

# **Walchand College of Engineering**

*(Government Aided Autonomous Institute)*

Vishrambag, Sangli. 416415



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

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

**2021-22**



# Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

## Credit System for S.Y. M.Tech. (Environmental 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	5EV601	Legal, Financial Aspects of Industrial Project	2	0	0	0	2	2	20	20	60	
<b>Professional Core (Lab)</b>													
2	PR	5EV690	Dissertation Phase 1	0	0	20	0	20	10	30	30	40	
3	PC	5EV602	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 # (Listed separately)</b>													
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<b>Value Added Life-Skill Courses # (Listed separately)</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>				



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

Sr.No.	Track	Course Code	Course Name
<b>Activity Based Elective Lab 2</b>			
1	Water and Wastewater	5EV651	Operation and Maintenance of Environmental Facilities Lab
2	Environmental Management	5EV652	Project Management Lab
<b>Elective 5</b>			
1	Water and Wastewater	5EV611	Operation and Maintenance of Environmental Facilities
2	Environmental Management	5EV612	Project Management

### 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. (Environmental 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	5EV691	Dissertation Phase 2	0	0	24	0	24	12	30	30	40	
2	PR	5EV671	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 # (Listed separately)</b>													
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<b>Value Added Life-Skill Courses # (Listed separately)</b>													
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<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. (Environmental Engineering) Sem-IV AY 2021-22

Sr.No.	Track	Course Code	Course Name
<b>Elective 6</b>			
1	Pollution Studies	5EV621	Industrial Wastewater Pollution and Control
2	Water and Wastewater	5EV622	Emerging Technologies in Water and Wastewater Treatment

### 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. (Environmental Engineering) AY 2021-22

Sr.No.	Sem	Elective	Course Code	Course Name
<b>Environmental Management</b>				
1	1	Elective 2	5EV514	Computational Methods and Optimization Techniques
2	2	Elective 4	5EV525	Environmental Management Systems
3	2	Elective 4	5EV526	Energy And Buildings
4	3	Elective 5	5EV612	Project Management
5		Activity Based Elective	5EV652	Project Management Lab
<b>Pollution Studies</b>				
1	1	Elective 1	5EV512	Geo-Environmental Engineering
2	2	Elective 3	5EV524	Hazardous Waste Management
3		Activity Based Elective	5EV576	Hazardous Waste Management Lab
4	4	Elective 6	5EV621	Industrial Wastewater Pollution and Control
<b>Water and Wastewater</b>				
1	1	Elective 1	5EV511	Hydraulics of Transport Systems in Environmental Engineering
2	1	Elective 2	5EV513	Water Quality Modeling
3	2	Elective 3	5EV523	Environmental Chemistry and Microbiology
4		Activity Based Elective	5EV575	Environmental Chemistry Lab
5	3	Elective 5	5EV611	Operation and Maintenance of Environmental Facilities
6		Activity Based Elective	5EV651	Operation and Maintenance of Environmental Facilities Lab
7	4	Elective 6	5EV622	Emerging Technologies in Water and Wastewater Treatment



# Walchand College of Engineering, Sangli

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

Sr.No.	Sem	Course Code	Course Name
<b>Professional Core (Lab) Courses</b>			
1	1	5EV560	Research Methodology
2	1	5EV551	Activity Based Lab for PCMWWT
3	1	5EV552	Activity Based Lab for MSWM
4	1	5EV553	Presentation and Technical Report Writing
5	1	5EV554	Professional Skills 1
6	2	5EV571	Activity Based Lab BMWT
7	2	5EV572	Activity Based Lab APC
8	2	5EV573	Industrial Project
9	2	5EV574	Professional Skills 2
10	3	5EV690	Dissertation Phase 1
11	3	5EV602	Industry Orientation Course
12	4	5EV691	Dissertation Phase 2
13	4	5EV671	Techno-Socio Activity



# Walchand College of Engineering, Sangli

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

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Electives Offered</b>				
1	Civil_Env	2	5OE101	Solid Waste Management





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

Sr.No.	Offering Dept	Sem	Course Code	Course Name
<b>Open Electives Available</b>				
1	Civil_Struct	2	5OE102	Structural Health Monitoring
2	Mech_Prod	2	5OE103	Advanced Production systems
3	Mech_Heat	2	5OE104	Waste to Energy
4	Mech_Design	2	5OE105	Industrial Product Design
5	Elect_Power	2	5OE106	Control Techniques for Electrical Drives
6	Elect_Control	2	5OE106	Control Techniques for Electrical Drives
7	Eln	2	5OE108	Introduction to Embedded Systems
8	CSE	2	5OE109	Machine Learning in Practice
9	IT	2	5OE110	Machine Learning & Applications