



**D. Y. Patil College of
Engineering and Technology**
Kasaba Bawada, Kolhapur

**Fourth Year B. Arch. Structure and
Syllabus
(Autonomous)**

(School of Architecture)

2023-2024

Curriculum w.e.f. 2023-24



SCHOOL OF ARCHITECTURE
D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY
KASABA BAWADA, KOLHAPUR-416006

An Autonomous Institute

Fourth Year B. Arch.

Curriculum w.e.f. 2023-24

STRUCTURE FOR B. ARCH SEM. - VII

Sr. No	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical/ Studio Hours			Type	Max. Marks	Min. Marks For Passing	
											Individual Course	Aggregate
1	201 AR401	PC	Advanced Architectural Design- I	1	-	6	7	200	ISE	100	50	100
									MSE			
									ESE (OE)	100	45	
									ESE (TH)			
2	201 AR402	PC	Neighborhood Design	1	-	3	4	200	ISE	100	50	100
									MSE			
									ESE (OE)	100	45	
									ESE (TH)			
3	201 AR403	PC	Interior Design	1	-	2	3	100	ISE	50	25	50
									MSE			
									ESE (OE)	50	23	
									ESE (TH)			
4	201 AR404	PC	Urban Design	1	-	2	3	100	ISE	50	25	50
									MSE			
									ESE (OE)	50	23	
									ESE (TH)			
5	201 AR405	BS & AE	Advanced Structure for Architecture I	3	-		3	100	ISE	20	10	50
									MSE	30	15	
									ESE (OE)			
									ESE (TH)	50	23	
6	201 AR406	PAECC	Professional Practice and Building By-Laws	3	-		3	100	ISE	20	10	50
									MSE	30	15	
									ESE (OE)			
									ESE (TH)	50	23	
7	201 AR407	PE	Professional Elective – V	3	-	-	3	100	ISE	20	10	50
									MSE	30	15	
									ESE (OE)			
									ESE (TH)	50	23	



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8	201 AR408	OEL	Open Elective - II	3	1	-	4	100	ISE	20	10	50
									MSE	30	15	
									ESE (OE)			
									ESE (TH)	50	23	
9	201 ARMC 409	Mandat ory Course	IPR	2				50	ESE (TH)	50	25	25
Total				16	1	13	30	1000		1000		500

STRUCTURE FOR B. ARCH. SEM. – VIII

Sr. No.	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical/ Studio Hours			Type	Max. Marks	Min. Marks for Passing	
											Individual Course	Aggregate
1	201 AR410	PAECC	Internship	-	-	90 working days	26	200	ISE	100	50	100
									MSE	-	-	
									ESE (OE)	100	45	
									ESE (TH)	-	-	
Total							26	200		200		100

ISE - In Semester Evaluation MSE - Mid Semester Examination ESE - End Semester Examination OE - Oral Examination TH – Theory.

NOTE: - As per CoA Gazette 2020 norms, minimum passing percentage for each individual course to be minimum 45%

PROFESSIONAL ELECTIVE- V			
Sr. No.	Course Code	Name of Course	SEMESTR
1	201AR407-A	Valuation and Project Management	VII
2	201AR407-B	Architectural Journalism	

OPEN ELECTIVES (OE)			
Sr. No.	Course Code	Name of Course	Semester
1	201AR408-A	Affordable Housing	VII
2	201AR408-B	Sustainable Community Living	



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<u>MANDATORY COURSE</u>		
SR. NO.	TITLE	BRIEF COURSE OUTLINE
1	Intellectual Property Rights (IPR)	Introduction to Intellectual property rights, copyright & patent. Types of IPR, copyrights & patent. Introduction to application process & awareness.

Total weeks – 15 weeks

ABBREVIATIONS	
PC	Professional Core
BS &AE	Building Sciences and Applied Engineering
PE	Professional Elective
OEL	Open Elective
PAECC	Professional Ability Enhancement Core Courses
SEC	Skill Enhancement Courses



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Course Plan

Course Title: Advanced Architectural Design –I	
Course Code :201AR401	Semester: VII
Teaching Scheme: L-T-P: 1-0-6	Credits: 7
Evaluation Scheme: ISE: 100	ESE (OE): 100

Course Description:

This course deals with integration of all aspects of horizontal and vertical planning for large scale and complex architectural projects in urban context. It also involves detail study and application of building byelaws and advanced services for buildings of different typologies. It also familiarizes students with campus planning, urban design, landscape architecture and sustainable principals of design.

Course Objectives:

1	To understand design aspects of largescale projects in urban/sub-urban context.
2	To study and apply advanced construction technologies applicable for large scale projects.
3	To identify scope and limitations of the given assignment as per building byelaws applicable to different typologies of buildings in urban setup.
4	To implement principles of campus planning in design.
5	To understand D.C Rules required for large-scale urban projects.
6	To inculcate sustainable approach of design and construction for urban projects.

Course Outcomes (COs):

COs	At the end of successful completion of course, the students will be able to...
C401.1	Understand fundamental aspects involved in design of buildings in urban form.
C401.2	Prepare data base essential for design process of largescale urban projects.
C401.3	Prepare preliminary design idea of large-scale urban projects in due consideration with aspects of planning, services, structural systems.
C401.4	Apply the knowledge of construction materials and technology.
C401.5	Design services with preparation of layouts and details along with supporting data, required for implementation of the same in their design.
C401.6	Apply the knowledge of design though various presentation techniques.

Prerequisite:

- Knowledge of conventional construction materials and methods.
- Basic knowledge of design process of medium-scale architectural projects.
- Ability to express architectural design projects using appropriate methods of presentation.



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Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Course Outcomes (COs) / Program Outcomes (POs) / Program Specific Outcomes (PSOs)	1	2	3	4	5	6	7	8	9	10	11	12	(PSOs)		BTL
													1	2	
													1	2	
C401.1	2	2	2	2			2		2	2			2	2	2
C401.2	2	2	2	2			2		2	2			2	2	3
C401.3	3	3	3	3			3		3	3			3	3	3
C401.4	3	3	3	3			3		3	3			3	3	3
C401.5	2	2	2	2			2		2	2			2	2	6
C401.6	2	2	2	2			2		2	2			2	2	3

Major design assignment:

The main design assignment should include, Public Buildings, Re-habilitation settlements, Mix –use buildings & long span structures etc. The project needs to be classified in urban/sub-urban/Rurban context. This assignment will have weightage of 75% for internal evaluation.

Minor design assignment:

Layouts of all relevant services in major design assignment. This assignment will have weightage of 25% for internal evaluation.

Unit No.	Course Content	Hrs.
1	Unit 01 Fundamental study	14
	1.1 Literature review	
	1.2 Conduct all necessary surveys.	
	1.3 Study of relevant byelaws, DC Rules and specific policies and strategies	
	1.4 Study of similar projects designed by master architects.	
	1.5 Analysis and synthesis of data collected	
2	Unit 02 Data base (data collection)	14
	2.1 Book/Net/Live case study (Min 1 International)	
	2.2 Interaction with subject experts and consultants in relation with the topic of design.	
	2.3 Site and contextual analysis	
	2.4 Analysis and synthesis of data collected	



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3		Unit 03 Preliminary design idea	28
	3.1	Formation of zones for horizontal and vertical zoning.	
	3.2	Selection of appropriate structural system.	
	3.3	Application of sustainable principles in design.	
	3.4	Conceptual design development with study models.	
	3.5	Presentation of all above	
4		Unit 04. Final design idea	21
	4.1	Transformation of preliminary design into final design.	
	4.2	Incorporation of sustainability, structural system, interior layout, landscape in design	
		Unit 05 Services design	
5	5.1	Preparation of layouts of all relevant services according to design topic, along with supporting documents and data. Presentation of all above	14
6		Unit 06 Design outcome	14
	6.1	Prepare Design proposal through various presentation techniques.	

Sessional work:

- 1 Fundamental study- Design program, surveys, bye laws, similar project study.
- 2 Database and case study - Data collection report & case study reports with hard copy.
- 3 Preliminary design idea - Conceptual plans, sections, materials and construction technology & models.
- 4 Final design idea - Final design idea including double line drawings incorporating interior layout, services, Landscaping & structural aspects).
- 5 Design outcome – Presentation of design idea through rendered drawings, PPT & modeling.

Reference material:

1	Time saver standards, Neufert architects' data- The hand book of building types.
2	UDCPR building byelaws
3	National Building Code of India 2016-(vol.1/2/3)



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Course Plan

Course Title: Neighborhood Design	
Course Code: 201AR402	Semester: VII
Teaching Scheme: L-T-P: 1-0-3	Credits: 04
Evaluation Scheme: ISE Marks: 100	ESE (OE) Marks: 100

Course Description:

The purpose of this course is to understand and develop the relationship between built environment and the overall environment. It covers the elements of town planning, urban design and landscape architecture. This course introduces the concept of F.S.I. as per prevailing byelaws for different types of residential units. Also, this course looks at the strategies to create sustainable cluster as well as neighborhood layout considering aspects of topography, climate, orientation, road hierarchy, housing types, concepts of densities etc.

Course Objectives:

1	To introduce the planning aspects for housing cluster and neighborhood layout.
2	To analyze the floor space index ratio for different typologies as per prevailing bylaws.
3	To prepare the master plan for neighborhood unit.

Course Outcomes (COs):

COs	At the end of successful completion of course, the students will be able to...
C402.1	Understand the planning aspects involved in town planning.
C402.2	Calculate F.S.I. for different housing typologies as per prevailing byelaws.
C402.3	Design a cluster unit.
C402.4	Understand the concept of neighborhood
C402.5	Analyze site of neighborhood planning
C402.6	Design the master plan for neighborhood unit.

Prerequisite: Basic knowledge of cognizance & land-use (color coding)



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													1	2	
													1	2	
C402.1	2	2	2	2		2	2		2	2			2	2	2
C402.2	3	2	2	3		3	3		3	3			3	3	3
C402.3	3	2	2	3		3	3		3	3			3	3	6
C402.4	2	2	2	2		2	2		2	2			2	2	2
C402.5	2	2	2	2		2	2		2	2			2	2	4
C402.6	3	3	3	3		3	3		3	3			3	3	6

Unit No.	Course Content	Hrs.
1	Theory: Planning	4
	1.1 Various theories of Town Planning	
	1.2 Existing Land use: Introduction to development plan of city/town – Land use typologies with colour codes and zoning.	
	1.3 Introduction to URDPFI guidelines for infrastructure planning	
2	F.S.I. Calculation	12
	2.1 Introduction to F.S.I. calculations of housing typologies based on prevailing byelaws.	
	2.2 F.S.I. calculations for different housing typologies. - assignment	
	2.3 Detail floor plans along with sections as per F.S.I. calculation.	
3	Cluster Unit	12
	3.1 Cluster Planning – Concept and introduction of assignment.	
	3.2 Classification and hierarchy of roads.	
	3.3 Case studies of cluster planning.	
	3.4 Layout of Cluster Unit in detail. (Area: 8 Ha to 10 Ha)	
4	Neighborhood Planning	8
	4.1 Neighborhood Planning – Concept and introduction of assignment.	
	4.2 Introduction and discussion on services.	
	4.3 Neighborhood Planning - case studies	



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5	Neighborhood - Site (Area: Minimum 20 Ha)		8
	5.1	Introduction to Neighborhood site	
	5.2	Site analysis and zoning	
6	Neighborhood - Master Plan		16
	6.1	Area calculations and allotment for LIG, MIG, HIG plotting, Group Housing, Open Spaces (park, children play park, children play ground), Amenities, Commercial Areas, Services etc.	
	6.2	Road hierarchy & sections	
	6.3	Master Plan for Neighborhood	

Text Book:

1	Hiraskar G., Fundamentals of Town Planning - Dhanpat Rai Publications
2	Abir Bandyopadhyay, Textbook of Town Planning
3	Gavin Parkar, Kat Salter and Matthew Wargent, Neighborhood Planning in Practice

Reference Books:

1	Nick Gallent and Steve Robinson, Neighbourhood planning Communities - networks and governance
2	Ross Chapin, Pocket Neighbourhoods creating small-scale community in a large scale world
3	Unified Development Control & Promotion regulations for Maharashtra State an illustrative manual

Video Links:

1	What is neighborhood planning concept? https://youtu.be/MgaE2Ww0du0
2	Five Features Every Neighborhood Needs-You tube https://youtu.be/q9F2xUTgWdo



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Course Plan

Course Title: Interior Design	
CourseCode:201AR403	Semester: VII
Teaching Scheme: L-T-P: 1-0-2	Credits:3
Evaluation Scheme: ISE Marks: 50	ESE(OE)Marks: 50

Course Description:

The course offers a comprehensive study of interior design. It aims to familiarize the students with interior design process of understanding the function and aesthetics of space and selecting the appropriate furniture and finishing materials, through small scale projects of human habitat. The design activity will be limited to the level of visual composition of architectural-interior spaces and human activities. The study will include building material exploration with respect to their use in different climates & acoustical considerations, colour, etc. This course will enable the students to apply creative and critical thinking to solve interior design issues from a human-centered approach.

Course Objectives:

1	To understand the fundamentals of interior design and the role of interior designer
2	To identify different space typologies and recent trends in Interior design
3	To understand and choose various services and finishes in Interior Design
4	To introduce the methodology to prepare estimates, rate analysis and BOQ for the furniture, interior Finishes

Course Outcomes (COs):

COs	At the end of successful completion of course, the students will be able to...
C.403.1	Interpret the intricacies of interior space planning and modern trends in the field.
C.403.2	Identify the historical and cultural influences and recent trends in Interior design
C.403.3	Understand the different space typologies and their functions
C.403.4	Understand the role of services in interiors.
C.403.5	Apply finishing materials in interior spaces with respect to space requirements
C.403.6	Prepare an estimate, rate analysis and BOQ of furniture items and interior finishes and carry out small and medium scale interior projects
Prerequisite: Knowledge of Anthropometry, Ergonomics, elements and Principles of Design	



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													1	2	
C.403.1	2	2	2				2		2	2			2	2	2
C.403.2	2	2	2				2		2	2			2	2	2
C.403.3	3	3	3				3		3	3			3	3	2
C.403.4	2	2	2				2		2	2			2	2	2
C.403.5	3	3	3				3		3	3			3	3	3
C.403.6	3	3	3				3		3	3			3	3	3

Course Content			Hrs.
1		Introduction to Interior design	6
	1.1	Definition & meaning of Interior Design, role of Interior Designer as a team player, scope of practice etc., a brief historical overview of the influence of various design movements on interior design	
	1.2	Role of Ergonomics in Interior Design	
	1.3	Elements and Principles of Interior Design	
	1.4	Introduction of design assignment of any one typology such as residential/ commercial/ institutional/ recreational interiors etc., case study presentation.	
2		Contemporary trends in Interior design	6
	2.1	Study of Modern and Contemporary trends in Interior design. Definitions, concepts, themes and types of interior spaces.	
	2.2	Design development of given assignment with respect to concept - Studio	
3		Study of different space typologies	9
	3.2	Behavioral psychology, perception and the related role of interior spaces	
	3.3	Design development of given assignment, Interior planning and zoning of activities - Studio	



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4		Services in Interior design	6
	4.1	Introduction of services like security systems, lighting, and other services for residential and public interiors	
	4.2	Design development of given assignment with respect to furniture detailing - Studio	
5		Material and technology in interior design	9
	5.1	Market survey of various materials used in interiors and its presentation.	
	5.2	Introduction to interior detailing for finishing like False ceiling, Partitions, Walls etc.	
	5.3	Application of materials with respect to Climate and Acoustics	
6		Estimation of Interior items	9
	6.1	Introduction to BOQ, Estimation of simple furniture units and finishing.	
	6.2	Rate analysis process for the above estimation	
	6.3	Estimation of one unit of the given interior design assignment -Studio	

Sessional Work:

Examples of project: Small-living space, Home-stay, Small sized showroom, Shop, Exhibition space etc.

Reference Books:

1	Kasu Ahmed - Interior Design, Ashish Book Centre (1 January 2018)
2	Time-Saver Standards For Interior Design and Space Planning, McGRAW-HILL
3	Ching D.K. Francis, Interior Design Illustrated, John Wiley & Sons, 2018
4	Energy Conservation Building Code page no. 58 - 68

Video/Audio Links:

1	https://www.youtube.com/watch?v=sIEvHTzAXhE - exterior lighting
2	https://www.youtube.com/watch?v=_cfMs_WJhgE interior lighting
3	https://www.youtube.com/watch?v=6xBTfQ-4lVU - residential interiors



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Course Plan

Course Title: Urban Design	
Course Code: 201AR404	Semester: VII
Teaching Scheme: L-T-P: 1-0-2	Credits: 03
Evaluation Scheme: ISE Marks:50	ESE (OE) Marks: 50

Course Description:

The intent of this course is to understand and analyze architecture at a broader city scale knowing the nuances in urban design and planning infrastructure. It encompasses the primary elements and principles of urban design. This course introduces the emerging concepts in urban design in the global south considering Indian context. Also, this course looks at various aspects of urban design, urban heritage and the significance of urban conservation in this discipline.

Course Objectives:

1	To understand the scope and nature of urban design.
2	To introduce various elements and principles of urban design.
3	To study the public realm through elements of urban design.
4	To study the heritage of urban design.
5	To familiarize with various theorists and their contributions in urban design.

Course Outcomes (CO's):

COs	At the end of successful completion of course, the students will be able to...
C.404.1	Comprehend architecture at the urban scale and concepts in urban design.
C.404.2	Understand the issues and spatial forms in a given urban area through morphological dimension.
C.404.3	Understand the different aspects of architectural and urban conservation, with respect to Indian context.
C.404.4	Understand the approach of urban design by various theorists.
C.404.5	Demonstrate cumulative learning of the course and design interventions of various urban areas.
C.404.6	Apply the insights of urban design study into architectural projects.

Pre-requisite: Knowledge of evolution of human settlements.



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													1	2	
C.404.1	2	2	2	2		2	2		2	2			2	2	2
C.404.2	3	3	3	3		3	3		3	3			3	3	2
C.404.3	2	2	2	2		2	2		2	2			2	2	2
C.404.4	3	3	3	3		3	3		3	3			3	3	2
C.404.5	2	2	2	2		2	2		2	2			2	2	3
C.404.6	3	3	3	3		3	3		3	3			3	3	3

Unit No.	Course Content	Hrs.
1	Introduction to Urban design	9
	1.1 Relationship between Architecture, Urban Design, and Urban Planning and a brief history of urban design as a discipline	
	1.2 Analyzing through examples of historic cities, a broad insight of urban forms and spaces at various spatial scales.	
2	Elements of Urban Design	9
	2.1 Reading the city as a three-dimensional entity, the complex interaction of masses, voids, order, scale, harmony, symmetry, color, and texture determining the urban form.	
	2.2 The Spatial organization and articulation in the form of squares, streets, vistas, and focal points, Public open space concept, Image of the city and its constituents, such as its edges, paths, landmarks, and street features will be studied.	
3	Principles of Urban Design	9
	3.1 Urban grain, urban pattern, urban morphology, urban texture, urban fabric, public realm, timeline etc.	



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4		Theorist's Theories	
	4.1	Theories of Garden Cullen, Aldo Rossi, Jane Jacob, Kevin Lynch, Collin Rowe, Jan Gehl.	
5		Heritage of Urban Design	9
	5.1	Identifying and understanding importance of varied urban historic settings, built heritage, urban ecology, natural heritage and cultural heritage conservation.	
6		Urban Design Interventions	
	6.1	Knowing the Sustainability concept, Relationship of urban design with economic, environmental and social sustainability.	
	6.2	Urban renewal and urban sprawl, Concepts of Transit Oriented Development, Compact City, Livable City and Walkable City.	

Reference Books:

1	Gallion Arthur B: "The Urban Pattern: City Planning and Design" 5 th edition
2	Kevin Lynch - "Image of the City":, 1977. The image of the city, Cambridge, Mass: MIT Press
3	Lewis Mumford "City in History": (ISBN:9780156180351, 0156180359)
4	Charles Correa "Housing and Urbanization", (ISBN:0500282102) Thames & Hudson Publication
5	Aldo Rossi: "Architecture of the City", MIT Press, Cambridge, Mass
6	Collin Rowe "Collage City", 2009 5 ^{ed} Birkhauser, Basel publisher
7	Rob Krier: " Street, public square facade" ,cliff moughtin third edition architectural press

Video/Audio Links:

1	https://youtu.be/T0gYPlz2zLk
2	https://youtu.be/VRRPy-yEKRM
3	https://youtu.be/R3n6PXmpwqo



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Course Plan

Course Title: Advanced Structure for Architecture-I	
Course Code: 201AR405	Semester: VII
Teaching Scheme: L-T-P: 3-0-0	Credits: 3
Evaluation Scheme: ISE Marks : 20+MSE Marks: 30	ESE(TH): 50

Course Description:

The course Advanced Structure deals with concepts behind advanced structural systems and structural behavior of various components for Industrial buildings. It deals with concept of earthquake resistant structures, modern compression & tension structures, portal frames & shells, economics and time factor in structural design with design material & systems. It also introduces concept of solving structural design with the help of software.

Course Objectives:

1	To understand the advanced structural systems in industrial building.
2	To apply technique of earthquake resistant structures.
3	To introduce software in structural design.
4	To study modern structural systems such as shells, portal frames, Arches & cable structures.

Course Outcomes (COs):

COs	At the end of successful completion of course, the students will be able to...
C405.1	Choose the appropriate Structural system and material for Industrial buildings
C405.2	Apply technique of earthquake resistant structures in industrial buildings.
C405.3	Understand use of software application in structural design.
C405.4	Understand the structural typologies and architectural space.
C405.5	Understand the modern concept of structures such as composite structures, multistory buildings, and cable structures.
C405.6	Understand the concept and structural action of Shells.

Prerequisite: Mechanics of structures, RCC and steel design theory.



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Course Outcomes (COs) / Program Outcomes (POs) / Program Specific Outcomes (PSOs)	1	2	3	4	5	6	7	8	9	10	11	12	(PSOs)		BTL
													1	2	
C405.1	3	3	3	3	2	2	2		2	2			2	2	3
C405.2	3	3	3	3	2	2	2		2	2			2	2	3
C405.3	2	2	2	2	1	2	2		2	2			2	2	2
C405.4	2	2	2	2	1	2	2		2	2			2	2	3
C405.5	2	2	2	2	1	2	2		2	2			2	2	2
C405.6	3	3	3	3	2	2	2		2	2			2	2	2

Unit No.	Course Content	Hrs.
1	Structural Components of Industrial Buildings	9
	1.1 Concept & structural behavior of Structural Component of Industrial building. Planning and designing, bays, ht. of columns etc.	
	1.2 Different types of trusses for large span above 15 M. Concept of truss less roofing.	
	1.3 Pre-Engineered Building (PEB)-Advantages & disadvantages	
	1.4 Gantry Girder-span, crane girder, cab, various forces acting on Gantry Girder different cross sections of Gantry Girder. Concept of plate girder.	
	1.5 Different elements and their functions, Splices, Curtailment of flange plate. Concept of Virendeel girder & Castellated girder	
2	Earthquake Resistant Structures	9
	2.1 Precautions in planning, different shapes in plan. Aspect ratio, Separation Joint	
	2.2 Behavior of Building for EQ forces	
	2.3 Detailing of framed structure (Ductile detailing)	
	2.4 Detailing of load bearing structure	



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3		Application of Computers in Structure	6
	3.1	Introduction of different software used in analysis & design of structure	
	3.2	Introduction to analysis of buildings	
4		Structural typologies with respect to architectural space	6
	4.1	Studies of the relationship between structure and space by application of structural types to multistory buildings.	
5		Modern Concepts of Structure	6
	5.1	Composite Structures - Concept & connection details, large span structures	
	5.2	Multistoried load bearing, non-load bearing structure	
6		Shells	9
	6.1	Concepts of shells, Introduction of folded plate, geodesic dome, hyperboloids, paraboloids	
	6.2	Concept of space frames	
	6.3	Pneumatic Structures (Air lifted Structures)	

Sessional Work:

1	Assignments based on all units.
2	Case study report based on unit 1 and unit 4

Text Book:

1	RK Bansal and Sanjay Bansal, Strength of Material, Laxmi publications, New Delhi
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Reference Books:

1	Julian Weyer & Sergio Baragano, Industrial Building Planning and Design, Design Media Publishing Limited.
2	Mario G. Salvadori & Others, The Building of Buildings, Prentice Hall; 3rd edition (1 November 1985)
3	F.L. Singer, Engineering Mechanics, HarperCollins publications

Video/ Audio Links:

1	https://www.digimat.in/nptel/courses/video/105107204/L01.html
2	http://www.digimat.in/nptel/courses/video/124105015/L01.html



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Course Plan

Course Title: Professional Practice and Building By-laws	
Course Code: 201AR406	Semester: VII
Teaching Scheme: L-T-P: 3-0-0	Credits: 03
Evaluation Scheme: ISE Marks : 20+MSE Marks: 30	ESE(TH)Marks:50

Course Description:

This course gives a brief overview about the scope and responsibilities of the Architectural Profession. The course intends to teach various aspects related to architectural practice, the legal procedures and process of project execution (tendering and contracting). The course will also develop an attitude of ethical professionalism, socio – economic responsibility and competency among the students, who will be future architects of our nation.

Course Objectives:

1	To understand the duties and responsibilities of an architect in profession.
2	To understand the scope and challenges in architectural practice.
3	To introduce prevailing building by-laws necessary for an architectural practice.
4	To understand the tender calling process in an architectural project.
5	To understand contractual processes in an architectural project.
6	To understand the contract management process in an architectural project.

Course Outcomes(COs):

COs	At the end of successful completion of course, the students will be able to...
C.406.1	Understand the duties and responsibilities of an Architect in profession.
C.406.2	Understand the scope and challenges in Architectural practice.
C.406.3	Understand prevailing building by-laws in Architectural practice.
C.406.4	Understand tender calling process in an architectural project.
C.406.5	Understand contractual processes in an architectural project.
C.406.6	Understand the contract management process in an architectural project.

Prerequisite: Students should have an understanding of different terminologies, related to architectural profession and practice.



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**Course Articulation Matrix: Mapping of Course Outcomes (COs) with
 Program Outcomes (POs) and Program Specific Outcomes (PSOs)**

Course Outcomes (COs) / Program Outcomes (POs) / Program Specific Outcomes (PSOs)	1	2	3	4	5	6	7	8	9	10	11	12	(PSOs)		BTL	
													1	2		
C.406.1	3					3		3	3	3	3	3	3	3	3	2
C.406.2	3					3		3	3	3	3	3	3	3	3	2
C.406.3	2					2		2	2	2	2	2	2	2	2	2
C.406.4	3					3		3	3	3	3	3	3	3	3	2
C.406.5	2					2		2	2	2	2	2	2	2	2	2
C.406.6	2					2		2	2	2	2	2	2	2	2	2

Unit No.	Course Content		Hrs.
1	Architectural Profession		9
	1.1	Understanding the profession of architecture and understanding duties, social Responsibilities and liabilities of an architect.	
	1.2	Introduction to Architects Act 1972.	
	1.3	Understanding the role of Council of Architecture & I.I.A in functioning of Profession	
	1.4	Introduction to Code of Professional Conduct.	
2	Architectural Practice		9
	2.1	Types of Architectural Practice (firms, partnership, types of contemporary practices etc.) Case studies of architectural firms in different cities in India and across the world.	
	2.2	Introduction to architectural competitions and its types.	
	2.3	Briefing on Client management, Human resource management, financial management.	



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	2.4	Introduction to Arbitration, Powers and Duties of an Arbitrator.	
3		Building By-laws	6
	3.1	Introduction of different by laws considering F.S.I, zoning regulations, sanctioning of different statutory bodies, its procedure etc. (N.B.C., UDCPR)	
	3.2	Easement Rights, its definition. Different types of Easement rights.	
	3.3	Introduction to different types of Acts essential in architectural practice.	
4		Tenders	9
	4.1	Introduction to Tender – definition, different types of Tenders.	
	4.2	Tendering – process, Notice, preparation of documents.	
	4.3	Calling of Tenders, earnest money, Security deposit, etc.	
	4.4	Role of Architect in various issues arising in tendering process.	
5		Contract	6
	5.1	Contract – definition, different types of contracts.	
	5.2	Different clauses of contract	
	5.3	Role of architect	
	5.4	Issues in Contract	
6		Contract Document	6
	6.1	Contract document	
	6.2	Certificates issued by an architect in a contractual process of an architectural project.	

Sessional Work:

1	Assignments based on units.
2	Assignment on unit –Tenders so as to understand the tendering process, with their own Architectural design assignment.

Text Books:

1	Roshan H. Namavati,-‘Professional Practice’, published by Lakhani book depot 1st edition 2016.
2	Krishnamurthy K.G. and Ravindra S.V.-‘Professional Practice: for Architects, Engineers and Builders, published by PHI Learning 2nd edition.
3	Bob Greenstreet, David Chappell and Michael Dumn, ‘Legal and Contractual Procedures for Architects’ by Architectural press,5 th edition 2002.
4	Green book, The Indian Institute of Architects.

Reference Books:

1	Unified Development Control and Promotion Regulations for Maharashtra state(2020).
2	National Building Code 2017.



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Video/Audio Links:

1	https://youtu.be/C2g_fHwjAz4
2	https://youtu.be/b13SYOjCCLY
3	https://www.youtube.com/watch?v=92MsCII4wZ0&pp=ygUkY29udHJhY3RpbmcgaW4gYnVpbGRpbmcgY29uc3RydWN0aW9u
4	https://youtu.be/3HrMSj3KuE8



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Fourth Year B. Arch.

Course Plan

Course Title: Professional Elective V- Valuation and Project Management	
Course Code: 201AR407A	Semester: VII
Teaching Scheme: L-T-P: 3-0-0	Credits :3
Evaluation Scheme: ISE Marks : 20+MSE Marks: 30	ESE (TH) Marks :50

Course Description:

This course helps students to study characteristics of value and valuation including factors affecting value, supply and demand cost of reproduction and valuation tables. It also introduces students to fundamentals of Project Management and its application in architecture.

Course Objectives:

1	To introduce valuation as a profession
2	To develop understanding of real estate market
3	To introduce basics of project management in architectural practice
4	To understand complexities of construction and managerial methods to deal with them.

Course Outcomes (COs):

COs	At the end of successful completion of course, the students will be able to...
C407A.1	Understand the concept and methods of valuation.
C407A.2	Execute the valuation of small immovable property.
C407A.3	Understand the concept of project feasibility report.
C407A.4	Understand the fundamentals of project management and role of architect as a project manager.
C407A.5	Understand traditional and modern management techniques.
C407A.6	Implement types of management for a construction project.

Prerequisite: Knowledge of estimation and working drawing.



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Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Course Outcomes (COs) / Program Outcomes (POs) / Program Specific Outcomes (PSOs)	1	2	3	4	5	6	7	8	9	10	11	12	(PSOs)		BTL
													1	2	
													1	2	
C407A.1				3	2			3	3	3	3			3	2
C407A.2				3	2			3	3	3	3			3	3
C407A.3				2	2			2	2	2	2			2	2
C407A.4				2	2			2	2	2	2			2	2
C407A.5				3	3			3	3	3	3			3	2
C407A.6				2	2			2	2	2	2			2	3

Unit No.	Course Content	Hrs.
1	Introduction to valuation Concept of Cost, price, value. Types of values. Purposes of valuation. Factors affecting valuation. Different methods of valuation of land. Different methods of valuation of building property. Concept of depreciation, outgoings and net income	9
2	Valuation of immovable property Introduction to valuation of immovable property, case study of small immovable property, assignment based on similar scale.	9
3	Project feasibility To study the different steps involved to prepare architectural project feasibility report.	3
4	Introduction to Project management Concept and fundamentals of project management, resources, PDCA cycle, correlation between architecture and project management.	6
5	Network techniques Introduction to basics of Network, Traditional network techniques like Bar chart, Milestone chart and Modern network techniques like CPM, PERT.	12
6	Types of Management Introduction to material management, equipment management, labor management, finance management, site management etc. Software in Project management Importance of legal aspects in Project Management	6



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Text Books:

1	K. K. Chitkara, Construction Project Management: Planning, Scheduling and Controlling, McGraw Hill Education India
2	Kumar NeerajJha, Construction Project Management Theory And Practice, Pearson Education India, 2011.

Reference Books:

1	Brian Greenhalgh, Introduction to Building Procurement, Routledge, 1 st Edition 2011.
2	Duncan Cartlidge, Construction Project Manager's Pocket Book, Routledge, 1 st Edition 2015.

Video/ Audio Links:

1	https://youtu.be/zuaUxkwil7o
2	https://youtu.be/0cm7crSxNIA



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Course Plan

Course Title: Professional Elective V - Architectural Journalism	
Course Code: 201AR407B	Semester: VII
Teaching Scheme: L-T-P: 3-0-0	Credits: 3
Evaluation Scheme: ISE Marks : 20+MSE Marks: 30	ESE (TH) Marks: 50

Course Description:

The course introduces the fundamentals of writing, explaining various techniques of architectural journalism such as interviews, documentation, critical appreciation etc. It also includes photojournalism. The course also introduces the students with current trends of digital journalism.

<u>Course Objectives:</u>	
1	To acquaint about the basic concepts of architectural journalism
2	To understand the various techniques of journalism
3	To sensitize with the legal aspects of journalism
4	To describe the contemporary practices in architectural journalism
5	To describe the various techniques of procuring information for architectural Journalism
6	To sensitize the students with current trends of digital journalism

Course Out comes (COs):

COs	At the end of successful completion of course, the students will be able to...
C407B.1	Imbibe the knowledge of architectural journalism
C407B.2	Apply the knowledge of journalism techniques
C407B.3	Understand legal aspects of journalism
C407B.4	Acquire the knowledge of contemporary practices in architectural journalism
C407B.5	Describe various ways of discussions and interactive sessions in architectural journalism
C407B.6	Understand various current trends and concepts of digital journalism
Prerequisite: Report writing skills in course Literary and Communication Skills	



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Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs)

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													1	2	
C407B.1	2	2		2	2	2	2	2		2				2	2
C407B.2	3	3		3	3	3	3	3		3				3	3
C407B.3	2	2		2	2	2	2	2		2				2	2
C407B.4	2	2		2	2	2	2	2		2				2	2
C407B.5	3	3		3	3	3	3	3		3				3	2
C407B.6	3	3		3	3	3	3	3		3				3	2

Unit No.	Course Content	Hrs.
1	Introduction to journalism	6
	1.1 Concepts and objectives of journalism	
	1.2 Introduction to architectural journalism	
	1.3 Journalism skills like research, reporting, editing, photography, criticism etc	
2	Various techniques in journalism	9
	2.1 Interviewing technique	
	2.2 Argument and debate technique related to any social problem	
	2.3 Video and walkthrough of buildings	
	2.4 Study of newspapers, films television	
2.5 Criticism and appreciation of built and unbuilt spaces		
3	Legal aspects of architectural journalism	6
	3.1 Issues such as copyright, public art policy	
	3.2 Code of ethics, basic knowledge of press laws	
	3.3 Press council of India	



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4		Contemporary techniques in Architectural journalism	6
	4.1	Editing of articles in newspapers and magazines	
	4.2	Text preparation, Mode of presentation, Standards and Guidelines for documentation	
5		Discussions and interactive sessions	9
	5.1	Contemporary and historical design practices	
	5.2	Discussions on current Architectural issues	
	5.3	Study of different types of Architectural journals	
	5.4	Scope of architectural journalism in different sectors	
6		Digital Journalism	9
	6.1	Limitation and scope of social media, podcast	
	6.2	Multimedia/online journalism and digital developments	
	6.3	Introduction to blogs, websites and webpages	

Sessional Work:

1	Assignment on each unit (written, presentations, interviews, article etc)
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Reference Books:

1	Edward Jay Friedlander and John Lee, "Feature Writing for Newspapers and Magazines", 4 th edition, Longman, 2000.
2	Fuller, David & Waugh, Patricia eds., "The Arts and Sciences of Criticism", Oxford: Oxford University Press, 1999.
3	M. Harris, "Professional Architectural Photography", Focal Press, 2001.
4	Ward, S. J. A. "Philosophical Foundations of Global Journalism Ethics." Journal of Mass Media Ethics., Vol. 20, No. 1, 3-21, 2005.
5	Huckerby, Martin, The Net for Journalists: A Practical Guide to the Internet for Journalists in Developing Countries. UNESCO/Thomson Foundation/ Common wealth Broadcasting Association, 2005.

Video/Audio Links:

1	https://www.youtube.com/watch?v=gs2gxoC4UP8
2	https://www.youtube.com/watch?v=xMFV2VS6FjI



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Course Plan

Course Title: Open Elective II - Affordable Housing	
Course Code: 201AR408A	Semester: VII
Teaching Scheme: L-T-P: 3-1-0	Credits: 04
Evaluation Scheme: ISE Marks : 20+MSE Marks: 30	ESE (TH) Marks: 50

Course Description:

This course enables students to understand the fundamentals of affordable housing for better living situations along with economical and sustainable living. It makes them understand the need for affordable housing, various affordable housing policies at both central and state level, various challenges and issues of affordable housing. It also makes students understand the technological advancements and design innovations in affordable housing.

Course Objectives:

1	To gain an understanding of the concept of affordable housing.
2	To describe the government policies in affordable housing.
3	To understand the difficulties in the implementation of policies in affordable housing.
4	To understand the impact of urbanization in housing sector.
5	To understand the innovative approaches of design globally in the affordable housing.
6	To discuss the importance of technological advancements in affordable housing.

Course Out comes (COs):

COs	At the end of successful completion of course, the students will be able to...
C.408A.1	Understand the fundamentals of affordable housing.
C.408A.2	Understand the government policies affordable housing.
C.408A.3	Discuss the issues and challenges in affordable housing.
C.408A.4	Understand the impact of urbanization and affordable housing in urban areas.
C.408A.5	Discuss the design innovations in affordable housing.
C.408A.6	Discuss the role of technology in affordable housing.

Prerequisite: NIL



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Course Outcomes (COs) / Program Outcomes (POs)/ Program Specific Outcomes (PSOs)	1	2	3	4	5	6	7	8	9	10	11	12	(PSOs)		BTL
													1	2	
C.4018A.1	3		3			3	3		2	2				3	2
C.4018A.2	2		2			2	2		1	1				2	2
C.4018A.3	3		3			3	3		2	2				3	2
C.4018A.4	2		2			2	2		1	1				2	2
C.4018A.5	2		2			2	2		1	1				2	2
C.4018A.6	3		3			3	3		2	2				3	2

Unit No.	Course Content		Hrs.
	Introduction to Affordable Housing		
1	1.1	Definition of Affordable Housing	12
	1.2	Difference between affordable housing and low cost housing	
	1.3	Eligibility for Affordable Housing	
	1.4	Need for Affordable Housing	
	Government Policies for Affordable Housing		
2	2.1	Need for government intervention in housing	12
	2.2	Central and State level policies	
	Affordable Housing - Issues and Challenges		
3	3.1	Infrastructural Challenges, Financial Challenges, Challenges in project implementation, Connectivity Challenges, etc.	8
	3.2	Participation of private sector	



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4		Affordable Housing and Urbanization	8
	4.1	Urbanization - Concept, Factors, Impact	
	4.2	Affordable Housing in urban areas	
5		Design Innovation in Affordable Housing	12
	5.1	Design strategies for affordable housing	
	5.2	Sustainable design and Energy Efficient Systems	
	5.3	Affordable Housing in Paris, European Cities, Amsterdam	
		Affordable Housing and Technology	8
6	6.1	Concept of Global Housing Technology Challenge (GHTC)	
	6.2	Impact of technology on cost	
	6.3	Technology in quality construction of affordable housing	

Tutorials: Based on each unit.

Reference Books:

1	LAL A. K., Handbook of Low Cost Housing, New Age International Private Limited
2	Kathryn Vercillo and Jon Nunan, Complete Guide to Alternative Home Building Materials & Methods: Including Sod, Compressed Earth, Plaster Straw, Beer Cans Cordwood & Many Other Low Cost Materials, Atlantic Publishing Co; Illustrated edition (11 May 2021)
3	Gonzalo Lizarralde, The Invisible Houses: Rethinking and designing low-cost housing in developing countries, Routledge

Video/Audio Links:

1	https://youtu.be/GE0sNuStiOs - Alejandro Aravena's low-cost housing solutions
2	https://youtu.be/SoJR6nFMTxU - Laurie Baker: The Architect of the Poor



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Course Plan

Course Title: Open Elective II - Sustainable Community Living	
Course Code:201AR408 B	Semester: VII
Teaching Scheme: L-T-P:3-1-0	Credits: 04
Evaluation Scheme: ISE Marks : 20+MSE Marks: 30	ESE(TH)Marks:50

Course Description:

The course introduces concepts of communities planned and built to promote sustainable living. It includes the aspects of sustainable living such as efficient use of land, energy, and other resources, allowing the area to achieve a high quality of life with minimal waste and environmental damage. The course introduces the components of a sustainable community such as leadership, civic engagement and responsibility, ecological integrity, economic security, social well-being.

Course Objectives:

1	To introduce 17 SDGs and focus on importance of SDG 11.
2	To introduce various sustainable modes of transportation.
3	To create an awareness regarding sustainable waste management.
4	To understand the difference between green spaces and public spaces.
5	To understand the importance of cultural and natural world heritage sites.
6	To impart the knowledge of the mitigation and adaptation measures towards the global climatic change.

Course Outcomes (COs):

COs	At the end of successful completion of course, the students will be able to...
C.4018B.1	Understand the importance of 17 SDGs & SDG 11
C.4018B.2	Analyze the various sustainable modes of transportation
C.4018B.3	Remember the sustainable community waste management measures
C.4018B.4	Understand the difference between green spaces and public spaces
C.4018B.5	Understand the importance of cultural and natural world heritage sites
C.4018B.6	Remember the mitigation and adaptation measures towards the global climatic change
Prerequisite: Knowledge of the course Environmental Studies	



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													1	2	
C.4018B.1	3		3			3	3		3	3			2	2	2
C.4018B.2	2		2			2	2		1	1			3	3	4
C.4018B.3	2		2			2	2		1	1			2	2	1
C.4018B.4	3		3			3	3		3	3			3	3	2
C.4018B.5	3		3			3	3		3	3			2	2	2
C.4018B.6	2		2			2	2		1	1			3	3	1

Unit No.	Course Content	Hrs.
1	Introduction	8
	1.1 Introduction to 17 Sustainable Development Goals	
	1.2 Definition of Sustainable communities - SDG-11- Sustainable cities and communities.	
2	Sustainable Transport	12
	2.1 Definition, History of Mass Motorization, Transit oriented development of European cities, Impact of Transportation on Environment, Benefits of Sustainable Transport	
	2.2 Measures for Sustainable Transport – Use of Hybrid vehicles, Electrical vehicles, Green vehicles, Animal powered vehicles (rural areas) – Improving Cycling & Walking environments, Electrical rails, Enhancing role of Public transport (Metros, Buses), Access to all for public transportation (intermodal transport connections), Connection of Coastal cities by Waterways	
	2.3 Case studies of sustainable transport-Europe-(Paris, Amsterdam, Copenhagen) – Indian Metro (Mumbai, Kolkata, Delhi)	
3	Waste Management	8
	3.1 Direct community-member engagement and accountability, Tracking of waste collection and reduction, Segregation of waste at the household level, Composting of organic waste	
	3.2 On-site utilization of valuable and reusable items, Collection and transportation of waste to a treatment site by a public collection service. Case study	



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4		Green & Public Spaces	12
	4.1	Green space as a component of Green Infrastructure- definition of green infrastructure, green spaces, public spaces	
	4.2	Benefits /impacts of urban green spaces –Recreational, Ecological, Aesthetical, Social, Health & Wellbeing.	
	4.3	Greening of public spaces	
	4.4	Universal Access to Green & Public Spaces - Safe & Inclusive Green spaces for Elderly, Women & Children – Distribution Equitability within city.	
	4.5	Community Partition & Sustainable Gardening Practices	
5		Protect and safeguard the worlds cultural and natural heritage	12
	5.1	Introduction to heritage committees like UNESCO, OWHC, WMF, etc, inclusions of natural and cultural heritage, criteria for selection of world heritage site.	
	5.2	List of factors affecting the heritage properties, sustainable community participation to protect and safeguard worlds cultural and natural heritage.	
6		Mitigation and adaptation to climate change	8
	6.1	Introduction to climate change, Measures for mitigating and adapting to climate change, Introduction to various climate change summits all over the world and their strategies	
	6.2	Climate resilience, its example and one case study of climate resilience plans/programs	

Reference Books:

1	SDG11, Sustainable Cities and Communities Edited By Shyama V. Ramani ORCID Icon, Hiroshan Hettiarachchi ORCID Icon Edition 1st Edition, First Published 2022, eBook Published 17 June 2022, Pub. Location London, Imprint Routledge India
2	SDG-11: Sustainable Cities and Communities, Sinan Küfeoğlu
3	Green economy: cities investing in energy and resource efficiency, United Nations Environment Programme
4	Environmental Science and Engineering, Volume 5, Solid Waste Management, U C Sharma, Neetu Singh.
5	Emerging and Eco-Friendly Approaches for Waste Management Ram Naresh Bharagava, Pankaj Chowdhary
6	Adaptation and mitigation strategies in response to climate change, Authors: Makoto Tamura and Nobuo Mimura Main Title: Climate Change and Global Sustainability, pp 133-149 Publication Date: October 2013

Video/Audio Links:

1	https://youtu.be/VI3Ef1Rytz8
2	https://youtu.be/A5Je3eCwrpA



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Fourth Year B. Arch.

Course Plan

Course Title: Intellectual Property Rights (Mandatory Course)	
Course Code: 201AR409	Semester: VII
Teaching Scheme: L-T-P: 2-0-0	Credits: 0 (Non Credit Course)
Evaluation Scheme: ISE Marks: ---	ESE (TH) Marks: 50

Course Description:

The course is designed to provide comprehensive knowledge to the students regarding the general principles of intellectual property rights (IPR), concept and theories, background and development of various acts, laws and agreements, International Regime Relating to IPR

Course Objectives:

1	To explain the basic concepts of Intellectual Property
2	To understand the concept of patent
3	To sensitize about emerging issues in trademark
4	To identify the inventions in theory written by the students
5	To describe various registration processes of IPR
6	To sensitize the students of their rights for the protection of their invention done

Course Out comes (COs):

COs	At the end of successful completion of course, the students will be able to...
C.409.1	Imbibe the knowledge of Intellectual Property
C.409.2	Understand process of acquiring the patent
C.409.3	Understand process of trademark compliance
C.409.4	Identify originality and the uniqueness of their work
C.409.5	Apply the knowledge of IPR for registration, license and further professional development
C.409.6	Understand various agreements and acts of IPR and its protection through various act and laws

Prerequisite: Nil



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Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Course Outcomes (COs) / Program Outcomes (POs) / Program Specific Outcomes (PSOs)	1	2	3	4	5	6	7	8	9	10	11	12	(PSOs)		BTL
													1	2	
C.409.1						1		1				1			2
C.409.2						2		2				2			2
C.409.3						2		2				2			2
C.409.4						1		1				1			2
C.409.5						1		1				1			3
C.409.6						2		2				2			2

Unit No.	Course Content	Hrs.
1	Introduction Introduction to IPRs, Basic concepts and need for Intellectual Property - Patents, Copyrights, Geographical Indications, IPR in India and Abroad	4
2	Patent Origin, Meaning of Patent, Types, Inventions which are not patentable, Registration Procedure, Rights and Duties of Patentee, Assignment and license, Restoration of lapsed Patents, Surrender and Revocation of Patents, Infringement, Remedies & Penalties	6
3	Trademarks Rights of trademarks- kind of signs used as a trademarks, types, purpose and function of a trademark, trademark protection, trademark registration, acquisition of trademark rights, protectable matter, trademark registration process.	6
4	Copyrights Origin, Definition & Types of Copy Right, Registration procedure, Assignment & license, Terms of Copy Right, Piracy, Infringement, Remedies, Copy rights with special reference to software	4
5	Registration of IPRs Legal requirements for patent, Meaning and practical aspects of registration of Copy Rights, Trademarks, Patents	4



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6	Agreements and legislations International Treaties and Conventions on IPRs, TRIPS Agreement, PCT Agreement, Patent Act of India, Patent Amendment Act, Design Act, Trademark Act, Geographical Indication Act, Infringement of IPRs, Enforcement Measures, Emerging issues	6
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Reference Books:

1	V. Scople Vinod, Managing Intellectual Property, Prentice Hall of India Pvt. Ltd., 2012.
2	S. V. Satakar, "Intellectual Property Rights and Copy Rights, Ess Ess Publications, New Delhi, 2002.
3	Deborah E. Bouchoux, "Intellectual Property: The Law of Trademarks, Copyrights, Patents and Trade Secrets", Cengage Learning, Third Edition, 2012.
4	Prabuddha Ganguli, Intellectual Property Rights: Unleashing the Knowledge Economy", McGraw Hill Education, 2011.
5	Prabuddha Ganguli. Intellectual Property Rights. 1st Edition, TMH, 2012.

Video/Audio Links:

1	https://youtu.be/g4Tbq22NHag
2	https://youtu.be/WZREm0_THVg



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Fourth Year B. Arch.

Course Plan

Course Title: Internship	
Course Code: 201AR410	Semester: VIII
Teaching Scheme: L-T-P: 0-0-0	Credits: 26
Evaluation Scheme: ISE Marks: 100	ESE (OE) Marks: 100

Course Description

Intention of this course is to provide students opportunity to physically work in professional architectural firms of repute. This course enables students to experience and learn various aspects of a well functioning professional architectural firm/company. Students observe day to day functioning of an architectural firm to understand the interrelationships between various sections. Student get scope to share responsibility of assigned works by making drawings, details, models, estimates etc. It Students get opportunity to visit live projects to, observe, measure, experience and record the ongoing construction work at site. It also makes students to interact with various agencies involved in the execution of architectural and construction projects.

Course Objectives:

1	To observe office administration and day to day work culture of architectural firm.
2	To know manpower and infrastructure requirements of professional architectural firms/companies.
3	To observe role of various consultants and agencies in design and execution of architectural projects.
4	To acquire practical knowledge and skills of making professional drawings, models, estimates etc.
5	To observe and experience ongoing construction works through site visits.

Course Out comes (COs):

COs	At the end of successful completion of course, the students will be able to...
C.410.1	Understand infrastructure and manpower requirements of a professional architectural firms
C.410.2	Apply knowledge of design and construction into drawings, details and supervision of projects.
C.410.3	Prepare professional drawings and models required for approval and execution of architectural projects
C.410.4	Communicate effectively with various stakeholders of architectural projects.
C.410.5	Apply building and other byelaws in design and execution of architectural projects.

Prerequisite:

- Good knowledge of all theoretical as well as practical courses studied before.
- Good communication skills.
- Good knowledge of architectural software.



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Course guidelines

- All students who have appeared for Fourth Year B. Arch. Semester VII Exam will proceed for Final Year B-Arch Semester VIII - Internship
- The students will have to complete internship under a registered architect in Private Office/ Corporate office / Government Organizations under mentorship of an architect having experience of at least 5 years with the permission and approval of the Principal HOD/Director of the college. The period of practical training shall be of one semester of 15 weeks / 90 working days.
- Internship in Foreign Country shall be done under the Registered Architect of that Country and to be approved and monitored by the Head of the University or Institution.
- At the end of each Semester the candidate will have to submit to the department, the internship report (in stipulated format with drawings) along with the certificate by the employer to the effect that he/she has completed internship satisfactorily for the stipulated period.
- The student has to appear for the internal & external viva examination as per the exam schedule announced by the Institute at the end of the semester.
- The student should attend the office regularly and work full-time and should follow the discipline and days/ hours of the organization. He/she is also expected to observe general working of the office as a whole. His/her minimum attendance in the office should be 90 full working days.
- During this period, the student will maintain a log-book as prescribed and it shall counter signed by Principal of that office along with the professor-in-charge. The student is expected to work in an office or on work site during this period, in accordance with the discipline of the organization. The student should send a fortnightly report on his/her training, counter signed by the employer to the institution.
- If a student feels that he/she is not getting proper training in an office, then with the permission of the Head of the Department, he/she may go for training in some other office without break and give due intimation at least a fortnight before leaving, to the office working at.
- **At the end of the Semester student should complete at least one certified Educational Course (NPTEL, Coursera, MOOC, etc) of minimum 4 weeks.**

Note- 22 Credits will be allotted for internship and 4 Credits will be allotted for the certification course.
