Walchand College of Engineering

(Government Aided Autonomous Institute)

Vishrambag, Sangli. 416415

1947

Credit System for

F.Y. M.Tech. (Design Engineering)

Sem-I and II

2022-23

Walchand College of Engineering, Sangli
(Government Aided Autonomous Institute)

Credit System for F.Y. M.Tech. (Design Engineering) Sem-I AY 2022-23

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Remark
Professional Core (Theory)												
1	PC	6DE502	Advanced Solid Mechanics	3	0	0	0	3	3	30	20	50	
2	PC	6DE503	Advanced Vibrations and Acoustics	3	0	0	0	3	3	30	20	50	
Professional Core (Lab)												
3	PR	6DE501	Research Methodology for Design Engineers	0	0	0	2	2	2	30	30	40	
4	PR	6DE551	Design Engineering Laboratory 1	0	0	4	0	4	2	30	30	40	OE
Professional Elective (Theory)												
5	PE	Refer list	Professional Elective 1	3	0	0	0	3	3	30	20	50	
6	PE	Refer list	Professional Elective 2	3	0	0	0	3	3	30	20	50	
Professional Elective (Lab)												
7	PR	6DE552	Design Engineering Laboratory 2	0	0	4	0	4	2	30	30	40	OE
			Total	**12**	**0**	**8**	**2**	**22**	**18**				

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Professional Elective Course List for F.Y. M.Tech. (Design Engineering) Sem-I AY 2022-23

Sr.No.	Track	Course Code	Course Name
			Professional Elective 1
1	Design of Machines and Products	6DE511	Advanced Machine Design
2	Design of Machines and Products	6DE512	Design for Manufacturing and Assembly
3	Mathematical Modelling	6DE513	Mathematical Methods in Engineering
4	Mathematical Modelling	6DE514	Reliability Engineering
			Professional Elective 2
1	Materials	6DE515	Advanced Engineering Materials
2	Stress Analysis	6DE516	Mechanics of Composite Materials
3	Design of Machines and Products	6DE517	Analysis and Synthesis of Mechanisms
4	Design of Machines and Products	6DE518	Process Equipment Design

Notes:

For Theory courses: There shall be MSE, ISE and ESE. The ESE is a separate head of passing.

For Lab courses: There shall be continuous assessment (LA1, LA2, ESE). The ESE is a separate head of passing. The Y in the PoE indicates external component for ESE. Minimum two AICTE mandatory courses need to be completed for award of degree.

For further details, refer to Academic and Examination rules and regulations.

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Credit System for F.Y. M.Tech. (Design Engineering) Sem-II AY 2022-23

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Remark
			Professional Core (Theory)										
1	PC	6DE521	Finite Element Method	3	0	0	0	3	3	30	20	50	
2	PC	6DE522	Computer Aided Design	3	0	0	0	3	3	30	20	50	
			Professional Core (Lab)										
3	PR	6DE571	Design Engineering Laboratory 3	0	0	4	0	4	2	30	30	40	OE
4	PR	6DE591	Pre-dissertation Work and Seminar	0	0	4	0	4	2	30	30	40	
			Professional Elective (Theory)										
5	PE	Refer list	Professional Elective 3	3	0	0	0	3	3	30	20	50	
6	PE	Refer list	Professional Elective 4	3	0	0	0	3	3	30	20	50	
			Professional Elective (Lab)										
7	PR	6DE572	Design Engineering Laboratory 4	0	0	4	0	4	2	30	30	40	OE
			Open Elective										
8	OE	Refer list	Open Elective	3	0	0	0	3	3	30	20	50	
			Total	15	0	12	0	27	21				

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Professional Elective Course List for F.Y. M.Tech. (Design Engineering) Sem-II AY 2022-23

Sr.No.	Track	Course Code	Course Name
Professional Elective 3			
1	Vibration Analysis	6DE531	Tribology in Design
2	Design of Machines and Products	6DE532	Robotics
3	Stress Analysis	6DE533	Fracture Mechanics
4	Design of Machines and Products	6DE534	Advanced Machine tool design
Professional Elective 4			
1	Materials	6DE535	Advanced Metallurgy
2	Vibration Analysis	6DE536	Condition Based Monitoring
3	Mathematical Modelling	6DE537	Optimization Techniques in Design
4	Vibration Analysis	6DE538	Vehicle Dynamics

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Open Elective Course List for F.Y. M.Tech. (Design Engineering) Sem-II AY 2022-23

Sr.No.	Offering Dept	Sem	Course Code	Course Name
				Open Elective
1	Civil_Env	2	6OE501	Solid Waste Management
2	Civil_Struct	2	6OE502	Structural Health Monitoring
3	Mech_Heat	2	6OE504	Waste to Energy
4	Mech_Prod	2	6OE505	Advanced Production systems
5	Elect_Power	2	6OE506	Control Techniques for Electrical Drives
6	Elect_Control	2	6OE506	Control Techniques for Electrical Drives
7	Eln	2	6OE508	Introduction to Embedded Systems
8	CSE	2	6OE509	Machine Learning in Practice
9	IT	2	6OE510	Machine Learning & Applications

Notes:

For Theory courses: There shall be MSE, ISE and ESE. The ESE is a separate head of passing.

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For further details, refer to Academic and Examination rules and regulations.

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