

Sanjivani College of Engineering, Kopergaon

(An Autonomous Institute) Affiliated to Savitribai Phule Pune University.

At Sahajanandnagar, Post Shingnapur-423603, Ta.: Kopergaon, Dist.: Ahmednagar (MS)

Approved by AICTE, ISO 9001-2015 Certified, Accredited by NBA, Accredited 'A' Grade by NAAC,

Website: www.sanjivanicoe.org.in, Email: principalcoe@sanjivani.org.in,

Ph.No.: (+91) 9130191301, Fax: (02423)-222682



Department of Structural Engineering

B.Tech. (Structural Engineering)

Members of Board of Studies (BoS)

Sr. No.	Designation	Name	Address
1	Chairman	Dr. A. S. Sayyad	Prof. & Head Department of Structural Engineering
2	Member	All Faculty	Department of Structural Engineering
3	Member (Subject Experts Outside Parent University)	Dr. Y. M. Ghugal	Prof. & Head, Department of Civil Engineering, Govt. COE Karad
4	Member (Subject Experts Outside Parent University)	Dr. S. S. Jamkar	Professor, Applied Mechanics Department, Govt. COE, Aurangabad
5	Co-opt Members (Subject Expert)	Dr. Mrs. S. N. Madhekar	Professor, Department of Applied Mechanics, College of Engineering, Pune (COEP)
6	Subject Expert (Parent University Nominated by VC)	Dr. M. S. Ranadive	Prof. & Head, Department of Civil Engineering, College of Engineering, Pune (COEP)
7	Industry Representative	Er. Ravindra Joshi	Director, PAN GULF Technologies Pvt. Ltd. Mumbai.
8	Industry Representative	Er. Shaikh M. Iqbal	Executive Engineer, PWD Maharashtra, Aurangabad.
9	Meritorious Alumni	Er. Sandhya Unde	Deputy Manager, Technimont Pvt. Ltd. , Mumbai

Course Structure w.e.f. 2021-22

List of Abbreviations			
Abbreviation	Full Form	Abbreviation	Full Form
ES	Engineering Science	HS	Humanity Science
PC	Professional Core	CA	Continuous Assessment
PE	Professional Elective	OR	Oral
OE	Open Elective	PR	Practical
ISE	In-Semester Evaluation	TW	Term work
ESE	End-Semester Evaluation	MLC	Mandatory Learning Course
BSC	Basic Science Course	PRJ	Project/Seminar/Internship/Online Course

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Department of Structural Engineering

B.Tech. (Structural Engineering) (2021-Pattern)

Second Year B.Tech

Semester-I

Cat	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
CIA	ESE											
PC	ST201	Mechanics of Fluids	3	-	-	3	40	60	-	-	-	100
PC	ST202	Mechanics of Solids	4	-	-	4	40	60	-	-	-	100
PC	ST203	Civil Engineering Materials	3	-	-	3	40	60	-	-	-	100
PC	ST204	Architectural Planning and Drawing	3	-	-	3	40	60	-	-	-	100
HS	HS205	Universal Human Values and Ethics	3	-	-	3	40	60	-	-	-	100
PC	ST206	Mechanics of Fluids Lab.	-	-	2	1	-	-	-	-	-	50
PC	ST207	Mechanics of Solids Lab.	-	-	2	1	-	-	50	-	-	50
PC	ST208	Civil Engineering Materials Lab	-	-	2	1	-	-	50	-	-	50
PC	ST209	Architectural Planning and Drawing using AutoCAD	-	-	2	1	-	-	50	-	-	50
MLC	MLC210	Mandatory learning Course-III-(Constitution of India)	2	-	-	Pass/Fail	-	-	-	-	50	-
Total			18	-	8	20	200	300	150	-	50	700

Semester-II

Cat	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
CIA	ESE											
PC	BS202	Engineering Mathematics-III	3	1	-	4	40	60	-	-	-	100
PC	ST211	Object Oriented Programming	3	-	-	3	40	60	-	-	-	100
PC	ST212	Geotechnical Engineering	3	-	-	3	40	60	-	-	-	100
PC	ST213	Infrastructure Engineering	3	-	-	3	40	60	-	-	-	100
PC	ST214	Analysis of Determinate Structures	3	-	-	3	40	60	-	-	-	100
PC	ST215	Computer Aided Drawings Lab	-	-	2	1	-	-	-	50	-	50
PC	ST216	Geotechnical Engineering Lab	-	-	2	1	-	-	50	-	25	75
PC	ST217	Object Oriented Programming Lab	-	-	2	1	-	-	-	-	25	25
PRJ	ST218	Seminar/Mini Project	-	-	4	2	-	-	25	-	25	50
PRJ	ST219	Sports	-	-	2	1	Participation Certificate					
MLC	MLC220	Mandatory Learning Course-IV (Innovation)	2	-	-	Pass/Fail	-	-	-	-	-	-
Total			18	1	10	22	200	300	75	50	75	700

BOS Chairman

Dean Academics

Director

Third Year B.Tech (Course Structure)

Semester-I

Cat	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
							CIA	ESE				
PC	ST301	Analysis of Indeterminate Structures	03	-	-	03	40	60	-	-	-	100
PC	ST302	Design of Steel Structures	04	-	-	04	40	60	-	-	-	100
PC	ST303	Foundation Engineering	03	-	-	03	40	60	-	-	-	100
PC	ST304	Construction Planning and Management	03	-	-	03	40	60	-	-	-	100
PE	ST305	Professional Elective-I	03	-	-	03	40	60	-	-	-	100
PC	ST306	Surveying	02	-	-	02	20	30	-	-	-	50
PC	ST307	Surveying Lab	-	-	02	01	-	-	-	50	-	50
PC	ST308	Structural Analysis and Design using STAAD Pro.	-	-	04	02	-	-	-	50	50	100
MLC	MLC309	Mandatory Learning Course-V (Sports)	2	-	-	Pass/Fail	-	-	-	-	-	-
Total			20	-	06	21	220	330	50	100	-	700

Semester-II

Cat	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
							CIA	ESE				
PC	ST310	Design of Reinforced Concrete Structures	03	-	-	03	40	60	-	-	-	100
PC	ST311	Design of Industrial Structures	03	-	-	03	40	60	-	-	-	100
PC	ST312	Structural Audit and Health Monitoring	03	-	-	03	40	60	-	-	-	100
PE	ST313	Professional Elective-II	03	-	-	03	40	60	-	-	-	100
HS	ST314	Corporate readiness	01	-	02	02	-	-	-	-	50	50
PRJ	HS315	IPR and EDP	02	-	-	02	20	30	-	-	-	50
PC	ST316	Fundamentals of Earthquake Engineering	02	-	-	02	20	30	-	-	-	50
PC	ST317	Design of Reinforced Concrete Structures Lab	-	-	02	01	-	-	50	-	25	75
PC	ST318	Structural Audit and Health Monitoring Lab	-	-	02	01	-	-	50	-	25	75
PRJ	ST319	Creational Activity (Sports)	-	-	02	01	Participation Certificate					
MLC	MLC320	Mandatory Learning Course-VI	1	-	-	Pass/Fail	-	-	-	-	-	-
Total			18	-	08	21	200	300	100	-	100	700

BOS Chairman

Dean Academics

Director

Final Year B.Tech (Course Structure)

Semester-I

Cat	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
							CIA	ESE				
PC	ST401	Design of Advanced RCC Structures	03	-	-	03	40	60	-	-	-	100
PC	ST402	International Design Standards	03	-	-	03	40	60	-	-	-	100
PC	ST403	Finite Element Method	03	-	-	03	40	60	-	-	-	100
PE	ST404	Professional Elective-III	03	-	-	03	40	60	-	-	-	100
PE	ST405	Professional Elective-IV	03	-	-	03	40	60	-	-	-	100
PC	ST406	Design of Advanced RCC Lab	-	-	02	01	-	-	50	-	-	50
PC	ST407	Structural Analysis and Design using ETABS	-	-	04	02	-	-	-	50	50	100
PC	ST408	Structural Drawing Lab	-	-	02	01	-	-	50	-	-	50
PC	ST409	Sports	-	-	02	01	Participation Certificate					
MLC	MLC410	Mandatory Learning Course-VII	1	-	-	Pass/Fail	-	-	-	-	-	-
Total			16	-	10	20			150	50	-	700

Semester-II

Cat	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
							CIA	ESE				
OE	ST411	Open Elective-I	04	-	-	04	40	60	-	-	-	100
OE	ST412	Open Elective-II	03	-	-	03	40	60	-	-	-	100
OE	ST413	Open Elective-III	02	-	-	02	50	-	-	-	-	50
PRJ	ST414	Project Seminar	-	-	06	03	100	-	-	-	-	100
PRJ	ST415	Project/Industrial Internship/ Entrepreneurship Development Project	-	-	12	06	-	-	50	-	100	150
MLC	MLC416	Mandatory Learning Course-VIII	1	-	-	Pass/Fail	-	-	-	-	-	-
Total			10	-	18	18	230	120	50	-	100	500

List of Professional Electives

Track	Professional Elective -I	Professional Elective -II	Professional Elective -III	Professional Elective -IV
Competitive Services	Advanced Surveying	Hydrology and Irrigation Engineering	Environmental Engineering	Quantity Survey, Estimating and Costing
Entrepreneur/ Private sector	Design of Formwork	Equipment Foundation Design-I	Equipment Foundation Design-II	Design of STP and ETP
Higher Studies	Matrix Methods of Structural Analysis	Advanced Concrete Technology	Theory of Elasticity	Theory of Plates and Shells

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Department of Structural Engineering

B.Tech. Honors

Honors Course – I: Computers and Structures

Semester	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
							CIA	ESE				
V	ST8101	Introduction to Data Processing Tools	04	-	-	04	40	-	-	60	-	100
VI	ST8102	Problem Solving using Python	04	-	-	04	40	-	-	60	-	100
VII	ST8103	Advanced Structural Analysis and Design using STAAD Pro.	04	-	-	04	40	-	-	60	-	100
VIII	ST8104	Advanced Structural Analysis and Design using ETABs	04	-	-	04	40	-	-	60	-	100
VII	ST8105	Computers and Structures Lab-I	-	-	02	01	-	-	-	-	50	50
VIII	ST8106	Computers and Structures Lab-II	-	-	02	01	-	-	-	-	50	50
Total			16	-	04	18	160	-	-	240	100	500

Honors Course – II: Building Information Modelling

Semester	Course Code	Course Title	Teaching Scheme (Hrs./Week)			Credits	Evaluation Scheme (Marks)					
			L	T	P		Theory		OR	PR	TW	Total
							CIA	ESE				
V	ST8101	Revit Architecture	04	-	-	04	40	-	-	60	-	100
VI	ST8102	Revit Structure	04	-	-	04	40	-	-	60	-	100
VII	ST8103	Revit MEP - I	04	-	-	04	40	-	-	60	-	100
VIII	ST8104	Revit MEP - II	04	-	-	04	40	-	-	60	-	100
VII	ST8105	BIM Lab-I	-	-	02	01	-	-	-	-	50	50
VIII	ST8106	BIM Lab-II	-	-	02	01	-	-	-	-	50	50
Total			16	-	04	18	160	-	-	240	100	500

BOS Chairman

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