

# **Walchand College of Engineering**

*(Government Aided Autonomous Institute)*

Vishrambag, Sangli. 416415



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

**2022-23**



# Walchand College of Engineering

(Government Aided Autonomous Institute)

## Credit System for T.Y. B.Tech. (Electronics 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	5EN301	Digital Signal Processing	2	0	0	0	2	2	30	20	50	
2	PC	5EN302	Embedded System Design	2	0	0	0	2	2	30	20	50	
<b>Professional Core (Lab)</b>													
3	PC	5EN351	Digital Signal Processing Lab	0	0	2	0	2	1	30	30	40	POE
4	PC	5EN352	Embedded System Design Lab	0	0	2	0	2	1	30	30	40	POE
5	PR	5EN345	Mini-Project-1	0	0	2	0	2	1	30	30	40	OE
6	PR	5EN346	Mini-Project-2	0	0	2	0	2	1	30	30	40	OE
7	HS	5HS302	Humanities-1: Human Relations at work	0	0	0	3	3	3	30	30	40	
<b>Professional Elective (Theory)</b>													
8	PE	Refer list	Elective 1	2	1	0	0	3	3	30	20	50	
9	PE	Refer list	Elective 2	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	
<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>13</b>	<b>1</b>	<b>10</b>	<b>3</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. (Electronics Engineering) Sem-V AY 2022-23

Sr.No.	Track	Course Code	Course Name
<b>Elective 1</b>			
1	Communication & Signal Processing	5EN311	Biomedical Instrumentation
2	Embedded System & VLSI	5EN312	Microelectronics
3	Communication & Signal Processing	5EN313	Linear Algebra
<b>Elective 2</b>			
1	Communication & Signal Processing	5EN314	Information Theory and coding
2	Embedded IoT and Networking	5EN315	Object Oriented Programming
3	Embedded System & VLSI	5EN316	Computer Organization and Architecture
<b>Elective-2 Lab</b>			
1	Communication & Signal Processing	5EN353	Information Theory and Coding Lab
2	Embedded IoT and Networking	5EN354	Object Oriented Programming Lab
3	Embedded System & VLSI	5EN355	Computer Organization and Architecture Lab



# Walchand College of Engineering

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

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Elective 1</b>				
1	Mech	5	5OE330	Energy Engineering
2	Elect	5	5OE343	Electrical Machine Technology
3	CSE	5	5OE372	Data Science using Python
4	IT	5	5OE385	Joy of Python Programming
<b>Open Elective 2</b>				
1	Mech	5	5OE329	Non-conventional Machining Processes
2	Elect	5	5OE344	Industrial Instrumentation
3	CSE	5	5OE371	Software Engineering and Database Essentials
4	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	5EN321	Electromagnetic Engineering	2	1	0	0	3	3	30	20	50	
2	PC	5EN322	FPGA based System Design	2	0	0	0	2	2	30	20	50	
<b>Professional Core (Lab)</b>													
3	PC	5EN371	FPGA based System Design Lab	0	0	2	0	2	1	30	30	40	POE
4	PR	5EN347	Mini-Project-3	0	0	2	0	2	1	30	30	40	OE
5	PR	5EN348	Mini-Project-4	0	0	2	0	2	1	30	30	40	OE
6	HS	5HS301	Humanities-2: German Language	0	0	0	3	3	3	30	30	40	
<b>Professional Elective (Theory)</b>													
7	PE	Refer list	Elective 3	2	0	0	0	2	2	30	20	50	
8	PE	Refer list	Elective 4	2	0	0	0	2	2	30	20	50	
<b>Professional Elective (Lab)</b>													
9	PE	Refer list	Elective 4 Lab	0	0	2	0	2	1	30	30	40	
<b>Open Elective</b>													
10	OE	Refer list	Open Elective-3	2	0	0	0	2	2	30	20	50	
11	OE	Refer list	Open Elective-4	3	0	0	0	3	3	30	20	50	
<b>Total</b>				<b>13</b>	<b>1</b>	<b>8</b>	<b>3</b>	<b>25</b>	<b>21</b>				

**Notes:**

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

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

Sr.No.	Track	Course Code	Course Name
<b>Elective 3</b>			
1	Embedded IoT and Networking	5EN331	Introduction to Machine Learning
2	Communication & Signal Processing	5EN332	Optical Communication
3	Embedded IoT and Networking	5EN333	Design and Analysis of Algorithm
<b>Elective 4</b>			
1	Communication & Signal Processing	5EN334	Mobile Communication Engineering
2	Embedded System & VLSI	5EN335	CMOS Digital VLSI Design
3	Communication & Signal Processing	5EN336	Digital Image Processing
<b>Elective 4 Lab</b>			
1	Communication & Signal Processing	5EN372	Mobile Communication Engineering Lab
2	Embedded System & VLSI	5EN373	CMOS Digital VLSI Design Lab
3	Communication & Signal Processing	5EN374	Digital Image Processing Lab



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

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Elective 3</b>				
1	Mech	6	5OE336	3D Printing
2	Elect	6	5OE350	Renewable Energy
3	CSE	6	5OE378	Fundamentals of Internet of Things
4	IT	6	5OE392	Web Development & Applications
<b>Open Elective 4</b>				
1	Mech	6	5OE337	Basics of Automobile Engineering
2	Elect	6	5OE351	Energy Management
3	CSE	6	5OE379	Artificial Intelligence and Machine Learning
4	IT	6	5OE393	Fundamentals Of Machine Learning