



**RAMAIAH**  
Institute of Technology

# **CURRICULUM**

**for the Academic year 2020 – 2021**

**SCHOOL OF ARCHITECTURE**

**VII & VIII Semester B. ARCH**

**RAMAIAH INSTITUTE OF TECHNOLOGY**

(Autonomous Institute, Affiliated to VTU)

Bangalore – 560054.

## **About the Institute:**

Dr. M. S. Ramaiah a philanthropist, founded ‘Gokula Education Foundation’ in 1962 with an objective of serving the society. M S Ramaiah Institute of Technology (MSRIT) was established under the aegis of this foundation in the same year, creating a landmark in technical education in India. MSRIT offers 13 UG programs and 15 PG programs. All these programs are approved by AICTE. All the UG programs & 09 PG programs are accredited by National Board of Accreditation (NBA). The institute is accredited with ‘A’ grade by NAAC in 2014. University Grants Commission (UGC) & Visvesvaraya Technological University (VTU) have conferred Autonomous Status to MSRIT for both UG and PG Programs till the year 2029. The institute is a participant to the Technical Education Quality Improvement Program (TEQIP), an initiative of the Government of India. The institute has 380 competent faculty out of which 60% are doctorates. Some of the distinguished features of MSRIT are: State of the art laboratories, individual computing facility to all faculty members, all research departments active with sponsored funded projects and more than 300 scholars pursuing Ph.D. To promote research culture, the institute has established Centre of Excellence for Imaging Technologies, Centre for Advanced Materials Technology & Schneider Centre of Excellence. **M S Ramaiah Institute of Technology has obtained “Scimago Institutions Rankings” All India Rank 65 & world ranking 578 for the year 2020.**

The Centre for Advanced Training and Continuing Education (CATCE), and Entrepreneurship Development Cell (EDC) have been set up on campus to incubate startups. **M S Ramaiah Institute of Technology secured All India Rank 8<sup>th</sup> for the year 2020 for Atal Ranking of Institutions on Innovation Achievements (ARIIA), an initiative of Ministry of Human Resource Development (MHRD), Govt. of India.** MSRIT has a strong Placement and Training department with a committed team, a good Mentoring/Proctorial system, a fully equipped Sports department, large air-conditioned library with good collection of book volumes and subscription to International and National Journals. The Digital Library subscribes to online e-journals from Elsevier Science Direct, IEEE, Taylor & Francis, Springer Link, etc. MSRIT is a member of DELNET, CMTI and VTU E-Library Consortium. MSRIT has a modern auditorium and several hi-tech conference halls with video conferencing facilities. It has excellent hostel facilities for boys and girls. MSRIT Alumni have distinguished themselves by occupying high positions in India and abroad and are in touch with the institute through an active Alumni Association.

**As per the National Institutional Ranking Framework, MHRD, Government of India, M S Ramaiah Institute of Technology has achieved 59<sup>th</sup> rank among 1071 top Engineering institutions of India for the year 2020 and 1<sup>st</sup> rank amongst Engineering colleges (VTU) in Karnataka**

## **SCHOOL OF ARCHITECTURE**

Ramaiah Institute of Technology (RIT), Bangalore, is a leading institution offering undergraduate, postgraduate and research programs in the areas of engineering, management and architecture. The institute was established in the year 1962, under the aegis of Gokula Education Foundation. Its mission is to deliver global quality technical education by nurturing a conducive learning environment for a better tomorrow through continuous improvement and customization.

The School of Architecture, RIT Bangalore, was established in the year 1992. Since its establishment, the School has played a vital role in providing quality education. The Council of Architecture (COA) and All India Council for Technical Education (AICTE) have recognized this program.

The mission of the school is to uphold the RIT mission and to thus provide quality education to the students and mould them to be excellent architects with adequate design and management skills and noble human qualities.

Full time faculty members having postgraduate qualifications from prestigious institutions in India and abroad are teaching at The School of Architecture. Experienced and well-respected practicing architects are invited to provide their experiences as visiting faculty. New milestones are continually being set and achieved. The synergy of the progressive management, committed faculty and students are ensuring excellent academic results year after year. This is reflected in the high number of University ranks that are secured by the students of the School.

The School of Architecture is now autonomous (affiliated to VTU) providing scope for further improvement. The focus has been towards fostering novel concepts and solutions in Architectural Design. The student's response is very encouraging, and the school recognizes and appreciates such good students by awarding them. After graduation, many students have pursued higher studies in various universities in the country and abroad. There is a great demand for the school graduates in the industry and the School is developing initiatives towards co-branding of the industry and the School. Many students have started their own enterprise and architectural practices as well.

All this has been possible as a result of the efforts of the impeccable faculty of the School. The faculty is committed to the welfare and success of the students. The teachers of the school are also engaged in enhancing their knowledge and skills and many are engaged in research activities as well. The School has experts in specialized disciplines like Habitat Design, Product Design, Urban Design, Urban Planning, Landscape Architecture, and Interior Design. The faculty also actively participates in national and international conferences and publishes and presents papers.

The School as part of a consultancy had started off with the maiden project to redevelop the RIT engineering college campus and is now involved in various campus designs.

## **VISION OF THE INSTITUTE**

To be an Institution of International Eminence, renowned for imparting quality technical education, cutting edge research and innovation to meet global socio-economic needs.

## **MISSION OF THE INSTITUTE**

MSRIT shall meet the global socio-economic needs through -

- Imparting quality technical education by nurturing a conducive learning environment through continuous improvement and customization.
- Establishing research clusters in emerging areas in collaboration with globally reputed organizations.
- Establishing innovative skills development, techno-entrepreneurial activities and consultancy for socio-economic needs.

## **QUALITY POLICY**

We at MS Ramaiah Institute of Technology strive to deliver comprehensive, continually enhanced, global quality technical and management education through an established Quality Management System complemented by the synergistic interaction of the stake holders concerned.

## **VISION OF THE DEPARTMENT**

To achieve and propagate high standards of excellence in architectural education.

## **MISSION OF THE DEPARTMENT**

- The School's commitment is to prepare people to make a difference;
- To create an environment that shall foster the growth of intellectually capable, innovative and entrepreneurial professionals, who shall contribute to the growth of the society by adopting core values of learning, exploration, rationality and enterprise; and
- To contribute effectively by developing a sustainable technical education system to meet the changing technological needs incorporating relevant social concerns and to build an environment to create and propagate innovative designs and technologies.

## **PROGRAM EDUCATIONAL OBJECTIVES (PEOs):**

- PEO 1:** Use the knowledge and skills of Architecture to analyze the real-life problems and interpret the results.
- PEO 2:** Effectively design, implement, improve and manage the integrated socio-technical systems.
- PEO 3:** Build and lead cross-functional teams, upholding the professional responsibilities and ethical values.
- PEO 4:** Engage in continuing education and life-long learning to be competitive and enterprising.

## **PROGRAM OUTCOMES (POs):**

**PO1: Architectural knowledge:** Apply the knowledge of mathematics, science, architectural fundamentals, and an architectural specialization to the solution of complex architectural problems.

**PO2: Problem analysis:** Identify, formulate, review research literature, and analyse complex architectural problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3: Design/development of solutions:** Design solutions for complex architectural problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**PO4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern architectural and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**PO6: The architect and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional architectural practice.

**PO7: Environment and sustainability:** Understand the impact of the professional architectural solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the architectural practice.

**PO9: Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10: Communication:** Communicate effectively on complex architectural activities with the architectural community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO11: Project management and finance:** Demonstrate knowledge and understanding of architectural and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO12: Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## **PROGRAM SPECIFIC OUTCOMES (PSOs):**

- a) Apply knowledge and skills of arts and sciences to the various architectural scenarios.
- b) Design and develop projects based on function, form and analysis.
- c) Design and improve integrated systems of people, materials, information, facilities, and technology.
- d) Function as a member of a multi-disciplinary team.
- e) Identify, formulate and solve industrial requirements and problems.
- f) Understand and respect professional and ethical responsibility.
- g) Communicate effectively both orally and in writing.
- h) Understand the impact of design solutions in a global and societal context.
- i) Recognize the need for and an ability to engage in life-long learning.
- j) Have knowledge of contemporary issues in industrial and service sectors.
- k) Use updated techniques, skills and tools of architecture throughout their professional careers.
- l) Implement the concepts of project and construction management to satisfy customer expectations.

## **BOARD OF STUDIES FOR THE TERM 2020 - 2021**

- |                                  |                          |
|----------------------------------|--------------------------|
| 1. Prof. (Dr.) Pushpa Devanathan | Chairperson              |
| 2. Ar. Chitra Vishwanath         | VTU Nominee              |
| 3. Ar. Vidyadhar S. Wodeyar      | External Industry Expert |
| 4. Ar. Prasad G                  | External Industry Expert |
| 5. Dr. Rama R S                  | Academician              |
| 6. Dr. Chidambara Swamy          | Academician              |
| 7. Ar. Subbiah T S               | Alumni Industry Expert   |
| 8. Prof. Vishwas Hittalmani      | Member                   |
| 9. Prof. (Dr.) Rajshekhar Rao    | Member                   |
| 10. Dr. Rashmi Niranjana         | Member                   |
| 11. Ar. Meghana K Raj            | Member                   |
| 12. Ar. Reema H Gupta            | Member                   |
| 13. Er. Vijayanand M             | Member                   |



## SCHOOL OF ARCHITECTURE

### TEACHING FACULTY

Sl No	Name	Qualification	Designation
1	Prof. Pushpa Devanathan	M Arch, P.G.D.I. (PhD)	Professor & HOD
2	Prof. Vishwas Hittalmani	M Des	Professor
3	Prof. Rajshekhar Rao	M L Arch (PhD)	Professor
4	Prof. Jotirmay Chari	M Arch (PhD)	Professor
5	Ar. Prasad G	M Arch	Professor (Tenure Faculty)
6	Dr. Rashmi Niranjana	MFA (Fine arts), PhD	Associate Professor
7	Dr. Monalisa	M Arch, PhD	Associate Professor
8	Ar. Surekha R	M L Arch	Associate Professor
9	Ar. Lavanya Vikram	M L Arch (PhD)	Associate Professor
10	Ar. Sudha Kumari	M Arch – Habitat Design (PhD)	Associate Professor
11	Ar. Meghana K Raj	M L Arch	Associate Professor
12	Ar. Tejaswini H	M L Arch	Associate Professor
12	Ar. Reema Harish Gupta	M Arch – Urban Design	Associate Professor
13	Ar. Mallika P V	M L Arch	Associate Professor (Tenure Faculty)
14	Ar. Sudhir Chougule	M L Arch	Associate Professor (Tenure Faculty)
15	Ar. Nikhil V Wodeyar	P G Dip – Urban Design	Associate Professor (Tenure Faculty)
16	Ar. Ashwini Mani	M Arch – Advanced Architecture	Assistant Professor (Tenure Faculty)
17	Er. Vijayanand M	M Tech (PhD)	Assistant Professor
18	Er. Aruna Gopal	B E	System Analyst
19	Ar. Shiv Deepthi Reddy	M Arch	Assistant Professor
20	Ar. Kriti Bhalla	B Arch	Assistant Professor

21	Ar. Aishwarya Yoganand	M Sc – Sustainable Building Systems	Assistant Professor
22	Ar. Divya Susanna Ebin	M Arch – Urban Design	Assistant Professor
23	Ar. Yashas Hegde	M Arch – Urban Design	Assistant Professor
24	Ar. Arpita Sarkar	M L Arch	Assistant Professor
25	Ar. Jyotsna Rao J	M L Arch	Assistant Professor
26	Ar. Ranjitha Govindaraj	M L Arch	Assistant Professor
27	Ar. Trisha Sinha	M Tech (Infrastructure systems)	Assistant Professor
28	Ar. Theju Gowda	M Sc - Architecture	Assistant Professor
29	Ar. Akshata Shagoti	M Arch – Architectural Design	Assistant Professor
30	Ar. Amala Anna Jacob	M Arch – Urban Design	Assistant Professor
31	Ar. Meghana M	M A – World Heritage Studies	Assistant Professor
32	Ar. Sheethal B S	M Plan – Regional Planning	Assistant Professor
33	Ar. Megha Ann Jose	Masters in Interior Arch & Design	Assistant Professor
34	Ar. Pooja M Naik	M Arch – Urban Planning & Mgmt.	Assistant Professor

#### ADMINISTRATIVE STAFF

1	Mr. Nagesh B. L	Dip. in Mech Engg.	Instructor
2	Mrs. Ambika	M Tech	Assistant Instructor
3	Ms. Swathi P	B. Com	SDA

#### SUPPORT STAFF

1	Mr. Ramachandra Chari	Attender
2	Mrs. Varalakshmi R	Attender

**BREAKDOWN OF CREDITS FOR B. ARCH DEGREE CURRICULUM (Semester I to X)**  
**BATCH 2017 - 2022**  
**(as per Council of Architecture)**

<b>SEMESTER</b>	<b>HUMANITIES &amp; SOCIAL SCIENCES (HSS)</b>	<b>ARTS &amp; SCIENCE (AS)</b>	<b>BASIC ARCHITECTURE &amp; ENGINEERING (BAE)</b>	<b>PROFESSIONAL CORE SUBJECTS (PCS)</b>	<b>ELECTIVES</b>	<b>PROJECT/ INTERNSHIP</b>	<b>TOTAL CREDITS</b>
I	1	7	6	11	-	-	<b>25</b>
II	-	8	6	11	-	-	<b>25</b>
III	-	6	8	11	-	-	<b>25</b>
IV	-	3	11	11	-	-	<b>25</b>
V	2	6	6	11	-	-	<b>25</b>
VI	2	-	12	11	-	-	<b>25</b>
VII	3	-	8	11	3	-	<b>25</b>
VIII	5	-	3	-	2	15	<b>25</b>
IX	-	-	-	-	-	25	<b>25</b>
X	-	-	-	-	-	25	<b>25</b>
<b>Total</b>	<b>13</b>	<b>30</b>	<b>60</b>	<b>77</b>	<b>5</b>	<b>65</b>	<b>250</b>

**SCHEME OF TEACHING & EXAMINATION - VII SEMESTER B. ARCH  
ACADEMIC YEAR 2020 - 2021**

2017 Batch			Teaching scheme per week				Examination scheme			
Sl. No	Code	Subject	Lecture / Studio	Tutorial	Practical (Study Tour/ Case Study)	Total	Contact hours	Exam	CIE Marks	SEE Marks
1	AR 701	Architectural Design VI	6	0	1	7	8	SEE (viva voce)	50	50
2	AR 702	Building Materials & Construction Technology VII	3	0	1	4	5	SEE (viva voce)	50	50
3	AR 703	Urban & Regional Planning	2	0	1	3	3	SEE	50	50
4	AR 704	Professional Practice I	3	0	0	3	3	SEE	50	50
5	AR 705	Elective	3	0	0	3	3	SEE (viva voce)	50	50
6	AR 706	Interior Design	3	0	0	3	5	SEE (viva voce)	50	50
7	AR 707	Disaster Management	2	0	0	2	2	CIE	100	
8	AR 708	Vacation Assignment & Study Tour	-	-	-	-	0	SEE (viva voce)	100	
		<b>TOTAL</b>	<b>22</b>	<b>0</b>	<b>3</b>	<b>25</b>	<b>29</b>			

CIE = CONTINUOUS INTERNAL EVALUATION

P = Pass

SEE = SEMESTER END EXAMINATION

F = Absent & Fail

### EVALUATION PATTERN: Marks allocation for SEE

Subject	Subject Name	Design	Drawing	Viva Voce	Elective/ Educational
<b>AR701</b>	<b>Architectural Design - VI</b>	20	15	05	10

Subject Code	Subject Name	Portfolio	Viva
<b>AR702</b>	<b>Building Materials &amp; Construction Technology VII</b>	40	10
<b>AR705</b>	<b>Elective</b>	40	10
<b>AR708</b>	<b>Vacation Assignment &amp; Study Tour</b>	80	20

Subject Code	Subject Name	Portfolio	Viva	Materials Study
<b>AR706</b>	<b>Interior Design</b>	25	15	10

Subject Code	Subject Name	Assignment & Presentation	Test
<b>AR707</b>	<b>Disaster Management</b>	80	20

#### Note:

- Literature survey will be a requirement for Architectural Design study. Periodic review by external juror for subjects going for viva voce.
- National / international tours may be arranged during vacation for students, to study examples of good architecture.
- For all viva voce examinations one internal faculty and one external faculty will conduct the exam.
- Portfolios have to be submitted on prescribed date announced by the department for all the subjects for one year.
- All students have to register on the first day at the beginning of the **Viva voce exam**.
- All students have to register on the first day of **Term work exams**.

**SCHEME OF TEACHING & EXAMINATION - VIII SEMESTER B. ARCH  
ACADEMIC YEAR 2020 – 2021**

2017 Batch			Teaching scheme per week				Examination scheme			
Sl. No	Code	Subject	Lecture / Studio	Tutorial	Practical (Study Tour/ Case Study)	Total	Contact hours	Exam	CIE Marks	SEE Marks
1	AR 801	Architectural Design Project	15	0	0	15	15	SEE (viva voce)	50	50
2	AR 802	Dissertation	2	0	0	2	2	SEE (viva voce)	50	50
3	AR 803	IPR & Ethics	1	0	0	1	2	SEE	50	50
4	AR 804	Professional Practice II	3	0	0	3	3	SEE	50	50
5	AR 805	Constitutional Law	1	0	0	1	1	SEE	50	50
6	AR 806	Construction Management	3	0	0	3	3	SEE	50	50
		<b>TOTAL</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>26</b>			

CIE = CONTINUOUS INTERNAL EVALUATION

P = Pass

SEE = SEMESTER END EXAMINATION

F = Absent & Fail

### EVALUATION PATTERN: Marks allocation for SEE

Subject Code	Subject Name	Design	Drawing	Viva Voce	Model
<b>AR801</b>	<b>Architectural Design Project</b>	20	15	05	10

Subject Code	Subject Name	Theory	Project
<b>AR802</b>	<b>Dissertation</b>	40	10

#### Note:

- Electives and Educational Tours are a part of Basic/ Architectural Design
- Literature survey will be a requirement for Architectural Design study. Periodic review by external juror for subjects going for viva voce.
- National / international tours may be arranged during vacation for students, to study examples of good architecture.
- For all viva voce examinations one internal faculty and one external faculty will conduct the exam.
- Portfolios have to be submitted on prescribed date announced by the department for all the subjects for one year.
- All students have to register on the first day at the beginning of the **Viva voce exam**.
- All students have to register on the first day of **Term work exams**.

## SEMESTER - VII

### ARCHITECTURE DESIGN-VI

**Course Code: AR701**

**Prerequisite: Nil**

**Course Coordinator: Prof. Pushpa Devanathan**

**Course Credits: 6: 0: 1**

**Contact hours: 112 hours**

#### **Course Objectives:**

To enable students to -

- Understand the role of architecture in the urban context.
- Understand the dynamics of urban scale projects and high-rise buildings.
- Understand basic design and planning of transport interchanges

#### **Course contents:**

##### **UNIT - I**

Case studies to understand design parameters of high-rise buildings.

##### **UNIT - II**

Planning of high-rise buildings.

##### **UNIT - III**

Study of urban space, large gathering spaces.

##### **UNIT - IV**

Study of multiple functions in a space, mixed use development.

##### **UNIT - V**

Introduction and basic design and planning of Transport Interchanges.

#### **References:**

1. Dominic Bradbury, John Hitchcox, 'Vertical Living: Interior Experiences by Yoo'; Thames and Hudson, 2014
2. Charles Correa, 'Housing and Urbanisation: Building Ideas for People and Cities'; Thames and Hudson, 2000
3. James Tait, 'The Architecture Concept Book', Thames and Hudson, 2018
4. Aldo Rossi, 'Architecture of the City'; The MIT Press, 1984
5. Christopher Alexander, 'A Pattern Language: Towns, Buildings, Construction';



- Oxford University Press, 2015
6. Rob Krier, 'Urban Space'; Rizzoli, 1993
  7. Kamu Iyer, 'Boombay: From Precincts to Sprawl'; Popular Prakashan Ltd; 2014.
  8. Kevin Lynch, 'The Image of the City'; MIT Press, 1960.
  9. Kevin Lynch, 'Good City Form'; MIT Press, 1984
  10. Gordon Cullen, 'The Concise Townscape'; Architectural Press, 1961
  11. Elizabeth Welch, 'Architecture and Urban Design'; Willford Press, 2019
  12. Michael Larice, Elizabeth Macdonald, 'The Urban Design Reader'; Roulledge, 2012
  13. Charles Montgomery, 'Happy City: Transforming Our Lives Through Urban Design'; Penguin, 2015
  14. Jan Gehl, Birgitte Svarre, 'How to Study Public Life: Methods in Urban Design'; Island Press, 2013

### Course Outcomes (COs):

The students will be able to -

- a) Study the required parameters from case studies of high-rise buildings. (PO: 4; PSO: b)
- b) Plan and design a high-rise building. (PO: 4; PSO: c)
- c) Respond to the dynamics of urban scale projects and high-rise buildings confidently. (PO: 4; PSO: e)
- d) Deliver architectural solutions to projects in urban context. (PO: 4; PSO: c)
- e) Plan and design basic transport interchanges. (PO: 4; PSO: c)

### Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject Name	Design	Drawing	Viva Voce	Elective/ Educational Tour/ Book Review
AR701	Architectural Design - VI	20	15	05	10

## SEMESTER – VII

### BUILDING MATERIALS & CONSTRUCTION TECHNOLOGY VII

**Course Code: AR702**

**Prerequisite: Nil**

**Course Coordinator: Prof. Vishwas Hittalmani**

**Course Credits: 3: 0: 1**

**Contact Hours: 70 hours**

#### **Course objectives:**

To enable the students to -

- Learn construction techniques for interior spaces.
- Gain insight in the detailing of interior elements in residential and commercial buildings.
- Gain insight in the currently available / appropriate building materials used in interior spaces.
- Gain insight in the newer sustainable building materials used in interior spaces.

#### **Course Contents:**

##### **UNIT - I**

Dividers / Cabinet shelves / Showcases - sizes, construction joinery and detailing, material specifications & hardware used, modular options available in market, newer sustainable materials, finishes, costs.

Wardrobes - sizes, construction joinery and detailing, material specifications & hardware used, modular options available in market, finishes, costs.

##### **UNIT - II**

Modular Kitchens - configurations, sizes, Construction joinery and detailing, material specifications & hardware used, modular options available in market, finishes, costs.

##### **UNIT - III**

Workstations - configurations, sizes, construction joinery and detailing, material specifications & hardware used, modular options available in market, finishes, costs.

Partitions - Full height & half height, size, construction joinery and detailing, material specifications & hardware used, modular options available in market, newer sustainable materials, finishes, costs.

##### **UNIT - IV**

False ceiling - sizes, construction joinery and detailing, material specifications & hardware used, modular options available in market, finishes, costs.

## UNIT - V

Wall paneling - sizes, construction joinery and detailing, material specifications & hardware used, modular options available in market, newer sustainable materials, finishes, costs.

### References:

1. Joseph DeChiara, J. Panero, M. Zelnik, 'Time-saver Standards for Interior Design and Space Planning'; McGraw-Hill Inc., 1991
2. Interior Details Bedroom; Interior Architecture Group, 2018
3. Natascha Meuser, 'Drawings for Architects: Construction and Design Manual'; DOM Publishers, 2015
4. W. Otie Kilmer, Rosemary Kilmer, 'Construction Drawings and Details for Interiors'; John Wiley & Sons, 2016
5. Margaret Krohn, NKBA, 'Kitchen & Bath Design Presentation: Drawing, Plans, Digital Rendering'; Wiley, 2014
6. NKBA (National Kitchen and Bath Association), 'Kitchen Planning: Guidelines, Codes, Standards'; Wiley, 2013
7. Maureen Mitton, Courtney Nystuen, 'Residential Interior Design: A Guide to Planning Spaces'; Wiley, 2016

### Course outcomes (COs):

The students will be able to

- a) Understand construction and joinery techniques in Interior Design. (PO: 3; PSO: b)
- b) Apply construction techniques for interior spaces. (PO: 3; PSO: c)
- c) Carry out detailing of interior spaces in residential and commercial buildings. (PO: 2; PSO: e)
- d) Incorporate currently available/appropriate building materials used in interior spaces. (PO: 3; PSO: e)
- e) Integrate newer sustainable building materials and innovative details in interior spaces. (PO: 7; PSO: c)

**Evaluation Pattern:** Marks allocation for SEE

Subject Code	Subject Name	Portfolio	Viva
AR702	Building Materials & Construction Technology VII	40	10

## SEMESTER – VII

### URBAN AND REGIONAL PLANNING

**Course Code: AR703**

**Course Credits: 2 : 0 : 1**

**Prerequisite:**

**Contact hours: 42 hours**

**Course Coordinators: Prof. Jotirmay Chari**

#### **Course Objectives:**

To enable the students to -

- Understand the principles of Urban and Regional Planning.
- Understand the theories of eminent persons who have contributed to Planning.
- Understand the process of urbanization.
- Understand the various techniques in planning.

#### **Course contents:**

##### **UNIT - I**

Introduction to urban and rural planning, evolution of human settlements.

##### **UNIT - II**

Urbanization, urban area, urbanism, classification of urban systems, causes of growth and decay of cities, urban morphology, Land use planning theories, land use classifications, CBD, slum rehabilitation.

##### **UNIT - III**

Introduction to Regional Planning, theories, types of region – functional, formal, perceptual.

##### **UNIT - IV**

Types of planning systems (perspective plans, regional plans, development plan, local area plan, special purpose plan, annual plan), population density, age-sex ratio, economic base, etc, Surveys conducted for developing the plans, contents of Development plans.

##### **UNIT - V**

Project work - Practical approach towards urban renewal/ land use planning/ neighborhood planning.

#### **References:**

1. G K. Hiraskar, 'Fundamentals of town planning'; Dhanpat Rai Publication, 2018
2. Rangwala, 'Town Planning'; Charotar Book Distributors, 2015

3. M. Pratap Rao, 'Urban Planning: Theory and Practice'; CBS, 2019
4. Arthur Gallion, Simon Eisner, 'The urban pattern: City planning and Design'; Van Nostrand Reinhold, 1986
5. F. Stuart Chapin III, Edward J. Kaiser, 'Urban Land Use Planning'; University of Illinois Press, 1979
6. K. S. Rame Gowda, 'Urban and Regional Planning: Principles and Case Studies'; Prasaranga, University of Mysore, 1972
7. S. K. Kulshrestha, 'Dictionary of Urban and Regional Planning'; Kalpaz Publications, 2006
8. S K Kulshrestha, 'Urban and Regional Planning in India: A Handbook for Professional Practice'; Sage Publications Pvt. Ltd., 2012
9. Prasanna K Mohanty, 'Cities and Public Policy: An Urban Agenda for India'; SAGE India, 2014
10. Amiya Kumar Das, 'Urban Planning in India'; Rawat Publications, 2007
11. Simon Eisner, Arthur Gallion, Stanley Eisner, 'The Urban Pattern'; Wiley, 1993
12. Clara H. Greed, 'Introducing Town Planning'; Longman, 1993
13. K. C. Sivaramakrishnan, Amitabh Kundu, B. N. Singh, 'A Handbook of Urbanization in India: An Analysis of Trends and Processes'; Oxford University Press, 2007
14. Ministry of Urban Development, 'Urban and Regional Development Plans'; Government of India, 2014
15. Formulation and Implementation Guidelines, MoUD Government of India

### **Course Outcomes (COs):**

The students will be able to -

- a) Understand the evolution of human settlements that will help them devise method to envision future change. (PO: 2; PSO: c)
- b) Identify important contributions in the field of urban planning and summarizing their relationships between the present and future in Planning. (PO: 2; PSO: c)
- c) Compare and contrast various planning theories at regional level and explain how they can bring about an effective planning outcome. (PO: 4; PSO: c)
- d) Understand and implement plans making the planning process inclusive of the disadvantaged. (PO: 2; PSO: c)
- e) Develop the values for effective problem solving in the practice of planning using ethical standards, values of equity, fairness, efficiency order and beauty. (PO: 2; PSO: c)

## SEMESTER – VII

### PROFESSIONAL PRACTICE -I

**Course Code: AR704**

**Course Credits: 3: 0: 0**

**Prerequisite: Nil**

**Contact hours: 42 hours**

**Course Coordinator: Prof. Pushpa Devanathan**

#### **Course Objective:**

To enable the students to -

- Understand the responsibilities & liabilities of the architectural profession.

#### **Course contents:**

##### **UNIT - I**

Profession of architecture, types and extent of service by architect, types of architectural firms.

##### **UNIT - II**

Duties of an architect, towards client, contractor, scale of professional charges, mode of payment.

##### **UNIT - III**

Role of Council of architecture and The Indian Institute of Architects in the functioning of the profession, code of professional conduct, architectural competitions and guidelines for a competition.

##### **UNIT - IV**

Types of tenders, tender notice, various issues arising out of tendering process, earnest money.

##### **UNIT - V**

Contract – general principles, types of contracts, conditions of a contract, breach of contract, duties of an architect under the contract.

#### **References:**

1. K. G. Krishnamurthy and S. V. Ravindra, 'Professional Practice'; Prentice Hall India Learning Pvt. Ltd., 2014
2. Matt Butcher, Matt Farina; 'Go in Practice: Includes 70 Techniques'; Manning Publications, 2016

3. Roshan Namavathi, 'Professional Practice'; Lakhani Book Depot, 2013
4. Robert Greenstreet, David Chappell, Michael Dunn, 'Legal & Contractual procedures for Architects'; Architectural Press, 2003
5. S.C.Garg, Yogesh K Garg, ' Professional Practice of Architecture'; Satya Prakashan, 2014
6. Osamu A. Wakita, Richard M. Linde, Nagy R. Bakhoum, 'The Professional Practice of Architectural Working Drawings'; John Wiley & Sons, 2011
7. Frederik Ahlemann, Eric Stettiner, Marcus Messerschmidt, Christine Legner, 'Strategic Enterprise Architecture Management: Challenges, Best Practices, and Future Developments'; Springer, 2014
8. James Franklin, 'Architect's Professional Practice Manual'; McGraw-Hill Education, 2000

### **Course Outcomes (COs):**

The students will be able to -

- a) Understand the nature of the architectural profession and its practice. (PO: 6; PSO: f)
- b) Explain the ethical framework of architectural professional practice. (PO: 6; PSO: f)
- c) Explain the role and responsibilities of the professional bodies in regulating, assisting and safeguarding interests of architects. (PO: 6; PSO: f)
- d) Explain the procedures and guidelines related to architectural competitions and tendering. (PO: 6; PSO: f)
- e) Explain the general principles and procedure of contract in building construction works. (PO: 6; PSO: f)

## SEMESTER – VII

### ELECTIVE

**Course Code: AR705**

**Course Credits: 3: 0: 0**

**Prerequisite: Nil**

**Contact hours: 42 hours**

**Course Coordinator: Prof. Pushpa Devanathan & Prof. Vishwas Hittalmani**

#### Course Objectives:

To enable the students to –

- Pursue study and research in an area of special interest in architecture.
- Select a topic of their interest for their Architectural Design Project.

#### Course contents:

##### UNIT - I

Introduction regarding areas of special interest and types of projects.

##### UNIT - II

Topic selection and the norms and standards to be followed.

##### UNIT - III

Case study and collection of data.

##### UNIT - IV

Analysis and synthesis of data.

##### UNIT - V

Finalization of architectural design project with requirements, site details etc.,

#### Reference books:

1. Atul Deulgaonkar, 'Laurie Baker: Truth in Architecture'; Jyotsna Prakashan, 2015
2. Simon Unwin, 'Analysing Architecture'; Routledge, 2009
3. Joseph De Chiara, Michael J. Crosbie, 'Time Saver Standards for Building Types'; McGraw Hill Education, 2017
4. Donald Watson, Michael Crosbie, John Callender, 'Time Saver Standards for Architectural Design Data'; McGraw-Hill Education, 1997
5. Ernst Neufert, 'Architects' Data'; Wiley-Blackwell, 2019
6. David Bergman, 'Sustainable Design: A Critical Guide'; Princeton Architectural



Press, 2012

7. Elizabeth A. T. Smith, Peter Gossel, 'Case Study Houses'; Taschen GmbH, 2009
8. Peter Blundell Jones, Eamonn Carniffe, 'Modern Architecture Through Case Studies 1945 to 1990'; Architectural Press, 2007
9. Analyzing Architecture Case Studies for Beginners- RIBA
10. National building code of India, Bureau of Standards
11. Building Byelaws and Zonal regulations

### **Course outcomes (COs):**

The students will be able to -

- a) Identify their areas of special interest. (PO: 2; PSO: a)
- b) Select their topics of interest. (PO: 2; PSO: a)
- c) Collect appropriate data for their research. (PO: 2; PSO: b)
- d) Analyse and synthesize data. (PO: 2; PSO: c)
- e) Furbish project and site details for their Architectural Design Project in the following semester. (PO: 4; PSO: c)

**Evaluation Pattern:** Marks allocation for SEE

<b>Subject Code</b>	<b>Subject Name</b>	<b>Portfolio</b>	<b>Viva</b>
AR705	Elective	40	10

**SEMESTER – VII**  
**INTERIOR DESIGN**

**Course Code: AR706**

**Prerequisite: Nil**

**Course Coordinator: Prof. Jotirmay Chari**

**Course Credits: 3: 0: 0**

**Contact hours: 42 hours**

**Course Objectives**

- To introduce the students to the discipline of interior design.
- To enable students to develop the skill required to handle simple interior design projects.

**Course contents:**

**UNIT - I**

Case studies of Interior projects.

**UNIT - II**

Activity analysis, anthropometrics, application of scale and proportion.

**UNIT - III**

Effects of enclosure, psychological effects of space.

**UNIT - IV**

Elements of an interior space including furniture placement and layout, surface treatment and interior landscape.

**UNIT – V**

Material and construction details. Services in interiors including design for comfort-climatic, air conditioning natural, artificial lighting, acoustics, etc.

**References:**

1. Kim Kuhteubl, 'Branding + Interior Design: Visibility and Business Strategy for Interior Designers'; Schiffer Publishing Ltd., 2016
2. Aparna Gwande, 'Designs from Indian Textiles: Chintz – Kalamkari'; StoryMirror Infotech Pvt Ltd, 2017
3. Joseph De Chiara, Michael J. Crosbie, 'Time Saver Standards for Building Types'; McGraw Hill Education, 2017

4. Donald Watson, Michael Crosbie, John Callender, 'Time Saver Standards for Architectural Design Data'; McGraw-Hill Education, 1997
5. Ernst Neufert, 'Architects' Data'; Wiley-Blackwell, 2019
6. Erin Gates, 'Elements of Style: Designing a Home & a Life'; Simon & Schuster, 2014
7. Lauren Liess, 'Habitat: The Field Guide to Decorating'; Harry N. Abrams, 2015
8. Justina Blakeney, 'The New Bohemians: Cool and Collected Homes'; Harry N. Abrams, 2015
9. Kate Watson-Smyth, 'Mad about the House: How to Decorate Your Home with Style'; Pavilion, 2018
10. John F Pile, 'Interior Design'; Pearson, 2007
11. Francis D K Ching, 'Interior Design Illustrated'; John Wiley & Sons, 2012
12. Julius Panero & Martin, 'Human Dimension and Interior Space: A Source Book of Design'; McGraw-Hill Professional, 2001
13. Maureen Mitton, 'Interior Design Visual Presentation: A Guide to Graphics, Models and Presentation Techniques'; John Wiley & Sons, 2012
14. John F Pile, 'A History of Interior Design'; John Wiley & Sons Inc, 2000
15. John Curtich and Garret Eakin, 'Interior Architecture'; John Wiley & Sons, 1995

### Course outcomes (COs):

The students will be able to -

- a) Observe and learn about design from built interior spaces. (PO: 2; PSO: a)
- b) Understand the interaction between humans and objects in an interior space. To integrate design with the practical aspect of able space. (PO: 2; PSO: c)
- c) Analyze the effect of interior spaces on behavioural aspects of a user. (PO: 2; PSO: c)
- d) Render and present interior design projects and draft the required drawings to execute the project on site. (PO: 2; PSO: g)
- e) Integrate the understanding of various services in the design and drawings. Evolve innovative details in construction. (PO: 2; PSO: e)

**Evaluation Pattern:** Marks allocation for SEE

Subject Code	Subject Name	Portfolio	Viva	Materials Study
AR706	Interior Design	25	15	10

**SEMESTER – VII**  
**DISASTER MANAGEMENT**

**Course Code: AR707**

**Prerequisite: Nil**

**Course Coordinator: Prof. Vishwas Hittalmani**

**Course Credits: 2: 0: 0**

**Contact hours: 28 hours**

**Course Objectives:**

Provide awareness about disaster prevention measures in buildings and introduction to building safety from natural hazards and other hazards.

**Course contents:**

**UNIT - I**

Introduction to earthquakes, cyclones, floods, landslides.

**UNIT - II**

Prevention measures and their impact on buildings.

**UNIT - III**

Site planning, building forms and architectural design concepts for earthquake resistance of buildings

**UNIT - IV**

Retrofitting of buildings and dampers.

**UNIT - V**

Safety considerations in building and importance of construction details.

**References:**

1. Editor: David E. Alexander, 'International Journal of Disaster Risk Reduction'; Elsevier
2. M. M. Sulphery, 'Disaster Management'; PHI Learning, 2017
3. Mentor Llundji, 'Seismic architecture: The architecture of earthquake resistant structures'; MSPROJECT, 2016
4. Belen Garcia, 'Earthquake Architecture: New Construction Techniques for Earthquake Disaster Prevention'; HarperCollins, 2000
5. Mariana R. Correia, Paulo B. Lourenco, Humberto Varum, 'Seismic Retrofitting:

- Learning from Vernacular Architecture’; CRC Press, 2015
6. Schodek Daniel L., Bechthold Martin, ‘Structures’, Prentice Hall India Learning Pvt. Ltd., 2009
  7. Pankaj Agarwal, Manish Shrikhande, ‘Earthquake Resistant Design of Structures’; PHI, 2011
  8. Vinod Hosur, ‘Earthquake-Resistant Design of Building Structures’; Wiley, 2013
  9. C. V. R. Murty, ‘Learning Earthquake Design and Construction - IITK-BMTPC Earthquake Tips’; Springer, 2005
- IS: 4326- Seismic Detailing of Masonry Buildings.  
 IS: 1893-2002, IS: 13920-1993, IS: 456-2000, IS: 800-2007

**Course outcomes (COs):**

The students will be able to -

- a) Explain the phenomenon of disaster. (PO: 2; PSO: a)
- b) Characterise the impact of disasters on buildings. (PO: 2; PSO: a)
- c) Execute the mitigation strategies for a disaster and its impact on buildings. (PO: 3; PSO: c)
- d) Design buildings implementing the principles of earthquake resistance. Understand the procedure of retrofitting post calamity. (PO: 3; PSO: c)
- e) Design a disaster relief shelter or building based on guidelines of disaster resistant and mitigation strategies. (PO: 4; PSO: e)

**Evaluation Pattern:** Marks allocation for SEE

Subject Code	Subject Name	Assignment & Presentation	Test
AR707	Disaster Management	80	20

## SEMESTER – VII

### VACATION ASSIGNMENT AND STUDY TOUR

**Course Code: AR 708**

**Course Credits: Nil**

**Prerequisite: Nil**

**Contact hours: Nil**

**Course Coordinator: Assoc. Prof. Meghana Raj**

#### **Course Objectives:**

- Appraisal of working drawing, detailing and architectural design.
- To train in computer applications in design and drafting, documentation of drawings.
- To provide exposure to the various dimension of architectural design.

#### **Course Contents:**

##### **UNIT - I**

Provide exposure to the various dimensions of architectural design. This will include exposure to design concept, planning, form and spaces, detailing, with respect to the documentation.

Site experience helps to understand building orientation, adoption of site planning principles and appreciation of building.

Study the prime architectural monuments, newer works, and the usage of modern construction technology.

#### **References:**

1. 'Explore India'; The Unscripted Life, 2017
2. Germany: Travel Maps International Adventure Map- National Geographic maps
3. Tim Jepson, National Geographic Traveller: Italy'
4. Michael Ivory, 'National Geographic Traveller: Germany'
5. Rupinder Khullar, 'India: Land of Celebration'
6. Lonely Planet India (Travel Guide); Lonely Planet

#### **Course outcome (COs):**

Students will be able to -

- Present an appreciation of Architectural Design. (PO: 2; PSO: a)

**Evaluation Pattern:** Marks allocation for SEE

<b>Subject Code</b>	<b>Subject Name</b>	<b>Portfolio</b>	<b>Viva</b>
AR708	Vacation Assignment & Study Tour	80	20

**Performance will be evaluated through viva voce exam and awarded the grade as –**

**P** = Pass

**F** = Absent & Fail

## SEMESTER – VIII

### ARCHITECTURAL DESIGN PROJECT

**Course Code: AR801**

**Course Credits: 15: 0: 0**

**Prerequisite: Nil**

**Contact hours: 168 hours**

**Course Coordinator: Prof. Pushpa Devanathan**

#### **Course Objectives:**

To enable the students to -

- Take up a design project of their choice of a suitable scale and complexity.
- Apply the knowledge of various subjects learnt in the earlier semesters while working towards a design solution addressing the technical, socio-economic, environmental, aesthetic, and functional and sustainability factors.
- To tackle issues relating to Bye laws, Zonal regulations, policies of Planning and Government legislations.
- To express and describe the design into an architectural solution defining all the dimensions using diagrams, analog or digital drawings and models

#### **Course Contents:**

The Architectural Design Project should be run as a design studio with individual guidance from Project coordinators who will be available at the studios and under one or more guides.

The Architectural Design Project should ideally be a continuation with the Project Proposal submitted during Elective AR 705(conducted in the seventh semester) and augment on the architectural requirements and parameters that sets the premise for design detailing.

This being the last academic work of the student before entering the practical field, it is expected to be as close to professional work as possible. It is an opportunity for the student to display his/ her design abilities and reinforce the same by applying the technical skills garnered in the previous semesters. The student, in consultation with the faculty, is expected to demonstrate an innovative yet practical solution for the built environment. The project should clearly present an overview of almost all the subjects studied in the various semesters. The project should focus on actively engaging with the discipline by contributing new ideas, design solutions or exploring new dimensions to existing or current issues in the field.

This also includes the self-learning component, which is carried out through case studies, data collection, discussion with experts, site data collection etc.



The scope of the project should firmly be in the purview of architecture. All typology of projects should end with an Architectural design solution. A minimum of 3 interim reviews through the design process, typically at the conceptual ideas & iteration stage, detailing stage, and the end review, shall be conducted to determine the progress of work completed.

The following units highlight the stages of work to be completed during the semester

#### **UNIT - I**

Project finalization, Synopsis with aims, objectives, limitation, and scope

Project title, Type of project, site, site location, surroundings, proximity, accessibility to be discussed.

Site Details and analysis, Zoning, Site Plan, Entry/exit, parking, pickup, drop off, Service entry/exit, service parking, loading/unloading.

Building byelaws, norms, fire and safety regulations, Design standards.

#### **UNIT - II**

Concept and preliminary architectural scheme of the overall, drawings and working models shall be the end products of this stage.

#### **UNIT - III**

The conceptual drawings to be taken up for design and detailing either as individual blocks or as a whole.

Drawings to be detailed as plans, sections and elevations along with 3D representations to demonstrate the total project

#### **UNIT - IV**

Interior design detailing, coordination of all services, landscape details integration with structures.

#### **UNIT - V**

Presentation drawings, project report, presentation model, Preparation of portfolio. The final output should include a report; detailed and completed inclusive of digital drawings.

- a) The requirements pertaining to the differently abled, elderly and children are to be addressed in design and detailing.
- b) At the time of the Viva examination, the student shall show the jurors the portfolio containing the evolution of his/her design from the beginning to the final output.
- c) The Viva will be conducted by 1 internal and 2 external jurors.

## References:

1. Joseph De Chiara, Michael J. Crosbie, 'Time Saver Standards for Building Types'; McGraw Hill Education, 2017
2. Donald Watson, Michael Crosbie, John Callender, 'Time Saver Standards for Architectural Design Data'; McGraw-Hill Education, 1997
3. Ernst Neufert, 'Architects' Data'; Wiley-Blackwell, 2019
4. Frances Ambler, 'The Story of the Bauhaus'; Ilex Press, 2018
5. Frederica Miller, 'Ecovillages around the World: 20 Regenerative Designs for Sustainable Communities'; Findhorn Press, 2018
6. Martin Luther, 'Martin Luther's Ninety-Five Theses'
7. Jonathan Anderson, Millicent Poole, 'Assignment and Thesis Writing'; Wiley India Pvt Ltd., 2011
8. Paul Oliver, 'Writing your Thesis'; SAGE Publications Ltd., 2014
9. Indranil Sen, '11 Steps to Architectural Thesis'; Notion Press, 2018
10. Anne M Schmid and Mary Scoviak-Lerner, 'International Hotel and Resort Design'; PBC International, 1988

## Course outcomes (COs):

The students will be able to -

- a) Apply their understanding of site planning and site detailing developed over the previous architectural design projects. (PO: 2; PSO: b)
- b) Exhibit their learning of the evolution of building plans from the previous architectural design projects. (PO: 2; PSO: c)
- c) Develop building designs using a uniform design vocabulary. (PO: 4; PSO: c)
- d) Integrate the understanding of structures and building services. (PO: 4; PSO: c)
- e) Incorporate the details of landscape design. (PO: 4; PSO: c)
- f) Apply the standards pertaining to the elderly, differently abled as well as children. (PO: 4; PSO: c)

**Evaluation Pattern:** Marks allocation for SEE

Subject Code	Subject Name	Design	Drawing	Viva Voce	Model
AR801	Architectural Design Project	20	15	05	10

## **SEMESTER – VIII**

### **DISSERTATION**

**Course Code: AR802**

**Prerequisite: Nil**

**Course Coordinator: Assoc. Prof. Tejaswini H.**

**Course Credits: 2: 0: 0**

**Contact hours: 28 hours**

#### **Course Objectives**

To enable the students to pursue an in-depth study in an area of special interest.

#### **Course Contents:**

##### **UNIT - I**

Introduction to Dissertation

##### **UNIT - II**

Selection of topic, reason for selection, justification, synopsis.

##### **UNIT - III**

Literature Case study and documentation, review of case study; usefulness of case study to the selected topic; conclusion from case study.

##### **UNIT - IV**

Live case study and documentation, review of case study, usefulness of case study to the selected topic; conclusion from case study.

##### **UNIT - V**

Power point presentation on the actual topic based on conclusions from case studies and research; preparation of report based on research conducted under various heads.

#### **References:**

1. Andrea Palladio, 'The Four Books of Architecture'; Dover Publications, 1965
2. Iain Borden, Katerina Ruedi-Ray, 'The Dissertation: A Guide for Architecture Students'; Taylor & Francis Ltd, 2014
3. Kate L. Turabian, 'A Manual for Writers of Research Papers, Theses, and Dissertations'; University of Chicago Press, 2013
4. Pham Thanh Hien, 'Abstraction and Transcendence: Nature, Shintai, and Geometry in the Architecture of the Tadao Ando'; Dissertation.com, 1998
5. Elizabeth Laycock, Tim Howarth, Paul Watson, 'The Journey to Dissertation

- Success: For Construction, Property, and Architecture Students’; Routledge, 2016
6. Shamil G. Naoum, ‘Dissertation Research and Writing for Built Environment Students’; Routledge, 2019
  7. Linda Groat, David Wang, ‘Architectural Research Methods’; John Wiley Sons, 2013

**Course outcomes:**

The students will be able to -

- a) Identify their areas for special interest to be researched further. (PO: 2; PSO: a)
- b) Describe scope of their study with synopsis. (PO: 2; PSO: b)
- c) Illustrate case studies and conclusions. (PO: 3; PSO: b)
- d) Generate documentation for their projects. (PO: 3; PSO: k)
- e) Present their design and information. (PO: 3; PSO: g)

**Evaluation Pattern:** Marks allocation for SEE

<b>Subject Code</b>	<b>Subject Name</b>	<b>Theory</b>	<b>Project</b>
AR802	Dissertation	40	10

## **SEMESTER – VIII**

### **IPR & ETHICS**

**Course Code: AR803**

**Prerequisite: Nil**

**Course Coordinator: Assoc. Prof. Dr. Rashmi N**

**Course Credits: 1 : 0 : 0**

**Contact hours: 14 hours**

#### **Course Objective:**

- To provide an insight into professional ethics, legislation aspects and intellectual property rights.

#### **Course contents:**

##### **UNIT - I**

Introduction of the subject and its relevance to architectural field and society. Fundamentals of Intellectual Property- An introduction to the basic concepts of intellectual property, meaning and scope, comparison of intellectual property vs. physical property.

##### **UNIT - II**

Different types of IPR. Fundamentals of intellectual property- Introduction to each type, IPR protection procedure with reference to architecture, to provide an insight into the protection afforded to bioinformatics software by copyright and patent regime (case studies in other areas). Trade secrets & trademarks, overview of the concepts of trade secrets & trademarks.

##### **UNIT - III**

Prior art search, Technology Transfer and Licensing -Technology Transfer and Commercialization, patent search exercise using the internet, creation of copyright for your own Architectural Design Thesis Project types.

##### **UNIT - IV**

Filing an application, patent drafting, invention disclosures, Patent Drafting- PCT Applications.

##### **UNIT - V**

Ethics and Plagiarism in Intellectual Property, infringement Cases

## References:

1. Thomas Fisher, 'Ethics for Architects: 50 Dilemmas of Professional Practice'; Princeton Architectural Press, 2010
2. Barry Wasserman, Patrick J. Sullivan, Gregory Palermo, 'Ethics and the Practice of Architecture'; Wiley, 2000
3. N K Acharya, 'Text Book on Intellectual Property Rights'; Asia Law House, 2012
4. VK Ahuja, Archa Vashishtha , 'Intellectual Property Rights - Contemporary Developments'; Generic, 2020
5. Philippe Cullet, 'Intellectual Property Protection and Sustainable Development'; Lexis Nexis India, 2005

## Course outcomes (COs):

The students will be able to -

- a) Explain the basic concept of Intellectual Property Rights. (PO: 8; PSO: f)
- b) Demonstrate the knowledge of different forms of IPR and their characteristics. (PO: 8; PSO: f)
- c) Understand the technique of prior art search with respect to Architectural Design and in general. (PO: 4; PSO: f)
- d) Describe the steps of filing an application and the importance of patent drafting. (PO: 6; PSO: f)
- e) Work with the awareness of professional ethics, legislation and intellectual property rights. (PO: 6; PSO: f)

## SEMESTER – VIII

### PROFESSIONAL PRACTICE II

**Course Code: AR804**

**Prerequisite: Nil**

**Course Coordinator: Prof. Pushpa Devanathan**

**Course Credits: 3: 0: 0**

**Contact Hours: 42 hours**

#### **Course objectives:**

To enable the students to -

- Understand the professional responsibilities within the ambit of the laws of the land by studying building byelaws and codes.
- Gain insight into easement rights, Arbitration and Conciliation, Valuation, Dilapidation, and law related to land and property.

#### **Course contents:**

##### **UNIT - I**

Zoning Regulations and building byelaws: Introduction, Land use categories, regulations of main land use types, building byelaws applicable to cities-their necessity, various building byelaws - FAR /FSI, setbacks, garage, projections into open spaces, means of access, basement floor, parking norms, etc.

##### **UNIT - II**

Easement Rights: Definition, characteristics of an easement, natural rights, various easement rights- easement of support, easement of drainage, easement of light and air (ancient light), easement of right of way, easement of eave projection, etc. Continuous and discontinuous easements, apparent and non-apparent easements, extinction of easements, modes of acquiring easement rights, architect's role.

National Building Code: Importance of the NBC, stipulations with respect to fire norms in high-rise buildings.

##### **UNIT - III**

Valuation: Definition, purpose of valuation, value classification - market value, fair market value, salvage value, etc. Brief description of various methods of valuation, valuation report.

##### **UNIT - IV**

Dilapidation: Definition, information required prior to preparation of a schedule, schedule format, report and recommendation, architect's role.

Arbitration: Need for Arbitration, modes of settlement of disputes, The Arbitration and Conciliation Act-1996- objective and salient features, procedure adopted in arbitration, arbitrator, order of reference, selection of arbitrators, powers and duties of arbitrators, arbitral award.

### UNIT - V

Types of land holdings: freehold tenure and leasehold tenure –building lease, occupation lease

Land Acquisition: Objective, Land Acquisition Act 1894(amended in 1984), procedure for land acquisition.

Latest COA rules and regulations- architects’ professional liability.

### References:

1. Andrew Pressman, Thomas Fisher, ‘Professional Practice 101: Business Strategies and Case Studies in Architecture’; Wiley, 2006
2. Robert Greenstreet, David Chappell, Michael Dunn, ‘Legal and Contractual Procedures for Architects’; Architectural Press, 2003
3. Anthony Speaight, Gregory Stone, ‘AJ Legal Handbook: The Law for Architects’; Architectural Press, 1985
4. Roshan Namavathi, ‘Professional Practice’; Lakhani Book Depot, 2013
5. KG Krishnamurthy, SV Ravindra, ‘Professional Practice’; Prentice Hall India Learning Pvt. Ltd, 2014
6. Prajeet Budhale, ‘INFIN-EIGHT: Eight Principles for Infinite Professional Success’; Fingerprint Publishing, 2018
7. Julia McMorrough, ‘The Architecture Reference & Specification Book: Everything Architects Need to Know Every Day’; Rockport Publishers, 2013

### Course outcomes (COs):

The students will be able to -

- a) Carry out the professional responsibilities within the ambit of the laws of the land by studying building bye laws, codes. (PO: 6; PSO: e)
- b) Apply Easement Rights related to land and property as required. (PO: 4; PSO: j)
- c) Carry out the process of valuation in architecture works. (PO: 4; PSO: j)
- d) Apply the process of Dilapidation and Arbitration to land and property wherever required. (PO: 4; PSO: j)
- e) Demonstrate key insights on subjects of - Land Holding and Land Acquisition. (PO: 4; PSO: e)



**SEMESTER – VIII**  
**CONSTITUTIONAL LAW**

**Course Code: AR805**

**Prerequisite: Nil**

**Course Coordinator: Humanities Department**

**Course Credits: 1: 0: 0**

**Contact Hours: 14 hours**

**Course Objectives:**

To enable the students to -

- Provide basic information about Indian constitutional law.
- Identify individual role and create legal awareness.

**Course Contents:**

**UNIT - I**

Evolution of Indian Constitution, The Preamble, fundamental rights in detail and exercise of rights under Part III, limitations & important cases.

**UNIT - II**

Relevance of directive principles of state policy under part-IV, Fundamental duties & their significance. Special Constitutional Provisions for SC&ST, Women & Children.

**UNIT - III**

Union Executive-President, Prime Minister, Parliament & State Executive-Governor, Chief Minister, State legislatures.

**UNIT - IV**

Union and state judiciary -Supreme Court of India & High courts of the states.

**UNIT - V**

Emergency provisions, electoral process, amendment procedure and major constitutional amendments.42<sup>nd</sup>, 44<sup>th</sup>, 74<sup>th</sup> 76<sup>th</sup>, 86<sup>th</sup> and, 91<sup>st</sup> Amendments.

**References:**

1. Durga Das Basu, 'Introduction to the Constitution of India'; Lexis Nexis, 2011
2. K. R. Phaneesh, 'Constitution of India and Professional Ethics', Sudha Publications
3. J. N. Pandey, 'Constitutional Law of India'; Central Law Agency, 2019

4. M. Raja Ram, 'Constitution of India and Professional Ethics'; New Age International, 2015
5. B. R. Venkatesh, K. B. Merunandan, 'Introduction to The Constitution of India & Professional Ethics'; Meragu Publications, 2011
6. M. P. Jain, 'Indian Constitutional Law'; LexiNexis, 2018
7. V. N. Shukla, 'Constitution of India'; Eastern Book Company, 2019
8. Austin Granville, 'The Indian Constitution: Cornerstone of A Nation'; Oxford, 1999
9. Austin Granville, 'Working in a Democratic Constitution: A History of the Indian Experience'; Oxford, 2003
10. Chintan Chandrachud, 'Balanced Constitutionalism: Courts and Legislatures in India and the United Kingdom'; OUP India, 2020
11. M. V. Pylee, 'An Introduction to the Constitution of India'; South Asia Books, 1995

#### **Course outcomes (COs):**

The students will be able to -

- a) Enhance their legal literacy by understanding the fundamental principles of Indian constitutional law. (PO: 6; PSO: f)
- b) Identify various provisions of Directive Principles of state policies and fundamental duties. (PO: 6; PSO: f)
- c) Explain the powers of the executive and legislature. (PO: 6; PSO: f)
- d) Explain the powers of the judicial system. (PO: 6; PSO: f)
- e) Analyse and implement certain laws as a citizen and as a professional. (PO: 6; PSO: f)

## SEMESTER – VIII

### CONSTRUCTION MANAGEMENT

**Course Code: AR806**

**Prerequisite: NIL**

**Course Coordinator: Asst. Prof. M. Vijayanand**

**Course Credits: 3: 0: 0**

**Contact hours: 42 hours**

#### **Course Objectives:**

- Provide insight into management of buildings/construction projects involving management financial, machines and human resources.

#### **Course Contents:**

##### **UNIT - I**

Construction Management and Planning:

Basic concepts in the development of construction plan – Choice of technology and construction method – Defining works tasks – Definition precedence relationships among activities – Estimating activity duration – Estimating resource requirements for work activities.

##### **UNIT - II**

Construction Management Techniques: Construction planning, scheduling, and controlling phases- use of management techniques- bar chart, milestone chart

##### **UNIT - III**

Network Analysis: Introduction – Advantages of network analysis – Activity and Event oriented network – calculation of critical path scheduling – Comparison between PERT and CPM- Activity float and schedules – Crashing and time cost tradeoffs – Improving the scheduling process, problems.

##### **UNIT - IV**

Machinery for building works: Introduction – necessity to mechanize, options of procuring equipment, selection of equipment, concept, standard equipment, construction equipment deployed in large scale building works, construction equipment and their operational use.

##### **UNIT - V**

Cost Effectiveness: Introduction- role of client, contactor, consultant, architect, and engineers. System improvement to achieve cost effectiveness.

## References:

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5. Sharma J.C., 'Construction Management and Accounts'; Sathya Prakashan, 2006.
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## Course outcomes (COs):

The students will be able to -

- a) Manage building/construction projects. (PO: 11; PSO: 1)
- b) Understand different management techniques and their tools of network. (PO: 11; PSO: 1)
- c) Identify the required technology in construction planning. (PO: 11; PSO: 1)
- d) Evaluate the cost of the project and estimate the resources required for various construction activities. (PO: 11; PSO: 1)
- e) Suggest and categorize the different construction management techniques, innovations, and processes. (PO: 11; PSO: j)