

Walchand College of Engineering

(Government Aided Autonomous Institute)

Vishrambag, Sangli. 416415



1947

Credit System for
F.Y. M.Tech. (Heat Power Engineering)
Sem-I and II
2022-23



Walchand College of Engineering, Sangli
(Government Aided Autonomous Institute)

Credit System for F.Y. M.Tech. (Heat Power Engineering) Sem-I AY 2022-23

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Remark	
Professional Core (Theory)														
1	PC	6HP502	Thermodynamics and combustion	3	0	0	0	3	3	30	20	50		
2	PC	6HP503	Advanced Fluid Dynamics	3	0	0	0	3	3	30	20	50		
Professional Core (Lab)														
3	PR	6HP551	Research Methodology for Heat Power Engineers	0	0	0	2	2	2	30	30	40		
4	PR	6HP545	Heat Power Engineering Lab 1	0	0	4	0	4	2	30	30	40	OE	
Professional Elective (Theory)														
6	PE	Refer list	Professional Elective 1	3	0	0	0	3	3	30	20	50		
7	PE	Refer list	Professional Elective 2	3	0	0	0	3	3	30	20	50		
Professional Elective (Lab)														
8	PR	6HP546	Heat Power Engineering Lab 2	0	0	4	0	4	2	30	30	40	OE	
Total				12	0	8	2	22	18					

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Date:



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Professional Elective Course List for F.Y. M.Tech. (Heat Power Engineering) Sem-I AY 2022-23

Sr.No.	Track	Course Code	Course Name
Professional Elective 1			
1	Mathematical Modelling	6HP511	Computational Methods in fluid flow and heat transfer
2	Study and Design of Thermal Systems	6HP512	Nuclear Engineering
3	Pumps and Turbines	6HP513	Design of Thermal Turbo Systems
Professional Elective 2			
1	Study and Design of Thermal Systems	6HP514	Design of Hydro Turbo machines
2	Heating Ventilation and Air conditioning	6HP515	Air-Conditioning System Design
3	Pumps and Turbines	6HP516	Gas Turbines

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

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

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Credit System for F.Y. M.Tech. (Heat Power Engineering) Sem-II AY 2022-23

Sr.No.	Category	Course Code	Course Name	L	T	P	I	Hrs	Cr	MSE/LA1	ISE/LA2	ESE	Remark	
Professional Core (Theory)														
1	PC	6HP521	Advanced Heat Transfer	3	0	0	0	3	3	30	20	50		
2	PC	6HP522	Steam Engineering	3	0	0	0	3	3	30	20	50		
Professional Core (Lab)														
3	PR	6HP571	Heat Power Engineering Laboratory 3	0	0	4	0	4	2	30	30	40	OE	
4	PR	6HP591	Pre-dissertation Work and Seminar	0	0	4	0	4	2	30	30	40		
Professional Elective (Theory)														
5	PE	Refer list	Professional Elective 3	3	0	0	0	3	3	30	20	50		
6	PE	Refer list	Professional Elective 4	3	0	0	0	3	3	30	20	50		
Professional Elective (Lab)														
7	PR	6HP572	Heat Power Engineering Laboratory 4	0	0	4	0	4	2	30	30	40	OE	
Open Elective														
8	OE	Refer list	Open Elective	3	0	0	0	3	3	30	20	50		
Total				15	0	12	0	27	21					


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Professional Elective Course List for F.Y. M.Tech. (Heat Power Engineering) Sem-II AY 2022-23

Sr.No.	Track	Course Code	Course Name
Professional Elective 3			
1	Study and Design of I. C. Engines	6HP523	Internal Combustion Engine Design
2	Study and Design of Thermal Systems	6HP524	Design of Heat Exchangers
3	Refrigeration	6HP525	Industrial Refrigeration
Professional Elective 4			
1	Refrigeration	6HP526	Cryogenics
2	Mathematical Modelling	6HP527	Modelling of Internal Combustion Engines
3	Heating Ventilation and Air conditioning	6HP528	Industrial Air-Conditioning

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Date:



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Open Elective Course List for F.Y. M.Tech. (Heat Power Engineering) Sem-II AY 2022-23

Sr.No.	Offering Dept	Sem	Course Code	Course Name
Open Elective				
1	Civil_Env	2	6OE501	Solid Waste Management
2	Civil_Struct	2	6OE502	Structural Health Monitoring
3	Mech_Design	2	6OE503	Industrial Product Design
4	Mech_Prod	2	6OE505	Advanced Production System
5	Elect_Power	2	6OE506	Control Techniques for Electrical Drives
6	Elect_Control	2	6OE506	Control Techniques for Electrical Drives
7	Eln	2	6OE508	Introduction to Embedded Systems
8	CSE	2	6OE509	Machine Learning in Practice
9	IT	2	6OE510	Machine Learning & Applications

Notes:

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