



Amrutvahini Sheti and Shikshan Vikas Sanstha's

AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER

(An Autonomous Institute Approved by AICTE and Affiliated to SPPU, Pune)

Amrutnagar, Ghulewadi, Sangamner – 422608



Curriculum Structure

Of

M. Tech. Civil Engineering-Structural Engineering

w.e.f

F.Y. M.Tech: 2025 – 2026



Approved By:

[Signature]

Chairman
BoS, Civil Engineering
Amrutvahini College of Engineering, Amrutnagar
Sangamner-422608



[Signature]

Chairman
Academic Council
Amrutvahini College of Engineering, Amrutnagar
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Curriculum Structure

First Year M. Tech (Structural Engineering) (2025 Pattern) (Semester I)

Course Code	Course Type	Course Name	Teaching Scheme (Hrs./week)			Examination Scheme and Marks					Credits			
			Theory	Tutorial	Practical	CCE*	End-Sem	Term work	Practical	Oral	Theory	Tutorial	Practical	Total
Semester I														
R25-MSE-NMSE-501	Major Core Course	Numerical Methods in Structural Engineering	4	-	-	50	50	-	-	-	4	-	-	4
R25-MSE-ADSS-502	Major Core Course	Advanced Design of Steel Structures	4	-	-	50	50	-	-	-	4	-	-	4
R25-MSE-SD-503	Major Core Course	Structural Dynamics	4	-		50	50	-	-	-	4	-		4
R25-MSE-TEP-504	Major Core Course	Theory of Elasticity and Plasticity	4	-		50	50	-	-	-	4	-		4
R25-MSE-SADE-505	Major Core Course	Structural Analysis and Design Using ETAB	-	-	4	-	-	50	-	-	-	-	2	2
R25-MSE-MEC 506(A)	Major Elective Course (Elective –I)	Elective-I A) Design of Composite Construction	3	-	-	50	50	-	-	-	3	-	-	3
R25-MSE -MEC-506(B)		B) Structural Design of Concrete Bridges												
R25-MDE-MEC-506(C)		C) Structural Design of Foundation												
R25-MDE-MEC-506(D)		D) Design of Earthquake Resistant Structures												
R25-MSE-LP I-507	Major Elective Cours-I	Lab Practice - I	-	-	2	-	-	50	-	-			1	1
R25-MSE-CTS-508	Civictech Skills Course	Human Right-I	-	-	-	-	-	-	-	-	-	-	-	1
Total			19	-	6	250	250	100	–	50	19	–	3	23

CCE*: Comprehensive Continuous Evaluation

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**First Year M. Tech (Structural Engineering) (2025 Pattern) (Semester II)**

Course Code	Course Type	Course Name	Teaching Scheme (Hrs./week)			Examination Scheme and Marks					Credits			
			Theory	Tutorial	Practical	CCE*	End-Sem	Term work	Practical	Oral	Theory	Tutorial	Practical	Total
Semester II														
R25-MSE-ADCS-509	Major Core Course	Advanced Design of Concrete Structures	4	-	-	50	50	-	-	-	4		-	4
R25-MSE-FEM-510	Major Core Course	Finite Element Method	4	-	-	50	50	-	-	-	4		-	4
R25-MSE-TPS-511	Major Core Course	Theory of Plates and Shells	4	-	-	50	50	-	-	-	4	-	-	4
R25-MSE-LP II-512	Major Core Course	Lab Practice - II	-	-	4	-	-	--	-	50	-	-	2	2
R25-MSE -MEC-513(A)	Major Elective Course (Elective –II)	Elective-II A) Structural Audit and Retrofitting of Structures	3	-	-	50	50	-	-	-	3	-	-	3
R25-MSE -MEC-513(B)		B) Design of High-Rise Structures												
R25-MSE -MEC-513(C)		C) Structural Forensics and Health Monitoring												
R25-MSE -MEC-513(D)		D) Design of Industrial Structures												
R25-MSE-MEC-514 (A)	Major Elective Course (Elective –III)	Elective-III A) Design of Liquid Retaining Structures	3	-	-	50	50	-	-	-	3	-	-	3
R25-MSE-MEC-514 (B)		B) Bio Mechanics and Bio Materials												
R25-MSE-MEC-514 (C)		C) Structural Reliability												
R25-MSE-MEC-514 (D)		D) Nonlinear Analysis of Structures												
R25-MSE-SEM I-515	Seminar	Seminar-I	-	-	4	-	-	25	-	25	-	-	2	2
R25-MSE-CTS-516	Civictech Skills Course	Human Right-II	-	-	-	-	-	-	-	-	-	-	-	1
Total			18	-	8	250	250	25	-	75	18	-	4	23

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