

Walchand College of Engineering

(Government Aided Autonomous Institute)

Vishrambag, Sangli. 416415



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

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

2021-22



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

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

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	T1/LA1	T2/LA2	ESE	
Professional Core (Theory)													
1	PC	5PS601	Legal, Financial aspects of Industrial Project	2	0	0	0	2	2	20	20	60	
Professional Core (Lab)													
2	PR	5PS690	Dissertation Phase 1	0	0	20	0	20	10	30	30	40	
3	PC	5PS602	Industry Orientation Course	0	0	0	1	1	1	30	30	40	
Professional Elective (Theory)													
4	PE	Refer list	Elective 5	2	0	0	0	2	2	20	20	60	
Professional Elective (Lab)													
5	PR	Refer list	Activity Based Elective Lab 2	0	0	2	0	2	1	30	30	40	
Value Added Professional Courses #													
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Value Added Life-Skill Courses #													
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Total				4	0	22	1	27	16				



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

Sr.No.	Track	Course Code	Course Name
Activity Based Elective Lab 2			
1	Elect. Power Control and Analysis	5PS651	Modern Power Electronics Lab
2	Elect. Transmission and Distribution	5PS652	HVDC Transmission Lab
Elective 5			
1	Elect. Power Control and Analysis	5PS611	Modern Power Electronics
2	Elect. Transmission and Distribution	5PS612	HVDC Transmission

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.



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

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	T1/LA1	T2/LA2	ESE	
Professional Core (Theory)													
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Professional Core (Lab)													
1	PR	5PS691	Dissertation Phase 2	0	0	24	0	24	12	30	30	40	
2	PR	5PS671	Techno-Socio Activity	0	0	0	1	1	1	30	30	40	
Professional Elective (Theory)													
3	PE	Refer list	Elective 6	3	0	0	0	3	3	20	20	60	
Value Added Professional Courses #													
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Value Added Life-Skill Courses #													
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Total				3	0	24	1	28	16				



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

Sr.No.	Track	Course Code	Course Name
Elective 6			
1	Elect.Transmission and Distribution	5PS621	Deregulated Power System
2	Elect.Transmission and Distribution	5PS622	Smart Grid

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.



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

Sr.No.	Sem	Elective	Course Code	Course Name
Elect. Power Control and Analysis				
1	1	Elective 1	5PS512	DSP Application to Power System
2	1	Elective 2	5PS514	Neural Network and Fuzzy Application to Power System
3	2	Elective 3	5PS523	Power System Dynamics
4	2	Elective 4	5PS525	Computer Aided Power System Analysis
5		Activity Based Elective	5PS575	Computer Aided Power System Analysis Lab
6	3	Elective 5	5PS611	Modern Power Electronics
7		Activity Based Elective	5PS651	Modern Power Electronics Lab
Elect. Transmission and Distribution				
1	1	Elective 1	5PS511	Power Apparatus Modeling
2	1	Elective 2	5PS513	Grid Integration of Renewable Energy
3	2	Elective 3	5PS524	EHVAC
4	2	Elective 4	5PS526	HV Engineering
5		Activity Based Elective	5PS576	HV Engineering Lab
6	3	Elective 5	5PS612	HVDC Transmission
7		Activity Based Elective	5PS652	HVDC Transmission Lab
8	4	Elective 6	5PS621	Deregulated Power System
9	4	Elective 6	5PS622	Smart Grid



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

Sr.No.	Sem	Course Code	Course Name
Professional Core (Theory) Courses			
1	1	5PS501	Digital Protection of Power System
2	1	5PS502	Application of Power Electronics to Power Systems
3	2	5PS521	Power Quality in Distribution Systems
4	2	5PS522	PLC and Embedded Systems
5	3	5PS601	Legal, Financial aspects of Industrial Project



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

Sr.No.	Sem	Course Code	Course Name
Professional Core (Lab) Courses			
1	1	5PS560	Research Methodology
2	1	5PS551	Digital Protection of Power System Lab
3	1	5PS552	Application of Power Electronics to Power Systems Lab
4	1	5PS553	Presentation and Technical Report Writing
5	1	5PS554	Professional Skills 1
6	2	5PS571	Power Quality in Distribution Systems Lab
7	2	5PS572	PLC and Embedded Systems Lab
8	2	5PS573	Industrial Project
9	2	5PS574	Professional Skills 2
10	3	5PS690	Dissertation Phase 1
11	3	5PS602	Industry Orientation Course
12	4	5PS691	Dissertation Phase 2
13	4	5PS671	Techno-Socio Activity



Walchand College of Engineering, Sangli
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Open Electives offered by M.Tech. (Power System Engineering) to other programmes AY 2021-22

Sr.No.	Offering Dept	Sem	Course Code	Course Name
Open Electives Offered				
1	Elect_Power	2	5OE106	Control Techniques for Electrical Drives



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Open Electives available from other programmes to M.Tech. (Power System Engineering) AY 2021-22

Sr.No.	Offering Dept	Sem	Course Code	Course Name
Open Electives Available				
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	Eln	2	5OE108	Introduction to Embedded Systems
8	CSE	2	5OE109	Machine Learning in Practice
9	IT	2	5OE110	Machine Learning & Applications