

# Walchand College of Engineering

*(Government Aided Autonomous Institute)*

Vishrambag, Sangli. 416415



**\*\*\* Platinum Jubilee Year \*\*\***

**Credit System for  
S.Y. M.Tech. (Electronics Engineering)  
Sem-III and IV**

**2021-22**



# Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

## Credit System for S.Y. M.Tech. (Electronics Engineering) Sem-III AY 2021-22

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	T1/LA1	T2/LA2	ESE
<b>Professional Core (Theory)</b>												
1	PC	5EN601	Legal, Financial aspects of Industrial Project	2	0	0	0	2	2	20	20	60
<b>Professional Core (Lab)</b>												
2	PR	5EN690	Dissertation Phase 1	0	0	20	0	20	10	30	30	40
3	PC	5EN602	Industry Orientation Course	0	0	0	1	1	1	30	30	40
<b>Professional Elective (Theory)</b>												
4	PE	Refer list	Elective 5	2	0	0	0	2	2	20	20	60
<b>Professional Elective (Lab)</b>												
5	PR	Refer list	Activity Based Elective Lab 2	0	0	2	0	2	1	30	30	40
<b>Value Added Professional Courses #</b>												
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<b>Value Added Life-Skill Courses #</b>												
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<b>Total</b>				<b>4</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>27</b>	<b>16</b>			



# Walchand College of Engineering, Sangli

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## Elective Course List for S.Y. M.Tech. (Electronics Engineering) Sem-III AY 2021-22

Sr.No.	Track	Course Code	Course Name
<b>Activity Based Elective Lab 2</b>			
1	Communication and Signal Processing	5EN651	Remote Sensing Techniques and Applications Lab
2	Embedded and VLSI	5EN652	Advanced Automotive Electronics Lab
3	Communication and Signal Processing	5EN653	Suitable NPTEL / MOOC Course Lab
<b>Elective 5</b>			
1	Communication and Signal Processing	5EN611	Remote Sensing Techniques and Applications
2	Embedded and VLSI	5EN612	Advanced Automotive Electronics
3	Communication and Signal Processing	5EN613	Suitable NPTEL / MOOC course

### Notes:

For Lab courses: There shall be only internal continuous assessment (LA1, LA2, ESE). LA1 and LA2 together shall be Lab ISE. The ESE is a separate head of passing.

For Theory courses: There shall be two tests (T1 and T2) and one ESE. The ESE is a separate head of passing.

# The Value Added Courses are Optional Courses. The mode of teaching (LTPI) is decided by the resource person.

The credits earned from these courses will be shown on grade card. For SGPA and CGPA calculation, these courses will be excluded.

The list of Value added courses will be updated from time to time. The courses may be on paid basis. These courses will be offered as per availability of faculty.

The contact hours of each dissertation with the guide (research supervisor) shall be of one hour per week.

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



# Walchand College of Engineering, Sangli

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## Credit System for S.Y. M.Tech. (Electronics Engineering) Sem-IV AY 2021-22

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	T1/LA1	T2/LA2	ESE	
<b>Professional Core (Theory)</b>													
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<b>Professional Core (Lab)</b>													
1	PR	5EN691	Dissertation Phase 2	0	0	24	0	24	12	30	30	40	
2	PR	5EN671	Techno-Socio Activity	0	0	0	1	1	1	30	30	40	
<b>Professional Elective (Theory)</b>													
3	PE	Refer list	Elective 6	3	0	0	0	3	3	20	20	60	
<b>Value Added Professional Courses #</b>													
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<b>Value Added Life-Skill Courses #</b>													
--													
<b>Total</b>				<b>3</b>	<b>0</b>	<b>24</b>	<b>1</b>	<b>28</b>	<b>16</b>				



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## Elective Course List for S.Y. M.Tech. (Electronics Engineering) Sem-IV AY 2021-22

Sr.No.	Track	Course Code	Course Name
<b>Elective 6</b>			
1	Communication and Signal Processing	5EN621	DSP Architectures
2	Embedded and VLSI	5EN622	Deep Learning
3	Embedded and VLSI	5EN623	Suitable NPTEL / MOOC course

### Notes:

For Lab courses: There shall be only internal continuous assessment (LA1, LA2, ESE). LA1 and LA2 together shall be Lab ISE. The ESE is a separate head of passing.

For Theory courses: There shall be two tests (T1 and T2) and one ESE. The ESE is a separate head of passing.

# The Value Added Courses are Optional Courses. The mode of teaching (LTPI) is decided by the resource person.

The credits earned from these courses will be shown on grade card. For SGPA and CGPA calculation, these courses will be excluded.

The list of Value added courses will be updated from time to time. The courses may be on paid basis. These courses will be offered as per availability of faculty.

@ Minimum two AICTE mandatory courses need to be completed for award of degree.

The contact hours of each dissertation with the guide (research supervisor) shall be of one hour per week.

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



# Walchand College of Engineering, Sangli

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## Tracks and Semester-wise Elective Courses for M.Tech. (Electronics Engineering) AY 2021-22

Sr.No.	Sem	Elective	Course Code	Course Name
<b>Communication and Signal Processing</b>				
1	1	Elective 1	5EN511	Advanced Digital Signal Processing
2	1	Elective 2	5EN513	Biomedical Signal Processing
3	2	Elective 3	5EN523	Image Processing and Pattern Recognition
4	2	Elective 4	5EN525	Robotics and Artificial Intelligence
5		Activity Based Elective	5EN575	Image Processing and Pattern Recognition Lab
6		Activity Based Elective	5EN577	Robotics and Artificial Intelligence Lab
7	3	Elective 5	5EN611	Remote Sensing Techniques and Applications
8	3	Elective 5	5EN613	Suitable NPTEL / MOOC course
9		Activity Based Elective	5EN651	Remote Sensing Techniques and Applications Lab
10		Activity Based Elective	5EN653	Suitable NPTEL / MOOC Course Lab
11	4	Elective 6	5EN621	DSP Architectures
<b>Embedded and VLSI</b>				
1	1	Elective 1	5EN512	Digital VLSI Design
2	1	Elective 2	5EN514	Embedded Linux Programming
3	2	Elective 3	5EN524	Analog VLSI Design
4	2	Elective 4	5EN526	Embedded Linux System design
5		Activity Based Elective	5EN576	Analog VLSI Design Lab
6		Activity Based Elective	5EN578	Embedded Linux System design Lab
7	3	Elective 5	5EN612	Advanced Automotive Electronics
8		Activity Based Elective	5EN652	Advanced Automotive Electronics Lab
9	4	Elective 6	5EN622	Deep Learning
10	4	Elective 6	5EN623	Suitable NPTEL / MOOC course



# Walchand College of Engineering, Sangli

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## List of Professional Core (Theory) Courses for M.Tech. (Electronics Engineering) AY 2021-22

Sr.No.	Sem	Course Code	Course Name
<b>Professional Core (Theory) Courses</b>			
1	1	5EN501	FPGA Based System Design
2	1	5EN502	Embedded System Design
3	2	5EN521	RTOS Based System Design
4	2	5EN522	Wireless Sensor Networks and IoT
5	3	5EN601	Legal, Financial aspects of Industrial Project



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## List of Professional Core (Lab) Courses for M.Tech. (Electronics Engineering) AY 2021-22

Sr.No.	Sem	Course Code	Course Name
<b>Professional Core (Lab) Courses</b>			
1	1	5EN560	Research Methodology
2	1	5EN551	Activity Based Lab for FPGA Based System Design
3	1	5EN552	Activity Based Lab for Embedded System Design
4	1	5EN553	Presentaiton and Technical Report Writing
5	1	5EN554	Professional Skills 1
6	2	5EN571	Activity Based Lab for RTOS Based System Design
7	2	5EN572	Activity Based Lab for Wireless Sensor Networks and IoT
8	2	5EN573	Industrial Project
9	2	5EN574	Professional Skills 2
10	3	5EN690	Dissertation Phase 1
11	3	5EN602	Industry Orientation Course
12	4	5EN691	Dissertation Phase 2
13	4	5EN671	Techno-Socio Activity





# Walchand College of Engineering, Sangli

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## Open Electives offered by M.Tech. (Electronics Engineering) to other programmes AY 2021-22

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Electives Offered</b>				
1	Eln	2	5OE108	Introduction to Embedded Systems



**Walchand College of Engineering, Sangli**  
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**Open Electives available from other programmes to M.Tech. (Electronics Engineering) AY 2021-22**

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Electives Available</b>				
1	Civil_Env	2	5OE101	Solid Waste Management
2	Civil_Struct	2	5OE102	Structural Health Monitoring
3	Mech_Prod	2	5OE103	Advanced Production systems
4	Mech_Heat	2	5OE104	Waste to Energy
5	Mech_Design	2	5OE105	Industrial Product Design
6	Elect_Power	2	5OE106	Control Techniques for Electrical Drives
7	Elect_Control	2	5OE106	Control Techniques for Electrical Drives
8	CSE	2	5OE109	Machine Learning in Practice
9	IT	2	5OE110	Machine Learning & Applications