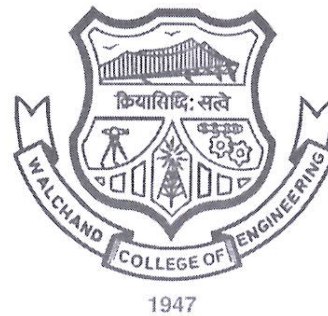# Walchand College of Engineering

(Government Aided Autonomous Institute)

Vishrambag, Sangli. 416415

Credit System for

F.Y. M.Tech. (Civil - Structural Engineering)

Sem-I and II

2022-23

Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for F.Y. M.Tech. (Civil - Structural 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	6ST501	Research Methodology	2	0	0	0	2	2	30	20	50	
2	PC	6ST502	Mechanics of Structures	3	1	0	0	4	4	30	20	50	
3	PC	6ST503	Theory of Elasticity and Plasticity	3	0	0	0	3	3	30	20	50	
4	PC	6ST504	Structural Dynamics and Earthquake Engineering	3	0	0	0	3	3	30	20	50	
Professional Core (Lab)
5	PR	6ST551	Modern Materials and Testing Laboratory	0	0	4	0	4	2	30	30	40	OE
6	PR	6ST552	Dynamics of Structures Laboratory	0	0	2	0	2	1	30	30	40	OE
Professional Elective (Theory)
7	PE	6ST5**	Professional Elective 1	3	0	0	0	3	3	30	20	50	
			Total	14	1	6	0	21	18				

DAC.

PG Coordinator   HoD   Dean Academics   Page 2/6   Date:

Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

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

Sr. No.	Track	Course Code	Course Name
	Professional Elective 1		
1	Advanced Design of Structures	6ST511	Advanced Design of Reinforced Concrete Structures
2	Advanced Structural Analysis and Computational Methods	6ST512	Structural Health Monitoring and Smart Materials

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.

Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for F.Y. M.Tech. (Civil - Structural 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	6ST521	Theory of Plates and Shells	3	1	0	0	4	4	30	20	50	
2	PC	6ST522	Finite Element Method	3	0	0	0	3	3	30	20	50	
Professional Core (Lab)
3	PR	6ST571	Structural Health Monitoring Laboratory	0	0	2	0	2	1	30	30	40	OE
4	PR	6ST572	Finite Element Laboratory	0	0	2	0	2	1	30	30	40	OE
5	PR	6ST574	Pre-dissertation Work and Seminar	0	0	2	0	2	1	30	30	40	
Professional Elective (Theory)
6	PE	6ST5**	Professional Elective 2	3	1	0	0	4	4	30	20	50	
7	PE	6ST5**	Professional Elective 3	3	0	0	0	3	3	30	20	50	
Open Elective
8	OE	6OE5**	Open Elective	3	0	0	0	3	3	30	20	50	
			Total	15	2	6	0	23	20				

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Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

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

Sr. No.	Track	Course Code	Course Name
Professional Elective 2			
1	Advanced Design of Structures	6ST531	Analysis and Design of Bridges
2	Advanced Structural Analysis and Computational Methods	6ST532	Advanced Earthquake Engineering
3	Advanced Structural Analysis and Computational Methods	6ST533	Numerical Methods in Structural Engineering
Professional Elective 3			
1	Advanced Design of Structures	6ST534	Advanced Prestressed Concrete
2	Advanced Structural Analysis and Computational Methods	6ST535	Design Optimization
3	Advanced Design of Structures	6ST536	Advanced Design of Steel Structures

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Date:

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

Sr.No.	Offering Dept	Sem	Course Code	Course Name
Open Elective				
1	Mech_Design	2	6OE503	Industrial Product Design
2	Mech_Heat	2	6OE504	Waste to Energy
3	Mech_Prod	2	6OE505	Advanced Production systems
4	Elect_Power	2	6OE506	Control Techniques for Electrical Drives
5	Elect_Control	2	6OE506	Control Techniques for Electrical Drives
6	Eln	2	6OE508	Introduction to Embedded Systems
7	CSE	2	6OE509	Machine Learning in Practice
8	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.

PG Coordinator   HoD   Dean Academics   Page 6/6   Date: