



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for F.Y. M. Tech. (Mechanical - Design 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	HS	4IC501	Research Methodology	2	0	0	2	2	10	30	10	50
2	PC	4DE501	Advanced Stress Analysis	3	0	0	3	3	10	30	10	50
3	PC	4DE502	Advanced Vibrations and Acoustics	3	0	0	3	3	10	30	10	50
Professional Core (Lab)												
4	PC	4DE551	Design Engineering Laboratory 1	0	0	4	4	2	25	25	25	25
Professional Elective (Theory)												
5	PE	Refer list	Professional Elective 1	3	0	0	3	3	10	30	10	50
6	PE	Refer list	Professional Elective 2	3	0	0	3	3	10	30	10	50
Professional Elective (Lab)												
7	PE	4DE552	Design Engineering Laboratory 2	0	0	4	4	2	25	25	25	25
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	8	22	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	4DE511	Advanced Machine Design
2	4DE512	Design for Manufacturing and Assembly
3	4DE513	Mathematical Methods in Engineering
4	4DE514	Reliability Engineering
Professional Elective 2		
1	4DE515	Advanced Engineering Materials
2	4DE516	Mechanics of Composite Materials
3	4DE517	Analysis and Synthesis of Mechanisms
4	4DE518	Process Equipment Design



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Sr.No.	Category	Course Code	Course Name	L	T	P	Hrs	Credits	ISE-1	MSE*	ISE-2	ESE
Professional Core (Theory)												
1	PC	4DE521	Finite Element Method	3	0	0	3	3	10	30	10	50
2	PC	4DE522	Computer Aided Design	3	0	0	3	3	10	30	10	50
Professional Core (Lab)												
3	PC	4DE571	Design Engineering Laboratory 3	0	0	4	4	2	25	25	25	25
4	PC	4DE572	Industrial Project	0	0	4	4	2	25	25	25	25
Professional Elective (Theory)												
5	PE	Refer list	Professional Elective 3	3	0	0	3	3	10	30	10	50
6	PE	Refer list	Professional Elective 4	3	0	0	3	3	10	30	10	50
Professional Elective (Lab)												
7	PE	4DE573	Design Engineering Laboratory 4	0	0	4	4	2	25	25	25	25
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				12	0	12	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.
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Sr.No.	Course Code	Course Name
Professional Elective 3		
1	4DE531	Tribology in Design
2	4DE532	Robotics
3	4DE533	Fracture Mechanics
Professional Elective 4		
1	4DE535	Advanced Metallurgy
2	4DE536	Condition Based Monitoring
3	4DE537	Optimization Techniques in Design