MIT | Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

MIT ACADEMY OF ENGINEERING, ALANDI

Curriculum for
Under Graduate Program
Bachelor of Technology in
Civil Engineering

(Choice Based Credit System)

NEP REVISION 2023 (2.0)

(Four Year Curriculum W.E.F, AY: 2023-2024)

BoS Chairman	Member Secretary	Chairman
Civil	Academic Council	Academic Council
Engineering	Dean Academics	Director MITAOE

INSTITUTE VISION

To be a new age learning center for holistic development of students into professional engineers, to cater to the changing needs of techno-society.

INSTITUTE MISSION

- To provide new-age infrastructural facilities blended with skill-based curriculum and activity-based pedagogical approaches to develop competitive engineering professionals to solve real-world problems.
- To prepare students for lifelong learning by transforming educational practices.
- To promote ethical and moral values by involving students in community services.
- To promote entrepreneurship and managerial skills by strengthening industry-institute interaction.

SCHOOL OF CIVIL ENGINEERING

VISION

To be a state-of-the-art School of Civil Engineering dedicated to the holistic development of students by imparting knowledge for ever-changing industrial, ecological & social needs.

MISSION

- To provide state-of-the-art infrastructure facilities combined with skill-based education and outcome-based pedagogical practices in order to build competent engineering professionals who can address real-world challenges in civil engineering.

- **To nurture students for professional growth by transforming civil engineering educational practices focusing on research aptitude.**

- **To imbibe students for humanitarian efforts in order to elevate moral and ethical responsibilities for society.**

- **To enhance entrepreneurial and managerial skills by developing Industry Institute relations.**

PROGRAM EDUCATIONAL OBJECTIVES(PEO's)

PEO	PROGRAM EDUCATIONAL OBJECTIVES(PEO's)
PEO 1	Civil Engineering graduates will be successful professionals in their fields.
PEO 2	Civil Engineering graduates will be inspired to pursue advanced degrees with a research attitude.
PEO 3	Civil Engineering graduates will exhibit the character of responsible citizens of society.

PO	PROGRAM OUTCOMES (POs)
PO1	**Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and 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 engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The Engineer and Society:** Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and sustainability:** Understand the impact of professional engineering 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 engineering practice.
PO9	**Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering 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 the engineering 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 (PSO's)

PSO	PROGRAM SPECIFIC OUTCOMES (PSO's)
PSO 1	Plan, survey, map, analyze and design for all civil engineering structures.
PSO 2	Build the systems with efficiency and long-term environmental sustainability.

MIT Academy of Engineering, Alandi, Pune
An Autonomous Institute affiliated to Savitribai Phule Pune University

COMMON CURRICULUM FRAMEWORK (NEP Revision 2023 (2.0))

The Bachelor of Technology Program shall be based on the following type of courses.

COURSE AND CREDIT DISTRIBUTION: SEMESTER-WISE												
S.N.	TYPE OF COURSE	NO. OF COURSES/SEMESTER (CREDITS)								Total Courses	Total Credits	%
		1	2	3	4	5	6	7	8			
1.	Basic Science Courses (BSC)	2(7)	2(8)							4	15	9
2.	Engineering Science (ESC)	2(6)	3(8)							5	14	9
3.	Program Core Course (PCC)		1(2)	3(10)	3(10)	2(8)	2(8)	1(4)	1(4)	13	46	27
4.	Program Elective Course (PEC)					1(4)	1(4)	1(4)	1(3)	4	15	9
5	Vocational and Skill Enhancement Course (VSEC)	1(2)	1(2)	1(2)	1(2)	1(2)	1(2)	1(2)		6	12	7
6	Multi-Disciplinary Minor(MDM)			1(3)	1(3)	1(3)	1(2)	1(3)		5	14	8
7	Open Elective (OE)			1(2)	1(4)				1(2)	3	8	5
8	Ability Enhancement Courses (HSSM AEC)	1(2)				1(2)				2	4	2
9	Management/Entrepreneurship/Economics Courses (HSSM MEC)			1(2)			1(2)			2	4	2
10	Indian Knowledge System (HSSM IKS) & Co-curricular (CC)	2(3)	1(2)							3	5	3
11	Value Education Course (HSSM VEC)			1(3)	1(2)					2	5	3
12	Experiential Learning/ Project/ Field Work/Community (ELC PRJ)			1(1)	1(1)	1(2)	1(2)	0/2 (4)	0/2 (4)	6	10	6
13	Experiential Learning Summer/ Semester Long Internship (ELC SI)			1(2)		1(2)		1(4)	1(8)	4	16	10
	Audit Courses	1			1					2	0	0
	TOTAL	8 (20)	8 (22)	7 (22)	7 (22)	6 (21)	6 (21)	7 (20)	5 20)	61	168	100

CREDITS (CONTACT HOURS)							
1 Lecture Hour = 1 Credit, 2 Lab Hours = 1 Credit, 1 Tutorial Hour = 1 Credit							
SL. NO.	YEAR	SEMESTER CREDIT			SEMESTER CONTACT HOURS		
		1	2	TOTAL	1	2	TOTAL
1.	First Year	20	22	42	30	29	59
2.	Second Year	22	22	44	30	32	62
3.	Third Year	21	21	42	29	31	60
4.	Final Year	20	20	40	22	12	44
TOTAL				168			225

COURSE CATEGORIES ABBREVIATION	
BSC	Basic Science Course
ESC	Engineering Science Course
PCC	Programme Core Course
PEC	Programme Elective Course
MDM	Multi-Disciplinary Minor
OE	Open Elective
VSEC	Vocational and Skill Enhancement Course
HSSM AEC	Humanities Social Science Management Ability Enhancement Courses
HSSM MEC	Humanities Social Science Management/Entrepreneurship/ Economics Course
HSSM IKS	Humanities Social Science Management Indian Knowledge System
HSSM VEC	Humanities Social Science and Management Value Education Course
EL PRJ	Experiential Learning Course Project/ Field Work/ Community Engagement Project
EL SI	Experiential Learning Course Student's Internship (Summer/ Semester Long/ Year Long)
CC	Co-Curricular Courses

ABBREVIATIONS			
TH	Theory Lecture	CA	Continuous Assessment
P	Practical Lab	T/P	Term Work / Practical
TU	Tutorial	DM	Demonstration
IA	Internal Assessment	Lab	Laboratory
MSE	Mid Semester Exam		
ESE	End Semester Exam		

MIT ACADEMY OF ENGINEERING, ALANDI

Curriculum for

First Year

Bachelor of Technology

(Civil Engineering)

NEP REVISION 2023 (2.0)

(With Effect from Academic Year: 2023-2024)

	COURSE STRUCTURE (NEP REVISION 2023)
SCHOOL OF CIVIL ENGINEERING	**W. E. F.** : **2023-2024**
FIRST YEAR BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)	**RELEASE DATE** : **01/08/2023**
	REVISION NO. : **2.0 (NEP)**

SEMESTER: I

2301186 - Universal Human Values (Induction Program)

TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	TOTAL	CREDIT
BSC	2301101T	Calculus and Differential Equations	3	-	-	30	20	50	-	-	100	3
	2301101U	Calculus and Differential Equations Tutorial	-	-	1	-	-	-	20	30	50	1
BSC	2301102T	Engineering Physics	2	-	-	15	20	40	-	-	75	2
	2301102L	Engineering Physics Lab	-	2	-	-	-	-	20	30	50	1
ESC	2307101T	Electrical and Electronics Engineering	2	-	-	15	20	40	-	-	75	2
	2307101L	Electrical and Electronics Engineering Lab	-	2	-	-	-	-	20	30	50	1
ESC	2304101T	Foundations of Computing	2	-	-	15	20	40	-	-	75	2
	2304101L	Foundations of Computing Lab	-	2	-	-	-	-	20	30	50	1
VSEC	2303161L	Computer-Aided Engineering Drawing	-	4	-	-	-	-	35	40	75	2
HSSM AEC	2301111/2/3/4	Communication Skills (English/German/Japanese/ French)	-	4	-	-	-	-	35	40	75	2
	2301112/3/4T	Communication Skills (German/Japanese/ French)	2	-	-	35	-	40	-	-	75	2
CC	2301182	Liberal Learning	-	2	-	-	-	-	-	50	50	1
HSSM IKS	2303181	Indian Knowledge System (Ancient Indian Architecture and Town Planning)	2	-	-	25	-	50	-	-	75	2
TOTAL			**13**	**16**	**1**						**800**	**20**

SCHOOL OF CIVIL ENGINEERING	W.E.F	:	2023-2024
FIRST YEAR BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)	RELEASE DATE	:	01/08/2023
	REVISION NO.	:	2.0 (NEP)

SEMESTER: II											
COURSE			**TEACHING SCHEME**			**EXAMINATION SCHEME AND MARKS**					**CREDIT**
			Hour/Week			**THEORY**			**PRACT**		**TOTAL**	
TYPE	**CODE**	**NAME**	TH	P	TU	IA	MSE	ESE	CA	D/P		
BSC	2301103T	Statistics and Integral Calculus	3	-	-	30	20	50	-	-	100	3
	2301103U	Statistics and Integral Calculus Tutorial	-	-	1	-	-	-	20	30	50	1
BSC	2301104T	Science of Nature	3	-	-	30	20	50	-	-	100	3
	2301104L	Science of Nature Lab	-	2	-	-	-	-	20	30	50	1
ESC	2304102T	Essentials of Data Science	2	-	-	15	20	40	-	-	75	2
	2304102L	Essentials of Data Science Lab	-	2	-	-	-	-	20	30	50	1
ESC	2303101T	Applied Mechanics	2	-	-	15	20	40	-	-	75	2
	2303101L	Applied Mechanics Lab	-	2	-	-	-	-	20	30	50	1
ESC	2309101T	Design Thinking	1	-	-	15	-	20	-	-	35	1
	2309101L	Design Thinking Lab	-	2	-	-	-	-	20	20	40	1
VSEC	2303162T	Surveying and Geomatics	1	-	-	15	-	20	-	-	35	1
	2303162L	Surveying and Geomatics Lab	-	2	-	-	-	-	20	20	40	1
PCC	2303111T	Basics of Civil Engineering	2	-	-	15	20	40	-	-	75	2
CC	2307183L	Creative Technologies	-	4	-	-	-	-	35	40	75	2
TOTAL			**14**	**14**	**1**						**850**	**22**

*Two Credit Internship need to accomplish after Completion of First Year

MIT ACADEMY OF ENGINEERING, ALANDI

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NEP REVISION 2023 (2.0)

(With Effect from Academic Year: 2024-2025)

SEMESTER: III

TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	TOTAL	CREDIT
PCC	2303211T	Mechanics of Solids	2	-	-	15	20	40	-	-	75	2
	2303212T	Geotechnical Engineering	3	-	-	30	20	50	-	-	100	3
	2303212L	Geotechnical Engineering Lab	-	2	-	-	-	-	20	30	50	1
	2303213T	Building Design and Construction	3	-	-	30	20	50	-	-	100	3
	2303213L	Building Design and Construction Lab	-	2	-	-	-	-	20	30	50	1
VSEC	2303264L	Building Information Modeling-I	-	4	-	-	-	-	35	40	75	2
OE	2311251L	Prototyping	-	4	-	-	-	-	35	40	75	2
	*OE Annexure List	Open Elective Course	2	-	-	35	-	40	-	-		
HSSM MEC	2301276T	Entrepreneurship Skills	2	-	-	35	-	40	-	-	75	2
HSSM VEC	2301287	Universal Human Values-II	1	4	-	-	-	25	-	75	100	3
ELC PRJ	2303291L	Minor Project Design	-	2	-	-	-	-	20	30	50	1
ELC SI	2303296	Internship (Life And Soft Skills)	-	-	-	-	-	-	-	75	75	2
TOTAL			14	16							825	22

Note: The TEACHING SCHEME header spans Hour/Week (TH, P, TU). EXAMINATION SCHEME AND MARKS spans THEORY (IA, MSE, ESE) and PRACT (CA, D/P), plus TOTAL and CREDIT columns.

SCHOOL OF CIVIL ENGINEERING	W. E. F	:	2024-2025
SECOND YEAR BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)	RELEASE DATE	:	01/07/2024
	REVISION NO.	:	2.0 (NEP)

SEMESTER: IV											
COURSE			**TEACHING SCHEME**			**EXAMINATION SCHEME AND MARKS**					**C R E D I T**
			Hour/Week			THEORY			PRACT		TOTAL
TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	
PCC	2303214T	Mechanics of Fluids	3	-	-	30	20	50	-	-	100	3
	2303214L	Mechanics of Fluids Lab	-	2	-	-	-	-	20	30	50	1
	2303215T	Surveying and Geospatial Engineering	2	-	-	15	-	20	-	-	35	1
	2303215L	Surveying and Geospatial Engineering Lab	-	2	-	-	-	-	20	20	40	1
	2303216T	Structural Analysis	3	-	-	30	20	50	-	-	100	3
	2303216L	Structural Analysis Lab	-	2	-	-	-	-	20	30	50	1
MDM	*MDM Annexure List	Multi-Disciplinary Minor Course-I	2	-	-	15	20	40	-	-	75	2
	*MDM Annexure List	Multi-Disciplinary Minor Course-I Lab	-	2	-	-	-	-	20	30	50	1
OE	2301254T	Applied Mathematics	3	-	-	30	20	50	-	-	100	3
	*OE Annexure List	Open Elective Course										
	2301254L	Applied Mathematics Lab	-	2	-	-	-	-	20	30	50	1
	*OE Annexure List	Open Elective Course Lab										
VSEC	2304268L	Data Analysis	-	4	-	-	-	-	35	40	75	2
HSSM VEC	2303292L	Environmental Science	2	-	-	35	-	40	-	-	75	2
ELC PRJ	2303296L	Project Implementation	-	2	-	-	-	-	20	30	50	1
Audit	2301281A	Indian Constitution	1	-	-	-	-	-	-	-	Audit	
TOTAL			**16**	**16**	**-**						**850**	**22**

MIT ACADEMY OF ENGINEERING, ALANDI

Curriculum for

Third Year

Bachelor of Technology

(Civil Engineering)

NEP REVISION 2023 (2.0)

(With Effect from Academic Year: 2025-2026)

SCHOOL OF CIVIL ENGINEERING	W. E. F	:	2025-2026
THIRD YEAR BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)	RELEASE DATE	:	01/07/2025
	REVISION NO.	:	2.0 (NEP)

SEMESTER: V

TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	TOTAL	CREDIT
PCC	2303311T	Concrete Technology	3	-	-	30	20	50	-	-	100	3
	2303311L	Concrete Technology Lab	-	2	-	-	-	-	20	30	50	1
	2303312T	Water supply and Sanitation Engineering	3	-	-	30	20	50	-	-	100	3
	2303312L	Water supply and Sanitation Engineering Lab	-	2	-	-	-	-	20	30	50	1
PEC	2303321T	Construction Engineering & Management	3	-	-	30	20	50	-	-	100	3
	2303322T	Design of Steel Structures										
	2303323T	Hydrology and Irrigation Engineering										
	2303321L	Construction Engineering & Management Lab	-	2	-	-	-	-	20	30	50	1
	2303322L	Design of Steel Structures Lab										
	2303323L	Hydrology and Irrigation Engineering Lab										
VSEC	2303361L	Analysis & Design of Building Systems	-	4	-	-	-	-	35	40	75	2
	2303362L	Building Information Modeling-II										
	2303365L	Professional Certification Course										
MDM	*MDM Annexure List	Multi-Disciplinary Minor Course-II	2	-	-	15	20	40	-	-	75	2
	*MDM Annexure List	Multi-Disciplinary Minor Course-II Lab	-	2	-	-	-	-	20	30	50	1
ELC PRJ	2303391	Project - I	-	4	-	-	-	-	35	40	75	2
ELC SI	2303396	Internship (Technical)	-	-	-	-	-	-	-	75	75	2
TOTAL			11	18	-						800	21

Note: Teaching Scheme columns = Hour/Week (TH, P, TU); Examination Scheme = THEORY (IA, MSE, ESE), PRACT (CA, D/P).

SCHOOL OF CIVIL ENGINEERING	W. E. F	:	2025-2026
THIRD YEAR BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)	RELEASE DATE	:	01/07/2025
	REVISION NO.	:	2.0 (NEP)

SEMESTER: VI

TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	TOTAL	CREDIT
PCC	2303314T	Design of Reinforced Concrete Structures	3	-	-	30	20	50	-	-	100	3
	2303314L	Design of Reinforced Concrete Structures Lab	-	2	-	-	-	-	20	30	50	1
	2303315T	Transportation Engineering	3	-	-	30	20	50	-	-	100	3
	2303315L	Transportation Engineering Lab	-	2	-	-	-	-	20	30	50	1
PEC	2303326T	Contracts Management	3	-	-	30	20	50	-	-	100	3
	2303327T	Solid and Industrial Waste Management										
	2303328T	Formwork Design										
	2303326L	Contracts Management Lab	-	2	-	-	-	-	20	30	50	1
	2303327L	Solid and Industrial Waste Management Lab										
	2303328L	Formwork Design Lab										
VSEC	2303366L	Drone Surveying	-	4	-	-	-	-	35	40	75	2
	2303367L	Hydraulic Modeling										
	2303370L	Professional Certification Course										
MDM	*MDM Annexure List	Multi-Disciplinary Minor Course-III	2	-	-	15	20	40	-	-	75	2
	*MDM Annexure List	Multi-Disciplinary Minor Course-II IILab	-	2	-	-	-	-	20	30	50	1
HSSM AEC	2303371L	Employability and Career Development	-	4	-	-	-	-	35	40	75	2
ELC PRJ	2303392L	Project - II	-	4	-	-	-	-	35	40	75	2
TOTAL			**11**	**20**	**-**						**800**	**21**

*Four Credit Internship need to accomplish after completion of Third Year Credit Transfer in Semester VII (Part A) / Semester VIII (Part B)

MIT ACADEMY OF ENGINEERING, ALANDI

Curriculum for

Final Year

Bachelor of Technology

(Civil Engineering)

NEP REVISION 2023 (2.0)

(With Effect from Academic Year: 2026-2027)

SCHOOL OF CIVIL ENGINEERING	W. E. F	:	2026-2027
FINAL YEAR BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)	RELEASE DATE	:	01/07/2026
	REVISION NO.	:	2.0 (NEP)

SEMESTER: VII (PART A)											
COURSE			**TEACHING SCHEME**			**EXAMINATION SCHEME AND MARKS**					**CREDIT**
			Hour/Week			THEORY			PRACT		TOTAL
TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P		
PCC	2303411T	Estimating and Costing	3	-	-	30	20	50	-	-	100	3
	2303411L	Estimating and Costing Lab	-	2	-	-	-	-	20	30	50	1
PEC	2303421T	Adv Construction Techniques	3	-	-	30	20	50	-	-	100	3
	2303422T	Earthquake Engineering										
	2303423T	Environmental Planning & Impact Assessment										
	2303424T	Railway Engineering										
	2303421L	Adv Construction Techniques Lab	-	2	-	-	-	-	20	30	50	1
	2303422L	Earthquake Engineering Lab										
	2303423L	Environmental Planning & Impact Assessment Lab										
	2303424L	Railway Engineering Lab										
MDM	*MDM Annexure List	Multidisciplinary Minor Course-IV	2	-	-	15	20	40	-	-	75	2
HSSM MEC	2303476	Entrepreneurship	-	4	-	-	-	-	35	40	75	2
ELC PRJ	2303491	Project - III	-	4	-	-	-	-	35	40	75	2
ELC PRJ	2303492	Research Methodology	2	-	-	15	20	40	-	-	75	2
ELC SI	2303496	Summer Internship (Technical)	-	-	-	-	-	-	-	150	150	4
TOTAL			**10**	**12**	**-**						**750**	**20**

SCHOOL OF COMPUTER ENGINEERING

W. E. F	:	2026-2027
RELEASE DATE	:	01/07/2026
REVISION NO.	:	2.0 (NEP)

FINAL YEAR BACHELOR OF TECHNOLOGY (COMPUTER ENGINEERING)

SEMESTER: VIII (PART A)											
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					TOTAL	CREDIT
			Hour/Week			THEORY			PRACT			
TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	TOTAL	CREDIT
PCC	2304313T	Dams and Hydraulic Structures	3	-	-	30	20	50	-	-	100	3
	2303413L	Dams and Hydraulic Structures Lab	-	2	-	-	-	-	20	30	50	1
PEC	2303426T	Building Services	3	-	-	30	20	50	-	-	100	3
	2303427T	Advanced Design of Structures										
	2303428T	Air and Noise Pollution										
	2303429T	Foundation Engineering										
MDM	*MDM Annexure List	Multidisciplinary Minor Course-V	2	-	-	15	20	40	-	-	75	2
	*MDM Annexure List	Multidisciplinary Minor Course-V Lab	-	2	-	-	-	-	20	30	50	1
OE	2303451	Professional Certification Course	-	-	-	-	-	-	-	-	-	2
ELC SI	2303497	Semester Long Internship	-	-	-	-	-	-	-	-	300	8
TOTAL			8	4							675	20

SCHOOL OF COMPUTER ENGINEERING	W. E. F	:	2026-2027
FINAL YEAR BACHELOR OF TECHNOLOGY (COMPUTER ENGINEERING)	RELEASE DATE	:	01/07/2026
	REVISION NO.	:	2.0 (NEP)

SEMESTER: VII (PART B)

TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	TOTAL	CREDIT
PCC	2303411T	Estimating and Costing	3	-	-	30	20	50	-	-	100	3
	2303411L	Estimating and Costing Lab	-	2	-	-	-	-	20	30	50	1
PEC	2303421T	Adv Construction Techniques	3	-	-	30	20	50	-	-	100	3
	2303422T	Earthquake Engineering										
	2303423T	Environmental Planning & Impact Assessment										
	2303424T	Railway Engineering										
	2303421L	Adv Construction Techniques Lab	-	2	-	-	-	-	20	30	50	1
	2303422L	Earthquake Engineering Lab										
	2303423L	Environmental Planning & Impact Assessment Lab										
	2303424L	Railway Engineering Lab										
MDM	*MDM Annexure List	Multidisciplinary Minor Course-IV	2	-	-	15	20	40	-	-	75	2
HSSM MEC	2303476	Entrepreneurship	-	4	-	-	-	-	35	40	75	2
ELC SI	2303497	Semester Long Internship	-	-	-	-	-	-	-	-	300	8
TOTAL			**8**	**8**	**-**						**750**	**20**

Teaching Scheme: Hour/Week. Examination Scheme and Marks: THEORY (IA, MSE, ESE), PRACT (CA, D/P)

MIT | Academy of Engineering
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

SCHOOL OF COMPUTER ENGINEERING	W. E. F	:	2026-2027
FINAL YEAR BACHELOR OF TECHNOLOGY (COMPUTER ENGINEERING)	RELEASE DATE	:	01/07/2026
	REVISION NO.	:	2.0 (NEP)

SEMESTER: VIII (PART B)

TYPE	CODE	NAME	TH	P	TU	IA	MSE	ESE	CA	D/P	TOTAL	CREDIT
COURSE			**TEACHING SCHEME** Hour/Week			**EXAMINATION SCHEME AND MARKS** THEORY			PRACT		TOTAL	CREDIT
PCC	2304413T	Dams and Hydraulic Structures	3	-	-	30	20	50	-	-	100	3
	2304413L	Dams and Hydraulic Structures Lab	-	2	-	-	-	-	20	30	50	1
PEC	2304426T	Building Services	3	-	-	30	20	50	-	-	100	3
	2304427T	Advanced Design of Structures										
	2304428T	Air and Noise Pollution										
	2304429T	Foundation Engineering										
MDM	*MDM Annexure List	Multidisciplinary Minor Course-V	2	-	-	15	20	40	-	-	75	2
	*MDM Annexure List	Multidisciplinary Minor Course-V Lab	-	2	-	-	-	-	20	30	50	1
OE	2303451	Professional Certification Course	-	-	-	-	-	-	-	-	-	2
ELC PRJ	2303491	Project - III	-	4	-	-	-	-	35	40	75	2
ELC PRJ	2303492	Research Methodology	2	-	-	15	20	40	-	-	75	2
ELC SI	2303496	Summer Internship (Technical)	-	-	-	-	-	-	-	150	150	4
TOTAL			**10**	**8**							**675**	**20**

		COURSE STRUCTURE (NEP REVISION 2023)

SCHOOL OF COMPUTER ENGINEERING	W.E.F	:	2023-2024
EXIT CRITERIA BACHELOR OF TECHNOLOGY	RELEASE DATE	:	01/08/2023
	REVISION NO.	:	2.0 (NEP)

Name of the Program	After Year	Courses	Credits	Total
Civil Engineering	FIRST YEAR	Building Information Modelling -I / Global Certification (AutoDesk Revit)	4	8
		Internship	4	
	SECOND YEAR	Building Information Modeling - II / Global Certification (Microsoft Planning / Primavera)	4	8
		Internship	4	
	THIRD YEAR	Global Certification (ANSYS FLUENT) / Geospatial Modelling	4	8
		Internship	4	

Basic Science Courses (BSC): 4 Courses and 15 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	AS105	Calculus and Differential Equations	4
2.	AS106	Engineering Physics	3
3.	AS107	Statistics and Integral Calculus	4
4.	CH101	Science of Nature	4

Engineering Science (ESC):6 Courses and 17 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	ET101	Electrical and Electronics Engineering	3
2.	ME107	Engineering Graphics	3
3.	CS103	Foundations of Computing	3
4.	CS104	Essentials of Data Science	3
5.	CV103	Applied Mechanics	3
6.	ME106	Design Thinking	2

Program Core Course (PCC): 13 Courses and 46 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303111T	Basics of Civil Engineering	2
2.	2303211T	Mechanics of Solids	2
3.	2303212T	Geotechnical Engineering	3
	2303212L	Geotechnical Engineering Lab	1
4.	2303213T	Building Design and Construction	3
	2303213L	Building Design and Construction Lab	1
5.	2303214T	Mechanics of Fluids	3
	2303214L	Mechanics of Fluids Lab	1
6.	2303215T	Surveying and Geospatial Engineering	1
	2303215L	Surveying and Geospatial Engineering Lab	1
7.	2303216T	Structural Analysis	3
	2303216L	Structural Analysis Lab	1
8.	2303311T	Concrete Technology	3
	2303311L	Concrete Technology Lab	1
9.	2303312T	Water supply and Sanitation Engineering	3
	2303312L	Water supply and Sanitation Engineering Lab	1
10.	2303314T	Design of Reinforced Concrete Structures	3
	2303314L	Design of Reinforced Concrete Structures Lab	1
11.	2303315T	Transportation Engineering	3
	2303315L	Transportation Engineering Lab	1
12.	2303411T	Estimating and Costing	3
	2303411L	Estimating and Costing Lab	1
13.	2304313T	Dams and Hydraulic Structures	3
	2303413L	Dams and Hydraulic Structures Lab	1

Program Elective Course (PEC): 4 Courses and 15 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303321T+L	Construction Engineering & Management	3+1=4
	2303322T+L	Design of Steel Structures	
	2303323T+L	Hydrology and Irrigation Engineering	
2.	2303326T+L	Contracts Management	3+1=4
	2303327T+L	Solid and Industrial Waste Management	
	2303328T+L	Formwork Design	
3.	2303421T+L	Adv Construction Techniques	3+1=4
	2303422T+L	Earthquake Engineering	
	2303423T+L	Environmental Planning & Impact Assessment	
	2303424T+L	Railway Engineering	
4.	2303426T	Building Services	3
	2303427T	Advanced Design of Structures	
	2303428T	Air and Noise Pollution	
	2303429T	Foundation Engineering	

Vocational and Skill Enhancement Course (VSEC): 6 Courses and 12 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303161L	Computer-Aided Engineering Drawing	2
2.	2303162T	Surveying and Geomatics	1+1=2
	2303162L	Surveying and Geomatics Lab	
3.	2303363	Professional Certification Courses	2
	2303264L	Building Information Modeling-I	
4.	2303268L	Data Analysis	2
	2304369L	Professional Certification Course	
5.	2303361L	Analysis & Design of Building Systems	2
	2303362L	Building Information Modeling-II	
	2303365L	Professional Certification Course	
6.	2303366L	Drone Surveying	2
	2303367L	Hydraulic Modeling	
	2303370L	Professional Certification Course	

		Open Elective (OE): 3 Courses and 8 Credits		
Sl. No.	Offering School	Course Code	Course Name	Course Credits
1.	SHES (Mathematics)	2301251T	Applied Mathematics	3
		230121L	Applied Mathematics Lab	1
2.	SHES (Physics)	2301252T	Foundation of Quantum Computing	3
		2301252L	Foundation of Quantum Computing Lab	1
3.	B. Design	2311251T	Prototyping	2
4.	Civil Engineering	2303251T	Corporate Valuation	3
		2303251L	Corporate Valuation Lab	1
		2303252T	Banking and Financial Services	2
		2303451T	Siemens(Product Life Cycle Management)	2
5.	Computer Engineering	2304251T	Business Management and Information System	3
		2304251L	Business Management and Information System Lab	1
		2304252T	Economics	2
		2304451T	Professional Certification	2
6.	Computer Engineering (Software Engineering)	2310251T	Business Management and Information System	3
		2310251L	Business Management and Information System Lab	1
		2310252T	Economics	2
		2310451T	Professional Certification	2
7.	Chemical Engineering	2305251T	Applied Numerical Methods	3
		2305251L	Applied Numerical Methods Lab	1
		2305252T	Financial Planning & Management	2
		2305451T	Professional Certification	2
8.	Electronics Engineering	2306251T	Engineering Informatics (For B.Des)	3
		2306251L	Engineering Informatics (For B.Des) Lab	1
		2306252T	Introduction to IoT (BDes)	2
		2306451T	CISCO Networking	2
9.	Electronics & Telecommunication Engineering	2307251T	Engineering Informatics (For B.Des)	3
		2307251L	Engineering Informatics (For B.Des) Lab	1
		2307252T	Introduction to IoT (BDes)	2
		2307451T	CISCO Networking	2
10.	Mechanical Engineering	230925T	Corporate Valuation	3
		2309251L	Corporate Valuation Lab	1
		2309252T	Banking and Financial Services	2
		2309451T	Siemens(Product Life Cycle Management)	2

Humanities Social Science and Management Ability Enhancement Courses (HSS AEC): 2 Courses and 4 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2301171/2/3/4	Communication Skills (English/ German/Japanese/French)	2
2.	23XX371	Employability and Career Development	2

Humanities Social Science Management/Entrepreneurship/Economics(HSS MEC): 2 Courses and 4 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2301276	Entrepreneurship Skills	2
2.	23XX476	Project Management / ---------------	2

Humanities Social Science and Management Value Education Course (HSSM VEC): 3 Courses and 5 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2301186	Universal Human Values-I	Audit
2.	2301286	Environmental Science	2
3.	2301287	Universal Human Values-II	3

Humanities Social Science and Management Indian Knowledge System / Co-Curricular Courses (HSSM IKS / CC): 4 Courses and 5 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303181	Indian Knowledge System (Ancient Indian Architecture and Town Planning)	2
	2305181	Indian Knowledge System - (Indian Heritage Textiles)	
	2304181	Indian Knowledge System - (Vedic Mathematics)	
	2310181	Indian Knowledge System - (Vedic Mathematics)	
2.	2301182	Liberal Learning - (HSSM CC)	1
3.	2307183	Creative Technologies - (HSSM CC)	2
4.	2301281	Indian Constitution	Audit

Experiential Learning Course Project/Field Work/Community Project(ELC PRJ): 6 Courses and 10 Credit			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303291	Project Design	1
2.	2303292	Project Implementation	1
3.	2303391	Major Project - I	2
4.	2303392	Major Project - II	2
5.	2303491	Major Project - III	2
6.	2303492	Research Methodologies	2

Experiential Learning Course Student's Internship (Summer/Semester Long) (ELC SI): 4 Courses and 16 Credits			
Sl. No.	Course Code	Course Name	Course Credits
1.	2303296	Internship (Life And Soft Skills)	2
2.	2303396	Summer Internship (Technical)	2
3.	2303496	Summer Internship (Technical)	4
4.	2303497	Semester Long Internship/ Capstone Project/ Student Exchange	8

Programme Name	Track Name	Semester IV (MDM-I)		Semester V (MDM-II)		Semester VI (MDM-III)		Semester VII (MDM-IV)		Semester VIII (MDM-V)	
		Course Code	Course Name	Course Code	Course Name	Course Code	Course Name	Course Code	Course Name	Course Code	Course Name
Chemical	Chemical Engineering (Green Sustainability)	2305231 (T+L)	Sustainability Informatics	2305331 (T+L)	Environmental Engineering (T+L)	2305332 (T+L)	Sustainable Engineering and Life Cycle Assessment (T+L)	2305431	Green technology	23XXSW XX	SWAYAM Course
Civil Engineering	Civil Engineering (Infrastructure and Sustainability	2303231 (T+L)	Material Engineering	2303331 (T+L)	Smart Cities (T+L)	2303332 (T+L)	Sustainable Engineering (T+L)	2303431 (T+L)	Environmental Planning & Impact Assessment	23XXSW XX	SWAYAM Course
Computer Engineering	Computer Engineering (Cloud Computing)	2310231	Engineering Informatics	2310331 (T+L)	Cloud Computing Foundations (T+L)	2310332 (T+L)	Cloud-Native Application Development (T+L)	2310431 (T+L)	Cloud Native DevOps	23XXSW XX	SWAYAM Course
CE (SE)											
CSE (AIML)	Artificial Intelligence and Machine Learning	2307231	Engineering Informatics	2312331 (T+L)	Data Analytics (T+L)	2312332 (T+L)	Artificial Intelligence & Machine Learning (T+L)	2312431 (T+L)	Deep Learning	23XXSW XX	SWAYAM Course
CSE (DS)											
CSE (IT)											

Multi-Disciplinary Minor (MDM) List: 05 Courses and 14 Credits

		Multi-Disciplinary Minor (MDM): 05 Courses and 14 Credits									
Programme Name	Track Name	Semester IV (MDM-I)		Semester V (MDM-II)		Semester VI (MDM-III)		Semester VII (MDM-IV)		Semester VIII (MDM-V)	
		Course Code	Course Name	Course Code	Course Name	Course Code	Course Name	Course Code	Course Name	Course Code	Course Name
Electronics Engineering	Semiconductor Technologies	2306231 (T+L)	Engineering Informatics (T+L)	2306331 (T+L)	Electronics System Design (T+L)	2306332 (T+L)	VLSI Design (T+L)	2306431 (T+L)	ASIC Design	23XXSW XX	SWAYAM Course System on Chip
Electronics & Tele-communication	Semiconductor Technologies	2307231 (T+L)	Engineering Informatics (T+L)	2307331 (T+L)	Electronics System Design (T+L)	2307332 (T+L)	VLSI Design (T+L)	2307431 (T+L)	ASIC Design	23XXSW XX	SWAYAM Course System on Chip
Mechanical Engineering	Computer Aided Engineering and Automation	2309231 (T+L)	Engineering Informatics (T+L)	2309331 (T+L)	CAD Automation and Customisation (T+L)	2309332 (T+L)	Computer Aided Simulation (T+L)	2309431 (T+L)	Industrial Automation	23XXSW XX	SWAYAM Course
	Robotics and Automation	2309231 (T+L)	Engineering Informatics (T+L)	2309333 (T+L)	Robot Fundamental & Kinematics (T+L)	2309334 (T+L)	Robot Dynamics and Control (T+L)	2309432 (T+L)	AI in Robotics	23XXSW XX	SWAYAM Course
MITACSC	Business Administration	23XX231 (T+L)	Principles and Practices of Management	23XX331	Organizational Behavior	23XX332	Production and Operation Management	23XX431	Micro and Macro Economics	23XXSW XX	SWAYAM Course
Entrepreneurship Cell	Innovation and Entrepreneurship	23XX231 (T+L)	Engineering Informatics (T+L)	23XX331	Foundational Course in Entrepreneurship	23XX332	Advanced Course in Entrepreneurship	23XX431	Startup and Incubation	23XXSW XX	SWAYAM Course
B. Design	Design for Engineers	2311231 (T+L)	Principles of Design	2311331 (T+L)	Packaging Design	2311332 (T+L)	Introduction to UI-UX	231133 (T+L)	Mini Design Project	23XXSW XX	SWAYAM Course