



**RAMAIAH**  
Institute of Technology

# **CURRICULUM**

**for the Academic year 2020 – 2021**

**SCHOOL OF ARCHITECTURE**

**IX & X 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 2016 - 2021**  
**(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 - IX SEMESTER B. ARCH  
ACADEMIC YEAR 2020 - 2021**

2016 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	AR901	Practical Training	0	0	25	25	-	SEE (viva voce)	50	50

CIE = CONTINUOUS INTERNAL EVALUATION

P = Pass

SEE = SEMESTER END EXAMINATION

F = Absent & Fail

**EVALUATION PATTERN: Marks allocation for SEE**

Subject Code	Subject Name	Portfolio	Critical Appraisal	Material Analysis	Viva voce
AR901	Practical Training	25	10	5	10

**Note:**

- For Practical training viva-voce exam, one internal faculty and two external faculty will conduct the exam.
- Portfolios and certificate have to be submitted which will be retained in the department for one year.
- All students have to register and submit the portfolios and certificate from architect's office on the first day, at the beginning of the viva voce exam.

## **AR901 - PRACTICAL TRAINING**

### **Requirements of Practical Training in an office:**

- Exposure to office work and practical experience
- Understanding of working drawings
- Understanding of construction details and innovative details
- Preparation of tender documents
- Regular visit to site to understand the practical problems
- Stacking methods of various building materials
- Understanding and taking measurements to prepare bill of quantities
- Understanding of local byelaws, rules and regulations
- Preparation of drawings for sanction purpose
- Maintaining day to day diary with dates with signature of the architect
- At the end of the training period collect a certificate of experience and satisfactory performance from the architect. (Let the dates match with the semester beginning and closing dates)
- All the drawings are signed by the architect and your name shall be mentioned in the title block (This is a must in computer drawings)
- Photographs of various stages of the work and details

(Familiarize yourself on the above topics even if works in some of the above listed areas are not subjected to you in the office.)

**Present the case study of one well known work of the architect.**

**Undertake a study of a building material of your choice and make a presentation.**

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

2016 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	AR1001	Practical Training	0	0	25	25	-	SEE (viva voce)	50	50

CIE = CONTINUOUS INTERNAL EVALUATION

P = Pass

SEE = SEMESTER END EXAMINATION

F = Absent & Fail

**EVALUATION PATTERN: Marks allocation for SEE**

Subject Code	Subject Name	Portfolio	Critical Appraisal	Material Analysis	Viva voce
AR1001	Practical Training	25	10	5	10

**Note:**

- For Practical training viva-voce exam, one internal faculty and two external faculty will conduct the exam.
- Portfolios and certificate have to be submitted which will be retained in the department for one year.
- All students have to register and submit the portfolios and certificate from architect's office on the first day, at the beginning of the viva voce exam.

## **AR1001 - PRACTICAL TRAINING**

### **Requirements of Practical Training in an office:**

- Exposure to office work and practical experience
- Understanding of working drawings
- Understanding of construction details and innovative details
- Preparation of tender documents
- Regular visit to site to understand the practical problems
- Stacking methods of various building materials
- Understanding and taking measurements to prepare bill of quantities
- Understanding of local byelaws, rules and regulations
- Preparation of drawings for sanction purpose
- Maintaining day to day diary with dates with signature of the architect
- At the end of the training period collect a certificate of experience and satisfactory performance from the architect. (Let the dates match with the semester beginning and closing dates)
- All the drawings are signed by the architect and your name shall be mentioned in the title block (This is a must in computer drawings)
- Photographs of various stages of the work and details

(Familiarize yourself on the above topics even if works in some of the above listed areas are not subjected to you in the office.)

**Present a case study of one well known work of the architect.**

**Undertake a study of a building material of your choice and make a presentation.**

## SEMESTER - IX

### PRACTICAL TRAINING

**Course Code: AR901**

**Prerequisite: Nil**

**Course Coordinator: Prof. Pushpa Devanathan**

**Course Credits: 0 : 0 : 25**

**Contact Hours: Internship**

#### **Course objectives:**

- To provide exposure to the various dimensions of architectural practice.
- To prepare working drawings and detailing.
- To prepare students to design and detail architectural projects with confidence.
- To enable students to develop skills to start their own practice.

#### **Course Contents:**

Preparation of working drawings and details.

Acquire knowledge of computer skills for drafting, design, 3D view etc

Understand how architectural offices function.

Through site visits gain practical knowledge and solve problems that arise during construction at site.

Discussion with clients.

Critical analysis of an Architect Designed building presented with a portfolio.

Study a building material and its usage in practice.

#### **References:**

1. Mark Karlen, 'Space Planning Basics'; Wiley, 2016
2. Andrew Brody, 'Electronic Workflow for Interior Designers and Architects'; Fairchild Books, 2009
3. Jennifer Hudson, 'Interior Architecture: From Brief to Build'; Laurence King Publishing, 2010
4. Douglas R. Seidler, 'Digital Drawing for Designers: A Visual Guide to AutoCAD 2021'; Fairchild Books, 2020
5. Matt Donley, 'SketchUp to LayOut: The essential guide to creating construction documents with SketchUp Pro & LayOut'; mastersketchup.com

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

The students will be able to -

- a) Conduct professional practice as per the demand of industry. (PO: 6; PSO: j)
- b) Carryout designing and detailing of architectural projects. (PO: 6; PSO: e)
- c) Demonstrate skills to start an independent practice. (PO: 9; PSO: e)



**Evaluation Pattern:** Marks allocation for SEE

<b>Subject Code</b>	<b>Subject Name</b>	<b>Portfolio</b>	<b>Critical Appraisal</b>	<b>Material Analysis</b>	<b>Viva voce</b>
AR901	Practical Training	25	10	5	10

**Note:**

Students should work under a registered architect from council of architecture and the registered architect should sign in the certificate along with the COA registration number.

Students are required to send a report of their progress and a log of works done every month to their respective proctors promptly.

## SEMESTER - X

### PRACTICAL TRAINING

**Course Code: AR1001**

**Prerequisite: Nil**

**Course Coordinator: Prof. Pushpa Devanathan**

**Course Credits: 0 : 0 : 25**

**Contact Hours: Internship**

#### Course objectives:

- To provide exposure to the various dimensions of architectural practice.
- To prepare working drawing and detailing.
- To prepare students to design and detail architectural projects with confidence.
- To enable students to develop skills to start their own practice.

#### Course Contents:

Preparation of working drawings and details.

Acquire knowledge of computer skills for drafting, design, 3D view etc

Understand how architectural offices function.

Through site visits gain practical knowledge and solve problems that arise during construction at site.

Discussion with clients.

Critical analysis of an Architect Designed building presented with a portfolio.

Study a building material and its usage in practice.

#### References:

1. Mark Karlen, 'Space Planning Basics'; Wiley, 2016
2. Andrew Brody, 'Electronic Workflow for Interior Designers and Architects'; Fairchild Books, 2009
3. Jennifer Hudson, 'Interior Architecture: From Brief to Build'; Laurence King Publishing, 2010
4. Douglas R. Seidler, 'Digital Drawing for Designers: A Visual Guide to AutoCAD 2021'; Fairchild Books, 2020
5. Matt Donley, 'SketchUp to LayOut: The essential guide to creating construction documents with SketchUp Pro & LayOut'; mastersketchup.com

#### Course outcomes (COs):

The students will be able to -

- a) Conduct professional practice as per the demand of industry. (PO: 6; PSO: j)
- b) Carryout designing and detailing of architectural projects. (PO: 6; PSO: e)
- c) Demonstrate skills to start an independent practice. (PO: 9; PSO: e)

**Evaluation Pattern:** Marks allocation for SEE

<b>Subject Code</b>	<b>Subject Name</b>	<b>Portfolio</b>	<b>Critical Appraisal</b>	<b>Material Analysis</b>	<b>Viva voce</b>
AR1001	Practical Training	25	10	5	10

**Note:**

Students should work under a registered architect from council of architecture and the registered architect should sign in the certificate along with the COA registration number.

Students are required to send a report of their progress and a log of works done every month to their respective proctors promptly.