

# **Walchand College of Engineering**

*(Government Aided Autonomous Institute)*

Vishrambag, Sangli. 416415



## **Credit System for T.Y. B.Tech. (Mechanical Engineering) Sem-V and VI**

**2022-23**



# Walchand College of Engineering

(Government Aided Autonomous Institute)

## Credit System for T.Y. B.Tech. (Mechanical Engineering) Sem-V AY 2022-23

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Ext
<b>Professional Core (Theory)</b>													
1	PC	5ME301	Heat Transfer	3	0	0	0	3	3	30	20	50	
2	PC	5ME302	Applied Thermodynamics	2	0	0	0	2	2	30	20	50	
<b>Professional Core (Lab)</b>													
3	PC	5ME353	Manufacturing Technology Lab	0	0	0	2	2	2	30	30	40	
4	PC	5ME351	Heat Transfer Lab	0	0	2	0	2	1	30	30	40	POE
5	PC	5ME352	Applied Thermodynamics Lab	0	0	2	0	2	1	30	30	40	POE
6	PR	5ME345	Mini-Project 1	0	0	2	0	2	1	30	30	40	
7	PR	5ME346	Mini-Project 2	0	0	2	0	2	1	30	30	40	
8	HS	5HS301	Humanities-1: German Language	0	0	0	3	3	3	30	30	40	
<b>Professional Elective (Theory)</b>													
9	PE	Refer list	Elective 1	2	0	0	0	2	2	30	20	50	
<b>Professional Elective (Lab)</b>													
10	PE	Refer list	Elective 2 Lab	0	0	2	0	2	1	30	30	40	OE
<b>Open Elective</b>													
11	OE	Refer list	Open Elective 1	2	0	0	0	2	2	30	20	50	
12	OE	Refer list	Open Elective 2	3	0	0	0	3	3	30	20	50	
<b>Total</b>				<b>12</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>27</b>	<b>22</b>				

**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.

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



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## Elective Course List for T.Y. B.Tech. (Mechanical Engineering) Sem-V AY 2022-23

Sr.No.	Track	Course Code	Course Name
<b>Elective 1</b>			
1	Production Engineering	5ME311	Plastic Technology
2	Design Engineering	5ME312	Advanced Strength of Materials
3	Production Engineering	5ME313	Composite Materials
<b>Elective 2 Lab</b>			
1	Production Engineering	5ME354	Mechatronics Systems Lab
2	Production Engineering	5ME355	Microprocessors in Automation Lab
3	Design Engineering	5ME356	Industrial Hydraulics and Pneumatics Lab
4	Design Engineering	5ME357	Mechanical Measurement and Control Lab



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## Open Elective Course List for T.Y. B.Tech. (Mechanical Engineering) Sem-V AY 2022-23

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Elective 1</b>				
1	Civil	5	5OE301	Basic Civil Engineering
2	Elect	5	5OE343	Electrical Machine Technology
3	Eln	5	5OE356	Signals and Systems
4	CSE	5	5OE372	Data Science using Python
5	IT	5	5OE385	Joy of Python Programming
<b>Open Elective 2</b>				
1	Civil	5	5OE315	Application of Remote Sensing
2	Elect	5	5OE344	Industrial Instrumentation
3	Eln	5	5OE357	Introduction to Electronics system
4	CSE	5	5OE371	Software Engineering and Database Essentials
5	IT	5	5OE386	Cloud Computing System



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Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Ext
<b>Professional Core (Theory)</b>													
1	PC	5ME321	Design of Machine Elements	2	0	0	0	2	2	30	20	50	
2	PC	5ME322	Automation in Manufacturing	2	0	0	0	2	2	30	20	50	
3	PC	5ME323	Engineering Metrology	1	0	0	0	1	1	15	10	25	
<b>Professional Core (Lab)</b>													
4	PC	5ME371	Design of Machine Elements Lab	0	0	2	0	2	1	30	30	40	OE
5	PC	5ME372	Automation in Manufacturing Lab	0	0	2	0	2	1	30	30	40	OE
6	PC	5ME373	Engineering Metrology Lab	0	0	2	0	2	1	30	30	40	POE
7	PR	5ME391	Mini-Project 3	0	0	2	0	2	1	30	30	40	
8	PR	5ME392	Mini-Project 4	0	0	2	0	2	1	30	30	40	
9	HS	5HS302	Humanities-2: Human Relations at Work	0	0	0	3	3	3	30	30	40	
<b>Professional Elective (Theory)</b>													
10	PE	Refer list	Elective 3	2	0	0	0	2	2	30	20	50	
<b>Professional Elective (Lab)</b>													
11	PE	Refer list	Elective 4 Lab	0	0	2	0	2	1	30	30	40	OE
<b>Open Elective</b>													
12	OE	Refer list	Open Elective 3	2	0	0	0	2	2	30	20	50	
13	OE	Refer list	Open Elective 4	3	0	0	0	3	3	30	20	50	
<b>Total</b>				<b>12</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>27</b>	<b>21</b>				

**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.

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## Elective Course List for T.Y. B.Tech. (Mechanical Engineering) Sem-VI AY 2022-23

Sr.No.	Track	Course Code	Course Name
<b>Elective 3</b>			
1	Thermal Engineering	5ME331	Energy Conservation and Management
2	Thermal Engineering	5ME332	Power Plant engineering
3	Production Engineering	5ME333	Operations Research
4	Design Engineering	5ME334	Design and Optimization of Mechanical Elements
<b>Elective 4 Lab</b>			
1	Production Engineering	5ME374	Robotics Lab
2	Thermal Engineering	5ME375	Internal Combustion Engine Lab
3	Production Engineering	5ME376	Industry 4.0 Lab



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## Open Elective Course List for T.Y. B.Tech. (Mechanical Engineering) Sem-VI AY 2022-23

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Elective 3</b>				
1	Civil	6	5OE322	Physical Geology
2	Elect	6	5OE350	Renewable Energy
3	Eln	6	5OE364	Cyber Physical System
4	CSE	6	5OE378	Fundamentals of Internet of Things
5	IT	6	5OE392	Web Development & Applications
<b>Open Elective 4</b>				
1	Civil	6	5OE323	Diaster Management
2	Elect	6	5OE351	Energy Management
3	Eln	6	5OE365	Biomedical Engineering
4	CSE	6	5OE379	Artificial Intelligence and Machine Learning
5	IT	6	5OE393	Fundamentals Of Machine Learning