VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI

Scheme of Teaching and Examinations (2026)
M. Arch., in Digital Architecture

Choice-Based Credit System (CBCS) and Outcome-Based Education (OBE)

M.Arch., Digital Architecture
Scheme of Teaching and Examinations 2026
Choice-Based Credit System (CBCS) and Outcome-Based Education (OBE)

I SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching and Learning Scheme						Duration in hours	Examination					Credits
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester		Self- learning in hours	Teaching - Learning hours per semester = CI +LI+TW+SL		CIE Marks	Theory	Viva Voce	Term Work (TW)	Total Marks	
					L	T	S	P	SL				SEE Marks				
1	ISC with PCC and PCCL	2MDAC101	Computational & Parametric Design Studio	Architecture	14	14	56	-	96	180	-	50	-	50	-	100	6
2	PCC	2MDAC102	Analytical Diagramming and Architectural Representation	Architecture	28	-	28	-	64	120	-	50	-	50	-	100	4
3	PCC	2MDAC103	Digital Architecture Process Theories & History - I	Architecture	42	-	-	-	48	90	3	50	50	-	-	100	3
4	PSC	2MDAC104	Digital Fabrication & Material Computation - I	Architecture	28	-	-	28	34	90	-	50	-	-	50	100	3
5	PEC	2MDAC105x	Professional Elective - I	Architecture	42	-	-	-	48	90	-	100	-	-	-	100	3
6	PCCL	2MDAC106	BIM and Integrated Workflows	Architecture	14	-	-	56	20	90	-	50	-	50	-	100	3
7	NCMC	2MRMI107	Research Methods & Intellectual Property in Computational Design	Online course (online.vtu.ac.in) (8–12 Weeks)													PP
Total										**660**	3	**350**	**50**	**150**	**50**	**600**	**22**

Note: **ISC**-Integrated Studio Course, **PCC** - Professional Core Course**, PCCL**-Professional Core Course lab, **PSC:** Professional Supportive Course to the Specialization, **PEC-** Professional Elective Course, **NCMC**- Non-Credit Mandatory Course, **L** - Lecture, **T** – Tutorial, **S** - Studio, **P** – Practical, **SL** –Self Learning, **TW** – Term work.

Professional Elective -1 course code under 2MDAC105x	Course Title
2MDAC105A	Generative AI & Machine Learning in Design
2MDAC105B	Performance-Driven Design & Environmental Simulation
2MDAC105C	Robotic Fabrication & Automated Construction

Integrated Studio Course (ISC): Refers to a Professional Studio Core Course Integrated with the theories/software relating to the studio. The theory part of the ISC shall be evaluated by CIE with regular assignment. The studio part shall be evaluated by both CIE & SEE (Viva-Voce with the external examiner).

Professional Core Course (PCC): Refers to a Course, which constitutes a major theory part of the particular specialization.

Professional Supportive Course (PSC) to the Specialization

Professional Elective Course (PEC): Elective courses will provide some of the most valuable and additional knowledge. The students will benefit from electives as they imply additional knowledge. Students may select courses from a large array of subjects that enhance their knowledge.

1. Studio:

(i) Students and studio coordinators to be involved individually in groups to interact to enhance learning and application skills.

(ii) The students should involve with Industry/ Professional bodies/ Stakeholders in issue identification followed by research/ case studies/ testing that results in creative and innovative solutions to the identified problems.

(iii) The students will gain real-world experience by working with industry professionals

(iv) Students must work on different software/s(tools)to simulate, analyze, and authenticate the output to interpret and conclude.

(v) Students must be involved in case studies and field visits/fieldwork.

(vi) Students must familiarize themselves with codes of standards to narrow the gap between academia and the industry.

2. All activities should enhance student's abilities for employment and /or self-employment opportunities, management skills, Statistical analysis, fiscal expertise, etc.

3. Skill Development Activities: They may be in the form of periodic site visits, guest lectures, and webinars and seminars, not a fixed slot in timetables.

Under Skill development, the activities must orient towards

1. Interaction with industry (construction/consultancy/product oriented).
2. Involvement in research/testing/projects to understand their problems and help creative and innovative methods to solve the problem.
3. Involvement in case studies and field visits/ fieldwork.
4. Exposure to the use of standards/codes/byelaws/zoning regulations etc., to narrow the gap between academia and industry.

All activities should enhance student's abilities to employment and/or self-employment opportunities, management skills, statistical analysis, fiscal expertise, etc. Students and the course faculty are to be involved either individually or in groups to interact together to enhance the learning and application skills of the study they have undertaken. The students with the help of the course teacher can take up relevant technical activities that will enhance their skills. The prepared report shall be evaluated for CIE marks.

4. Viva voce:

The viva voce shall be conducted for a duration of 20 minutes (per student including if any group presentation) for the subjects listed under viva voce for all the semesters with one external examiner and one internal examiner.

2MRMI107 - Research Methods & Intellectual Property in Computational Design - Non-Credit Mandatory Course (NCMC) The student has to take this course at http://online.vtu.ac.in and qualifying in this course is compulsory before completion of the minimum duration of the program (Two years), however, this course will not be considered for vertical progression.

Online Course: These are the MOOC courses that the relevant stream's Board of Studies has recommended; you can access them at www.online.vtu.ac.in. To qualify for those courses, the students must complete 8-12 weeks duration courses. The courses chosen have not to be the same as that of the courses or subjects covered in the preceding semesters. Depending on the needs of the degree program, the BOS may recommend interdisciplinary courses. It is required to pass the course and qualify.

M.Arch DIGITAL ARCHITECTURE
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II SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching and Learning Scheme						Duration in hours	Examination					Credits
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester		Self -learning in hours	Teaching - Learning hours per semester = CI +LI+TW+SL		CIE Marks	Theory	Viva Voce	Term Work (TW)	Total Marks	
					L	T	S	P	SL				SEE Marks				
1	ISC with PCC and PCCL	2MDAC201	Performative & Ecological Design Studio	Architecture	14	14	98	-	144	270	-	50	-	50	-	100	9
2	PCC	2MDAC202	Kinetic Architecture & Interactive Systems	Architecture	28	-	28	-	64	120	-	50	-	50	-	100	4
3	PCC	2MDAC203	Digital Architecture Process Theories & History -II	Architecture	42	-	-	-	48	90	3	50	50	-	-	100	3
4	PSC	2MDAC204	Digital Fabrication & Material Computation - II	Architecture	28	-	-	28	34	90	-	50	-	-	50	100	3
5	PEC	2MDAC205x	Professional Elective - II	Architecture	42	-	-	-	48	90	-	100	-	-	-	100	3
6	PSC	2MDAC206	Artificial Intelligence & Machine Learning in Architecture	Architecture	42	-	-	-	48	90	-	50	-	50	-	100	3
Total										**750**	3	**350**	**50**	**150**	**50**	**600**	**25**

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Professional Elective – II with Course Code under 2MDAC205x	Course Title
2MDAC205A	Bio-Computation & Biomimetic Design
2MDAC205B	Building Performance Simulation (BPS) & Carbon-Neutral Architecture
2MDAC205C	Structural Optimization & Generative Design

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Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching and Learning Scheme						Duration in hours	Examination					Credits
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester		Self- learning in hours	Teaching - Learning hours per semester = CI +LI+TW+SL		CIE Marks	Theory	Viva Voce	Term Work (TW)	Total Marks	
					L	T	S	P	SL				SEE Marks				
1	ISC/IDC	2MDAC301	Generative Urban Design & Smart City Dynamics	Architecture	14	14	70	-	142	240	-	50	-	50	-	100	8
2	PSC	2MDAC302	Design Thesis Phase I: Research & Computational Framework	Architecture	14	14	28	-	34	90	-	50	-	50	-	100	3
3	PEC	2MDAC303x	Professional Elective - III	Architecture	42	-	-	-	48	90	-	100	-	-	-	100	3
4	INT	2MDAC304	Digital Architecture Application on Real time project	Architecture	-	-	-	56	154	210	-	50	-	-	50	100	7
5	PCC	2MDAC305	BOS Recommended online course	Online course (online.vtu.ac.in) (8–12 Weeks)													PP
Total										**630**	**-**	**250**	**-**	**100**	**50**	**400**	**21**

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Professional Elective – III, Course Code under 2MDAC303x	Course Title
2MDAC303A	Cyber-Physical Systems & Responsive Environments
2MDAC303B	Parametric Landscape Urbanism & Terramechanics
2MDAC303C	Algorithmic Design & Complex Systems

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IV SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching and Learning Scheme						Duration in hours	Examination					Credits
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester		Self learning in hours	Teaching - Learning hours per semester = CI +LI+TW+SL		CIE Marks	Theory	Viva Voce	Term Work (TW)	Total Marks	
					L	T	S	P	SL				SEE Marks				
1	Dissertation	2MDAC401	Design Thesis Phase II: Architectural Synthesis & Realization	Architecture	-	14	42	-	304	360	-	50	-	50	-	100	12
Total										**360**	**-**	**50**	**-**	**50**	**-**	**100**	**12**

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CIE procedure for Project Work:
The CIE marks shall be awarded by a committee/panel of guides consisting of the head of the concerned department, internal and external reviewer whoever takes review including mid-review on invitation by the department. The CIE marks awarded for the dissertation / project work shall be based on the evaluation of the dissertation work process / progress such as research on an issue, title, literature review, dissertation structure, study methodology, issues and strategies, design program and intervention etc. evaluation also need to be based on the presentation skill, work during the periodic review. 50% weightage to be given to strategies and solutions developed, 25% to the report and presentation, and 25% to question answers.

SEE procedure for Project Work:
The two examiners appointed by the University will conduct SEE for dissertation work with one internal examiner. The SEE marks awarded for the project work shall be based on the objectives and rubrics set and the final presentation/defending the viva voce / portfolio / dissertation report / Research Papers Published / documentation which showcases the outcome of a dissertation / project work. The SEE marks awarded for the project work shall be based on the evaluation of the thesis work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The weightage of the above may vary based on the specialization / topic of the dissertation / project work.

Total Teaching Learning hours : 660+750+630+360 = 2400 (30 hours of academic learning = 1 credit)

Total Credits : 23+22+20+12 = 80

VTU–NCrF Credit Structure Table

VTU–NCrF Credit Structure adopted for M.Arch Digital Architecture (2026 Scheme)							
Particulars	**Classroom Instruction (CI) Hours/Semester**		**Laboratory / Studio Instruction (LI) Hours/Semester**		**Term Work (TW) & Self Learning (SL) Hours/Semester**	**Total Teaching–Learning Hours**	**Credits**
	L	**T**	**S**	**P**			
3-Credit Professional Core / Professional Elective Theory Course	42	-	-	-	48	90	3
3-Credit Professional Core Course with Laboratory	28	-	-	28	34	90	3
4-Credit Studio / Integrated Course	28	-	28	-	64	120	4
6-Credit Integrated Computational Design Studio	14	14	56	-	96	180	6
8-Credit Integrated Urban Design Studio	14	14	70	-	142	240	8
9-Credit Integrated Ecological Design Studio	14	14	98	-	144	270	9
7-Credit Professional Internship	-	-	-	56	154	210	7
12-Credit Design Thesis / Dissertation	-	14	42	-	304	360	12

Overall NCrF Summary

Semester	**Credits**	**Total Notional Learning Hours**
Semester I	22	660
Semester II	25	750
Semester III	21	630
Semester IV	12	360
Programme Total	**80**	**2400 Hours**

Mapping with Curriculum

Credits	Courses
3 Credits	2MDAC103, 2MDAC104, 2MDAC105, 2MDAC106, 2MDAC203, 2MDAC204, 2MDAC205, 2MDAC206, 2MDAC302, 2MDAC303
4 Credits	2MDAC102, 2MDAC202
6 Credits	2MDAC101
7 Credits	2MINT304
8 Credits	2MDAC301
9 Credits	2MDAC201
12 Credits	2MDAC401

Mapping with Semester Scheme

Course Code	Course Title	NCrF Category
2MDAC101	Computational & Parametric Design Studio	6-Credit Integrated Computational Design Studio
2MDAC102	Analytical Diagramming & Architectural Representation	4-Credit Studio / Integrated Course
2MDAC103	Digital Architecture Process Theories & History-I	3-Credit Theory Course
2MDAC104	Digital Fabrication & Material Computation-I	3-Credit Theory with Laboratory
2MDAC105A/B/C	Professional Elective-I	3-Credit Theory Course
2MDAC106	BIM and Integrated Workflows	3-Credit Theory with Laboratory
2MDAC201	Performative & Ecological Design Studio	9-Credit Integrated Studio
2MDAC202	Kinetic Architecture & Interactive Systems	4-Credit Studio / Integrated Course
2MDAC203	Digital Architecture Process Theories & History-II	3-Credit Theory Course
2MDAC204	Digital Fabrication & Material Computation-II	3-Credit Theory with Laboratory
2MDAC205A/B/C	Professional Elective-II	3-Credit Theory Course
2MDAC206	Artificial Intelligence & Machine Learning in Architecture	3-Credit Theory Course
2MDAC301	Generative Urban Design & Smart City Dynamics	8-Credit Integrated Studio
2MDAC302	Design Thesis Phase-I	Project-based 3-Credit Course
2MDAC303A/B/C	Professional Elective-III	3-Credit Theory Course
2MINT304	Professional Internship	7-Credit Internship
2MDAC401	Design Thesis Phase-II: Architectural Synthesis & Realization	12-Credit Design Thesis