



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for F.Y. M. Tech. Civil (Structural Engineering) Sem-I AY 2020-21

Sr.No.	Category	Course Code	Course Name	L	T	P	Hrs	Credits	ISE-1	MSE*	ISE-2	ESE
Professional Core (Theory)												
1	PC	4IC501	Research Methodology	2	0	0	2	2	10	30	10	50
2	PC	4ST501	Mechanics of Structures	3	0	0	3	3	10	30	10	50
3	PC	4ST502	Structural Dynamics and Earthquake Engineering	3	0	0	3	3	10	30	10	50
Professional Core (Lab)												
4	PC	4ST551	Modern Materials and Testing Laboratory	0	0	4	4	2	25	25	25	25
5	PC	4ST552	Dynamics of Structures Laboratory	0	0	4	4	2	25	25	25	25
Professional Elective (Theory)												
6	PE	4ST***	Professional Elective 1	3	0	0	3	3	10	30	10	50
7	PE	4ST***	Professional Elective 2	3	0	0	3	3	10	30	10	50
Mandatory Life Skill Courses												
8	MC	Refer list	Mandatory Life Skill Course	2	0	0	2	0	10	30	10	50
Value Added Professional Courses #												
9	VAPC	Refer list	Value Added Professional Courses					#				
Value Added Life-Skill Courses #												
10	VALS	Refer list	Value Added Life Skill Courses					#				
Total				16	0	8	24	18				

Notes:

- * For Lab courses, there will be only internal continuous assessment. ESE is a separate head of passing for both theory and lab courses.
- # The Value Added Courses are Optional Courses. The mode of teaching (LTPI) & evaluation scheme is decided by the resource person.
The list of Value added courses will be updated from time to time.
The course may be on paid basis. The credits earned from these courses will be shown on grade card.
For SPI and CPI calculation, these courses will be excluded.
- @ Minimum 2 mandatory life skill courses are to be completed for award of degree.
For further details refer to Academic and Examination rules and regulations.



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Sr.No.	Course Code	Course Name
Professional Elective 1		
1	4ST511	Theory of Elasticity and Plasticity
2	4ST512	Structural Health Monitoring and Smart Materials
Professional Elective 2		
1	4ST515	Advanced Design of Reinforced Concrete Structures
2	4ST516	Advanced Design of Steel Structures



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Sr.No.	AICTE Category	Course Code	Course Name	L	T	P	Hrs	Credits	ISE-1	MSE*	ISE-2	ESE
Professional Core (Theory)												
1	PC	4ST521	Theory of Plates and Shells	3	0	0	3	3	10	30	10	50
2	PC	4ST522	Finite Element Method	3	0	0	3	3	10	30	10	50
Professional Core (Lab)												
3	PC	4ST571	Finite Element Laboratory	0	0	4	4	2	25	25	25	25
4	PC	4ST572	Structural Health Monitoring Laboratory	0	0	4	4	2	25	25	25	25
5	PC	4ST573	Industrial Project	0	0	4	4	2	25	25	25	25
Professional Elective (Theory)												
6	PE	4ST***	Professional Elective 3	3	0	0	3	3	10	30	10	50
7	PE	4ST***	Professional Elective 4	3	0	0	3	3	10	30	10	50
Mandatory Life Skill Courses												
8	MC	Refer list	Mandatory Life Skill Course	2	0	0	2	0	10	30	10	50
Value Added Professional Courses #												
9	VAPC	Refer list	Value Added Professional Courses					#				
Value Added Life-Skill Courses #												
10	VALS	Refer list	Value Added Life Skill Courses					#				
Total				14	0	12	26	18				

Notes:

* For Lab courses, there will be only internal continuous assessment. ESE is a separate head of passing for both theory and lab courses.

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Sr.No.	Course Code	Course Name
Professional Elective 3		
1	4ST531	Analysis and Design of Bridges
2	4ST532	Design Optimization
Professional Elective 4		
1	4ST535	Advanced Prestressed Concrete
2	4ST536	Advanced Earthquake Engineering