

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI**



Scheme of Teaching and Examinations (2026)

M. Arch-Construction Project Management

(Effective From Academic Year 2026-27)

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

Specialization in – (Construction Project Management)

I SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching and Learning Scheme					Examination					Credits	
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester	Term work & self-learning in hours	Teaching -Learning hours per semester = CI + LI+TW+SL	Duration in h ours	CIE Marks	SEE Marks				Total Marks
					L	T	P	TW+SL				Theory	VIVA	Term Work		
1	MAT/PCC	2MCPM101	Building Management-1		42	--	28	50	120	--	50		50		100	4
2	PCC	2MCPM102	Project Management		56	0	0	64	120	03	50	50			100	4
3	PCC	2MCPM103	Contract Management		56	0	0	64	120	03	50	50			100	4
4	IPCC	2MCPM104x	Integrated Professional Core Course-I		42	0	28	50	120	--	50		50		100	4
5	PEC	2MCPM105x	Professional Elective Course-I		42	0	0	48	90	--	100				100	3
6	PEC	2MCPM106x	Professional Elective Course-II		42	0	0	48	90	--	100				100	3
7	PCCL	2MCPML107x	Professional Core Courses Labs		--	--	28	2	30	--	50			50	100	1
8	NCMC	2MRMI108	Research Methodology and IPR				Online course (online.vtu.ac.in)									PP
					Total		690	06	450	100	100	50	700	23		
		Professional Elective Courses (PECs): Professional Elective Courses – PEC–I and PEC–II – are common to all branches of specialization within a particular Engineering stream. Students may choose the most appropriate elective based on their field of specialization and academic requirements. Note: The number of courses listed under each PEC group may exceed four, depending on the specializations under one stream. Integrated Professional Core Courses (IPCC): The 2Mxx104x Group comprises specialization-specific core courses that are integrated with a practical component, ensuring application-oriented learning aligned with industry and research needs. The number of courses in the group depends on the number of specializations offered under a particular engineering stream.														

Integrated Professional Core Course (IPCC)		Professional Elective Courses-I	
Code	Title of the Course	Code	Title of the Course
2MCPM104A	Construction Environmental Management	2MCPM105A	Disaster Management
2MCPM104B	Advanced Materials and Construction Techniques	2MCPM105B	Quality Management
2MCPM104C	Sustainable Construction.	2MCPM105C	Safety Management
2MCPM104D	Maintenance And Rehabilitation of Structures	2MCPM105D	Risk Management

Professional Elective Courses-II		Professional Core Courses Lab (PCCL)	
Code	Title of the Course	Code	Title of the Course
2MCPM106A	Value Engineering in Construction Management	2MCPML107A	MS Office For Business Administration
2MCPM106B	Lean Construction Management	2MCPML107B	Project Liber
2MCPM106C	Construction Demolition and Waste Management	2MCPML107C	Gis & Infrastructure Planning
2MCPM106D	International Project Management	2MCPML107D	RUP- Rationale Unified Process

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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					Examination					Credits	
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester	Term work & self-learning in hours	Teaching-Learning hours per semester = CI + LI + TW+SL	Duration in hours	CIE Marks	SEE Marks				Total Marks
					L	T	P	TW+SL				Theory	VIVA	Term Work		
1	PCC/IPCC	2MCPM201	Building Management-2		42	--	28	50	120	--	50		50		100	4
2	PCC	2MCPM202	Resource Management		56	0	0	64	120	03	50	50			100	4
3	PCC	2MCPM203	Building Energy Analysis Management		56	0	0	64	120	03	50	50			100	4
4	PCC	2MCPM204	AI in Project Management		56	0	0	64	120	--	50		50		100	4
5	PEC	2MCPM205x	Professional Elective Courses-III		42	0	0	48	90	--	100				100	3
6	PEC	2MCPM206x	Professional Elective Course-IV		42	0	0	48	90	--	100				100	3
7	PCCL	2MCPML207	Professional Core Course- Lab (AEC Lab)		--	--	28	2	30	--	50			50	100	1
8	PCC	2MPRJ208	Dissertation Phase – I		28	28	--	34	90	--	50		50		100	3
Total (In case of regular students)									780	06	500	100	150	50	800	26
		* An Ability Enhancement Course Laboratory is a practical, skill-oriented lab course designed to strengthen students’ practical abilities, professional competencies that support communication, environmental awareness, computational thinking, interdisciplinary learning, and application skills through hands-on learning experiences. The laboratory may pertain to disciplinary or interdisciplinary involving experiments, design tasks, and mini-projects aligned with current industry practices.														
		2MPRJ304- Project Phase-I : Project Phase-I” generally refers to the first stage of a project work , especially in engineering or postgraduate programs. It is the initial phase where students mainly focus on: - Identifying and finalizing the project topic - Defining objectives and problem statement - Conducting literature survey/review - Preparing methodology and work plan - Requirement analysis and feasibility study - Initial design, modelling, or prototype planning - Submitting synopsis and progress presentation/report														

Professional Elective Courses (PECs)			
PEC-III		PEC-IV	
Code	Title of the Course	Code	Title of the Course
2MCPM205A	Airport Planning and Design	2MCPM206A	Project Formulation & Appraisal
2MCPM205B	Infrastructure Management- Airports, Tunnelling, Marine/Offshore Construction	2MCPM206B	Project Recovery
2MCPM205C	Renewable Energy Infrastructure	2MCPM206C	Project Failure and Success
2MCPM205D	Functional Efficiency of Buildings	2MCPM206D	Economic and Finance Management

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Specialization in – (Construction Project Management)

III SEMESTER

SL. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching and Learning Scheme					Examination					Credits	
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester	Term work & self-learning in hours	Teaching -Learning hours per semester = CI + LI+TW+SL	Duration in hours	CIE Marks	SEE Marks				Total Marks
					L	T	P	TW+SL				Theory	VIVA	Term Work		
1	PEC	2MCPM301x	Professional Elective Course-V		42		28	50	120	--	50		50		100	03
2	PEC	2MCPM302x	Professional Elective Course-VI		42	0	0	48	90	--	50		50		100	03
3	PEC	2MCPM303x	Multidisciplinary Elective Courses-I		42	0	0	48	90	--	100				100	03
4	PCC	2MPRJ304	Dissertation Phase II		42	28	0	50	120	--	50		50		100	04
Total									420	--	250	--	150	--	400	13
		Courses 2MXXX301, 2MXXX302, and 2MXXX303 are online courses offered through CoE Mysuru/NPTEL for students opting to undertake internships outside the institution premises. However, for students carrying out Research Internship or Internship within the institution, these courses may be conducted in offline mode, as decided by the concerned Board of Studies (BoS).														

Professional Elective Courses (PECs)			
PEC-V		PEC-VI	
Code	Title of the Course	Code	Title of the Course
2MCPM301A	Facility Management	2MCPM302A	Entrepreneurship Development
2MCPM301B	Real Estate Management	2MCPM302B	Legal Framework and Labour Laws
2MCPM301C	Supply Chain and logistics Management	2MCPM302C	Geospatial techniques in practice
2MCPM301D	Project Management Information system	2MCPM302D	Cloud adoption and management techniques
Multidisciplinary Elective Courses (PECs)			
MEC-I			
Code	Title of the Course		
2MCPM303A	Public Policies for young Professional		
2MCPM303B	Organizational behaviour		
2MCPM303C	Critical thinking, Design thinking, leadership and team work		
2MCPM303D	Foreign Language		

Specialization in – (Construction Project Management)

IV SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching and Learning Scheme					Examination							
					Classroom Instruction (CI) hours per semester		Laboratory Instruction (LI) hours Per semester	Term work & self -learning in hours	Teaching - Learning hours per semester = CI +LI+TW+SL	Duration in hours	CIE Marks	SEE Marks			Total Marks	Credits	
												Theory	VIVA	Term Work			
2	PCC	2MINT401	Internship		(15 weeks duration Internship)					--	--		200		200	10	
3	PEC	2MAUD402	NPTEL/SWAYAM Online Courses							--	--					4	
3	PEC	2MAUD403	NPTEL/SWAYAM Online Courses							--	--					4	
					Total					660	--	--	--			200	18

Courses **2MCPM402**, and **2MCPM403** are online courses offered through CoE Mysuru/NPTEL for students opting to undertake internships outside the institution premises. However, for students carrying out Research Internship or Internship within the institution, these courses may be conducted in offline mode, as decided by the concerned Board of Studies (BoS).

2MINT401 -Internship: Students opting for Internship of duration more than 15 weeks and less than 30 weeks shall appear for the Semester End Examination (SEE) after completion of the 4th semester duration. In such cases, the students need not appear for the Semester End Examination (SEE) at the end of the 3rd semester. However, there shall be no change in the total credit requirement or credit value prescribed in the Scheme for the students opting for Internship of duration more than 15 weeks and less than 30 weeks.

2MPRJ401 Project Phase-II

is the continuation and completion stage of the project work carried out after Project Phase-I. In this phase, students mainly focus on the actual execution and final outcome of the project.

The activities generally include:

- Detailed design and implementation of the project
- Experimentation, coding, fabrication, simulation, or development work
- Testing, validation, and performance analysis
- Result generation and discussion
- Preparation of dissertation/project report
- Presentation, demonstration, and viva-voce examination

Submission of final report and supporting documents

Note on Internship for the Attention of Students and Colleges

- Placement training conducted at the college level, whether by third-party agencies, training institutes, or internal faculty, shall not be considered as internship for an 15 week period.
- The official engagement period of 15-week for students selected/recruited by the company/ organization only at their premises under the supervision of the company, shall only be considered as an internship.
- The period of training and working of students who have been recruited as employees by organisations at the beginning of the 2nd year of the programme, shall also be treated as an internship.
- Students and colleges/institutions shall follow all the guidelines and procedures of the organization and the University's Internship Guidelines, and complete the internship within a period that matches with the VTU Calander and examination timetable.
- The assigned institution faculty mentor/ coordinator/guide should monitor the student's progress, and document offer letters, training reports, attendance, and evaluations for awarding academic credits.
- All students undergoing an internship, should adhere to all the guidelines, reporting protocols, and evaluation procedures prescribed by the University.
- Students must submit the certificate of completion of an internship with the period of internship clearly mentioned, from the respective company/organization.
- Colleges must submit details of students opting for internship during the odd and even semesters, along with a copy of the company selection letter, to the VTU when notified by the University.

Overview of Courses, Credits, Projects, and Internships under VTU Curriculum

(A) Abbreviations Adopted in the Scheme of Teaching and Examinations

Course		General Terms		General Terms	
Acronyms	Expanded Form	Acronyms	Expanded Form	Acronyms	Expanded Form
AEC	Ability Enhancement Course	AICTE	All India Council of Technical Education	SEE	Semester End Evaluation
ASC	Applied Science Course	CCA	Continuous Comprehensive Assessment	SGPA	Semester Grade Point Average
BSC	Basic Science Course	CGPA	Cumulative Grade Point Average	SL	Self-Learning
HSMC	Humanities Studies and Management Course	CI	Classroom Instruction	SWAYAM	Study Webs of Active-Learning for Young Aspiring Minds
IPCC	Integrated Professional Core Course	CIE	Continuous Internal Evaluation	T	Tutorial
NCMC	Non-Credit Mandatory Course	COE	Centre for Online Education	TW	Term Work
OEC	Open Elective	CUL	Cultural	VTU	Visvesvaraya
PCC	Professional Core Course	NCrF	National Credit Framework	VTU online	VTU online courses
PCCL	Professional Core Course	L	Lecture		
PEC	Professional Elective	LI	Laboratory Instruction		
PE	Physical Education	NPTEL	National Programme for		
SEC	Skill Enhancement	NSS	National Service Scheme		
YOG	Yoga	P	Practical		

(B) Academic Credit Framework in accordance with the National Credit Framework (NCrF)

The National Credit Framework (NCrF), introduced under India's education reforms, serves as an umbrella framework for the creditisation of learning across school education, higher education, vocational education, and experiential learning.

NCrF credit levels are determined based on a combination of cumulative years of learning, the complexity of learning outcomes, and the rigor of assessment. These levels signify the degree of competence and complexity attained by the learner, progressing from foundational schooling to advanced doctoral research.

Levels 1 to 4 correspond to school education up to the 12th standard, while Levels 4.5 to 8 correspond to higher education, ranging from the undergraduate level to the Ph.D. level.

In the earlier system, credits were primarily based on contact time (lecture hours per week $\times$ number of weeks per semester/year), assuming that learning is directly proportional to time spent in classroom instruction.

However, the NCrF adopts a comprehensive and outcome-based approach by assigning credits to all forms of learning, including, (i) Classroom teaching, (ii) Laboratory work, (iii) Projects, (iv) Internships and apprenticeships, (v) Online and blended learning, (vi) Fieldwork and community engagement, (vii) Recognition of Prior Learning (RPL), (viii) Sports and arts activities, and (ix) On-the-job training.

Credits are thus based on notional learning hours, representing the total learner effort rather than only contact hours.

This definition aligns Indian education with Global outcome-based credit systems, and international credit transfer practices [e.g., European Credit Transfer and Accumulation System (ECTS)-like frameworks].

According to NCrF, one academic year of learning is equal 1,200 notional learning hours (not a scientifically-validated law or psychological constant, but a policy design hours) and includes classroom teaching, self-study, assignments, projects, laboratory work, co-curricular and extra-curricular activities, internships, apprenticeships and other assessed learning experiences. For these 1,200 hours a student is expected to earn 40 credits, which means 1 credit corresponds to approximately 30 hours of academic learning.

Although traditional university systems often equated 1 credit with approximately 13 to 15 contact hours per semester, VTU, in alignment with NCrF, considers 14-weeks of structured academic interaction per semester with students is equivalent to approximately 30 notional hours per credit.

The learning methodologies include:

(i) Classroom Instruction (CI): Includes different instructional/implementation strategies, such as Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc., to deliver theoretical concepts within the classroom measured in Number of hours per semester.

(ii) Laboratory Instruction (LI): Expressed as number of hours per semester which Includes experiments/practical performances / problem-based experiences in laboratory, workshop, field or other locations using different instructional / Implementation strategies.

(iii) Term work (TW): Includes assignments, seminars, presentations, case studies, micro projects, field activities, industrial visits, academic preparation duration and any other student activities in Number of hours per semester.

(iv) Self-Learning (SL): MOOCs (SWAYAM/NPTEL/Industry certified courses), spoken tutorials, online educational resources, self-initiated projects, Learning through digital resources etc in Number of hours per semester. (If provided in curriculum structure).

VTU, in alignment with NCrF, considers 14-weeks of structured academic interaction per semester with students as equivalent to approximately 30 notional hours per credit.

Table below shows the credit structure, equivalent NCrF learning hours adopted by VTU:

Table 7.0.1 VTU adopted NCrF credit structure					
Particulars	Classroom Instruction (CI) in Hours per semester		Laboratory Instruction (LI) in Hours per semester	Term work (TW) and Self-Learning (SL) in Hours per semester	Total number of Teaching-Learning hours per semester
	L	T	P	TW + SL	
1 Credit theory course	14	-	-	16	30
1 Credit Practical course	-	-	28	02	30
2 Credit theory course	28	-	-	32	60
3 Credit theory course	42	-	-	48	90
3 Credit theory course with Tutorial	28	28	-	34	90
4 Credit theory course	56	-	-	64	120
4 Credit theory course with Tutorial	42	28	-	50	120
4 Credit Integrated Course	42	-	28	50	120
Project work	-	-	-	As per the type of project	
Internship	-	-	-	As per the type of Internship	

NCrF is designed to work with ABC for years, where, credits are digitally stored to accumulate, transfer, and redemption across institutions for vertical and horizontal mobility across sectors, which is essential for MEME.

(C) Details of Courses

- (1) Integrated Professional Core Course (IPCC):** The Integrated Professional Core Course (IPCC) refers to a core theory course that is integrated with a laboratory of the same subject. Each IPCC carries 4 credits, with Teaching–Learning hours structured (L : T : P) as either (3:0:2). The theory component of the IPCC shall be evaluated through both Continuous Internal Evaluation (CIE) and Semester End Examination (SEE). The laboratory part shall be assessed exclusively through CIE, with no SEE. However, questions derived from the laboratory part may be included in the SEE question paper to ensure comprehensive evaluation.
- (2) Non-Credit Mandatory Courses (NCMC):** are aimed at enhancing students' knowledge, skills, and awareness beyond the core curriculum. Successful completion of the NCMC is compulsory for fulfilling the requirements of the academic program. It shall not be considered for the computation of SGPA, CGPA and vertical progression. Each student shall register for the prescribed NCMC(s) in the prescribed semester. A student who fails to qualify in the prescribed NCMC shall not be eligible for the conferment of the degree.
- (3) Professional Elective Courses (PEC):** A professional elective course (PEC) is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum of the same discipline.

- (4) Open Elective Courses (OEC):** A open elective course (OEC) is a course offered by departments other than a student's parent department. These interdepartmental /interdisciplinary courses allow students to explore disciplines beyond their core area of study. These courses are intended to promote interdisciplinary learning, broad-based education, thereby enhancing a student's overall knowledge, creativity, and employability. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor/Proctor.
- (5) Ability/Skill Enhancement Course Laboratory (AEC):** An Ability Enhancement Course Laboratory is a practical, skill-oriented lab course designed to strengthen students' practical abilities, professional competencies that support communication, environmental awareness, computational thinking, interdisciplinary learning, and application skills through hands-on learning experiences.
The laboratory may pertain to disciplinary or interdisciplinary involving experiments, design tasks, and mini-projects aligned with current industry practices.
- (6) Skill Enhancement Courses (SEC):** These courses are intended to develop specific practical skills and competencies that improve students' employability, technical proficiency, and professional readiness to bridge the gap between academic and industry requirements. These courses emphasize hands-on training, application of theoretical knowledge, and development of discipline-relevant and transferable skills required in industry and society, and develop entrepreneurship and start-up skills.
- (7) Online Courses:** Online courses are educational programs delivered over the Internet through a digital platform, allowing students to access lessons, assignments, and discussions from anywhere at any time. Most online courses offer flexibility, allowing students to access materials and complete assignments on their own schedule. However, students have to pass the course within a stipulated period as per the norms of the university.
- (8) VTU Online Courses:** VTU Online Courses are online courses offered by the Centre of Online Education (COE), Mysuru. A wide range of multidisciplinary courses is made available to learners anytime and anywhere, enabling them to earn University-prescribed credits through duly conducted proctored examinations for the award of the degree.
NPTEL/SWAYAM courses adopted by VTU shall be offered in accordance with the NPTEL/SWAYAM course delivery framework, wherein teaching-learning is carried out through the online MOOC platform, assignments are administered periodically, and assessment is completed through a centrally conducted proctored examination as prescribed by the respective platform.
- (9) NPTEL/SWAYAM Online Courses:** The National Programme on Technology Enhanced Learning (NPTEL)/SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) are the specific Indian platforms to host national Massive Open Online Courses (MOOCs). It offers online courses on a wide range of disciplines to learners anywhere, anytime, to earn university-prescribed credits through proctored examination for the award of a degree. All NPTEL/SWAYAM courses are MOOCs, but not all MOOCs are offered on these specific Indian platforms.