

Punyashlok Ahilyadevi Holkar Solapur University, Solapur



Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: CIVIL STRUCTURAL ENGINEERING

Name of the Course: M.Tech - Semester I, II, III & IV

(Syllabus to be implemented from w.e.f. 2023-24 & 2024-25)



PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR
FACULTY OF SCIENCE & TECHNOLOGY
STRUCTURE OF M.Tech. CIVIL (STRUCTURAL ENGINEERING)

Four Semester Course
Choice Based Credit System Syllabus wef 2023-24
Semester-I

Sr. No	Course Code	Subject	Teaching Scheme				Credits				Evaluation Scheme				
			L	T	P	Total	Credits (L)	Credits (T)	Credits (P)	Total Credits	Scheme	Theory Marks	ICA- P Marks	ICA-T Marks	Total Marks
1	ST101	Advanced Structural Analysis	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
2	ST102	Advanced Solid Mechanics	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
3	ST103	Dynamics & Earthquake Engineering	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
4	ST104	Elective- I	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
5	ST105	Research Methodology and IPR©	3	-	-	3	3	-	-	3	ISE	30	--	-	100
											ESE	70	--	--	
6	ST106	Structural Design Lab	-		4	4	-	-	2	2	ISE	50	50	--	100
											ESE	--	--	--	
Total			15	4	4	23	15	4	2	21		550	50	100	700

Note : L- Lectures, P-Practical, T-Tutorial, ISE- In Semester Evaluation, ESE- End Semester Evaluation, ICA- Internal Continuous Assessment
 © - This Course is common for M.Tech. (Civil- Structural Engineering) and M.Tech. (Mechanical-Design Engineering)



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Semester-II

Sr. No.	Course Code	Subject	Teaching Scheme				Credits				Evaluation Scheme				
			L	T	P	Total	Credits (L)	Credits (T)	Credits (P)	Total Credits	Scheme	Theory Marks	ICA- P Marks	ICA-T Marks	Total Marks
1	ST111	FEM in Structural Engineering	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
2	ST112	Advanced Design of Concrete Structures	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
3	ST113	Special Concrete & Concrete Composite	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
4	ST114	Elective – II	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
5	ST115	Elective – III	3	1	-	4	3	1	-	4	ISE	30	--	25	125
											ESE	70	--	--	
6	ST116	Advanced Concrete Lab	-	-	2	2	-	-	1	1	ISE		25	--	25
											ESE	--	--	--	
7	ST117	Mini Project	-	-	2	2	-		2	2	ISE	--	50	--	50
											ESE	--	--	--	
Total			15	5	4	24	15	5	3	23		500	75	125	700

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○ **List of elective courses for semester I and II**

<i>Course Code</i>	<i>Elective - I</i>	<i>Course Code</i>	<i>Elective – II</i>	<i>Course Code</i>	<i>Elective – III</i>
ST104.a	Structural Audits	ST114.a	Theory of Plates and Shell	ST115.a	Theory of Structural Stability
ST104.b	Design of Prestressed Concrete Structures	ST114.b	Design of Formwork	ST115.b	Design of RCC Bridges
ST104.c	Advanced Design of Foundation	ST114.c	Repair and Rehabilitation of Structures	ST115.c	Advanced Steel Design
ST104.d	Structural Optimization	ST114.d	Design of Industrial Structures	ST115.d	Soil Structure Interaction



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Semester-III

Sr. No.	Course Code	Subject	Teaching Scheme			Credits			Evaluation Scheme			
			L	P	Total	Credits (L)	Credits (P)	Total Credits	Scheme	Theory Marks	ICA- P Marks	Total Marks
1	ST201	Lab. Practice	-	4	4	-	2	2	ISE	--	50	50
									ESE	--	--	
2	OE001	Open Elective Course#	3	-	3	3		3	ISE	30	--	100
									ESE	70	--	
3	ST202	Dissertation Phase I : Synopsis Submission Seminar*		@4	4	-	2	2	ISE	--	50	50
									ESE	--	--	
4	ST203	Dissertation Phase II : ICA*				-	4	4	ISE	--	100	100
									ESE	--	--	
5	ST204	Dissertation Phase II Progress Seminar*				-	4	4	ISE	--	--	100
									ESE	--	100	
Total			3	8	11	3	12	15		100	300	400

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Note –

- Lab Practice shall include any of the below activities as recommended by Advisor and student shall submit a report after completion of the activity to Advisor along with other details if any. Software / hardware assignments, learning new software, literature survey, filed work, industrial training etc. related to dissertation work.
- *- For all activities related to dissertation Phase I (synopsis submission seminar and progress seminar) student must interact regularly every week with the advisor.
- # - This course is common for all branches of Technology (i.e. for all M.Tech. Programs)
- Synopsis submission seminar shall cover detailed synopsis of the proposed work. Student shall submit synopsis of the dissertation work only after delivering this seminar.
- Progress seminar shall be delivered capturing details of the work done by student for dissertation
- Student shall deliver all seminars using modern presentation tools. A hard copy of the report shall be submitted to the department before delivering the seminar. A PDF copy of the report must be submitted to the advisor along with other details if any
- @ Indicates contact hours of students for interaction with advisor.
- Details of modes of assessment of seminar and dissertation shall be as specified in 7(III) of PG Engineering Ordinance of Solapur University, Solapur

List of open Elective Courses-

<i>Sr.</i>	<i>Course Code</i>	Open Elective Course#
1	OE001.a	Business Analytics
2	OE001.b	Operation Research
3	OE001.c	Cost Management of Engineering Projects
4	OE001.d	Non Conventional Energy
5.	OE001.e	Product Design & Development

- New Open Elective Courses may be added as and when required



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Semester-IV

Sr. No	Course Code	Sub ject	Teaching Scheme			Credits			Evaluation Scheme		
			L	P	Total	Credits (L)	Credits (P)	Total Credits	Scheme	ICA- P Marks	Total Marks
1	ST211	Dissertation Phase III :Progress Seminar #	-	4@	4	-	3	3	ISE	100	100
2	ST212	Dissertation Phase IV: Final presentation and submission of report #	-	2@	2	-	6	6	--	200	200
3	ST213	Dissertation Viva –Voce	-	-	-	-	6	6	ESE	200	200
Total			-	6	6	--	15	15	-	500	500

Note –

- #- For all activities related to dissertation Phase III & IV student must interact regularly every week with the advisor.
- Progress seminar shall be delivered capturing details of the work done by student for dissertation
- Student shall deliver all seminars using modern presentation tools. A hard copy of the report shall be submitted to the Department before delivering the seminar. A PDF copy of the report must be submitted to the advisor along with other details if any.
- Student must submit a hard copy of Project Report to the department
- @ indicates contact hours of the student for interaction with the advisor
- Details of modes of assessment of seminar and dissertation shall be as specified in 7 (III) of PG Engineering Ordinance of Solapur University, Solapur.

