomes:
- PO-a: Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.
- PO-b: Problem Solving
- PO-c: Planning development
- PO-d: Conduct Investigations/ Pre - Planning research
- PO-e: Use of Modern tool
- PO-f: Socially responsible Planning
- PO-g: Environment and Sustainability outLook
- PO-h: Ethics
- PO-i: Individual and team work
- PO-j: Communication
- PO-k: Management and finance
- PO-l: Life-long Learning
- PSO-m: Analysis and Planning Skill
- PSO-n: Research and Innovation
- PSO-o: gain advanced knowledge in Planning practices

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Prepare projects of regional scale.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	Application	Yes	Sheet work, site study, Minor Exams, End Term Exams
CO2: To address the complex overlays of context, linkages, legal frameworks and hierarchy.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Application		
CO3: Explain possible approaches of dealing with different problems identified on land and the built environment.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	Analysis		

Name of the Department: M.Plan

Course Outcome	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas. (PO-a)	Problem Solving (PO-b)	Planning development (PO-c)	Conduct Investigations/ Pre - Planning research (PO-d)	Use of Modern tool (PO-e)	Socially responsible Planning (PO-f)	Environment and Sustainability outLook (PO-g)	Ethics (PO-h)	Individual and team work (PO-i)	Communication (PO-j)	Management and finance (PO-k)	Life-long Learning (PO-l)	Analysis and Planning Skill (PSO-m)	Research and Innovation (PSO-n)	gain advanced knowledge in Planning practices (PSO-o)	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
Paper UC/MURP-302/19 Regional Planning																		
CO1: At the end of the course, the students will able to Understand of the issues of regional development, regional disparity and the need for balanced regional development.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Understanding	Yes	Minor Exams, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Paper UC/MURP-303/19 Research Methodology

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: At the end of the course, the students will able to Apply various research techniques for their research projects and thesis.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	Application	Yes	Minor Exams, End Term Exams
CO2: Understand and explore various areas of research in urban planning.	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	Understanding		Minor Exams, End Term Exams
CO3: Formulate a research a problem.		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	Application		Minor Exams, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-304/19 Review of Summer professional training / internship

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: At the end of the course, the students will able to Apply various research techniques for their research projects and thesis.	<	<	<	<	<	<	<	<	<	<	<	<		<	<	Application	Yes	End Term Viva Voce Exams
CO2: Understand and explore various areas of research in urban planning.			<	<	<	<	<	<	<	<	<	<	<	<	<	Understanding		
CO1: Formulate a research a problem.	<	<	<	<	<	<	<	<	<	<	<	<		<	<	Application		

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-PE-305(A)/19 (Elective-II) Special Area Planning

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: At the end of the course, the students will able to Develop development plans of special areas ;Understand the use and power of emerging new technologies and social networks among communities.	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	Application	Yes	Minor Exams,End Term Exams
CO2: Understand the governance and management aspects of these areas.			v	v	v	v	v	v	v	v	v	v	v	v	v	Understanding		

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-PE-305(B)/19 [Elective- II] Disaster Management

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Tools to Measure Attainment of
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: At the end of the course, the students will able to Understand the disasters and disaster management.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Understanding	Yes	Minor Exams, End Term Exams
CO2: Understand planning of disaster prone areas and know various mitigation measures and preparedness			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	Understanding		

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-PE-305(C)/19 (Elective-II) Project Planning and Management																			
Course Outcome	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas. **PO-a**	Problem Solving **PO-b**	Planning development **PO-c**	Conduct Investigations/ Pre - Planning research **PO-d**	Use of Modern tool **PO-e**	Socially responsible Planning **PO-f**	Environment and Sustainability outLook **PO-g**	Ethics **PO-h**	Individual and team work **PO-i**	Communication **PO-j**	Management and finance **PO-k**	Life-long Learning **PO-l**	Analysis and Planning Skill **PSO-m**	Research and Innovation **PSO-n**	gain advanced knowledge in Planning practices **PSO-o**	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Describe a project life cycle, and can skilfully map each stage in the cycle.	√	√	√	√	√	√	√	√	√	√	√	√		√	√	Understanding	Yes	Minor Exams, End Term Exams
CO2: Identify the resources needed for each stage, describe the time needed to successfully complete a project.		√	√	√	√	√	√	√		√	√	√	√	√	√	Analysis		Minor Exams, End Term Exams

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department

Paper UC/MURP-PE-305(D)/19(Elective-II) Rural Planning and Development

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
PO Description	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: At the end of the course, the students will able to Understand the policies and sectoral policies of rural planning.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Understanding	Yes	Minor Exams, End Term Exams
CO2: Will learn to raise the quality of life of the people in rural areas.	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	Analysizing		

Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP-OE-306/19 (Open Elective-I)
MOOC/SWAYAM/NPTEL/ Open learning course relevant to M.Plan course

Course Outcome	PO-a (Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.)	PO-b (Problem Solving)	PO-c (Planning development)	PO-d (Conduct Investigations/ Pre - Planning research)	PO-e (Use of Modern tool)	PO-f (Socially responsible Planning)	PO-g (Environment and Sustainability outLook)	PO-h (Ethics)	PO-i (Individual and team work)	PO-j (Communication)	PO-k (Management and finance)	PO-l (Life-long Learning)	PSO-m (Analysis and Planning Skill)	PSO-n (Research and Innovation)	PSO-o (gain advanced knowledge in Planning practices)	Learning Level	Focus on Employability / Entrepreneurship	Assessment Tools to Measure Attainment of CO
CO1: At the end of the course, the students will able to Understand the need of ICT in Learning	√	√	√	√	√	√	√	√	√	√	√	√				Understanding		Minor Exams, End Term Exams
CO2: Explore wide perspective of Learning beyond the limits of the classroom.			√	√	√	√	√	√		√	√	√	√	√	√	Understanding		

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Note: Provide Mapping for all courses of all programs offered by the Department

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Name of the Department: M.Plan

Paper UC/MURP - 401/19 Planning Thesis		

Course Outcome	PO-a	PO-b	PO-c	PO-d	PO-e	PO-f	PO-g	PO-h	PO-i	PO-j	PO-k	PO-l	PSO-m	PSO-n	PSO-o	Learning Level	Tools to Measure Attainment of CO	Focus on Employability / Entrepreneurship
	Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.	Problem Solving	Planning development	Conduct Investigations/ Pre - Planning research	Use of Modern tool	Socially responsible Planning	Environment and Sustainability outLook	Ethics	Individual and team work	Communication	Management and finance	Life-long Learning	Analysis and Planning Skill	Research and Innovation	gain advanced knowledge in Planning practices			
CO1: At the end of the course, the students will be able to have a basic understanding of the area chosen for study (by carrying out a detailed literature review).	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	Understanding	University Viva Voce	Yes
CO2: To undertake detailed exploration of the topic (by way of surveys and studies).	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Analyzing	University Viva Voce	Yes
CO3: To identify issues and concerns those emerge out of the study and suggest recommendations.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Application	University Viva Voce	Yes

(Signature of Head of Department)

Note: Provide Mapping for all courses of all programs offered by the Department