



Walchand College of Engineering, Sangli

(Government Aided Autonomous Institute)

Credit System for F.Y. M. Tech. (Heat Power Engineering) Sem-I AY 2020-21

Sr.No.	Category	Course Code	Course Name	L	T	P	Hrs	Credits	ISE-1	MSE*	ISE-2	ESE
Professional Core (Theory)												
1	PC	4IC501	Research Methodology	2	0	0	2	2	10	30	10	50
2	PC	4HP501	Thermodynamics and combustion	3	0	0	3	3	10	30	10	50
3	PC	4HP502	Advance fluid dynamics	3	0	0	3	3	10	30	10	50
Professional Core (Lab)												
4	PC	4HP551	Heat Power Engineering Laboratory 1	0	0	4	4	2	25	25	25	25
Professional Elective (Theory)												
5	PE	Refer list	Professional Elective 1	3	0	0	3	3	10	30	10	50
6	PE	Refer list	Professional Elective 2	3	0	0	3	3	10	30	10	50
Professional Elective (Lab)												
7	PE	4HP552	Heat Power Engineering Laboratory 2	0	0	4	4	2	25	25	25	25
Mandatory Life Skill Courses												
8	MC	Refer list	Mandatory Life Skill Course	2	0	0	2	0	10	30	10	50
Value Added Professional Courses #												
9	VAPC	Refer list	Value Added Professional Courses					#				
Value Added Life-Skill Courses #												
10	VALS	Refer list	Value Added Life Skill Courses					#				
Total				16	0	8	24	18				

Notes:

- * For Lab courses, there will be only internal continuous assessment. ESE is a separate head of passing for both theory and lab courses.
- # The Value Added Courses are Optional Courses. The mode of teaching (LTPI) & evaluation scheme is decided by the resource person.
The list of Value added courses will be updated from time to time.
The course may be on paid basis. The credits earned from these courses will be shown on grade card.
For SPI and CPI calculation, these courses will be excluded.
- @ Minimum 2 mandatory life skill courses are to be completed for award of degree.
For further details refer to Academic and Examination rules and regulations.



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Sr.No.	Course Code	Course Name
Professional Elective 1		
1	4HP511	Computational methods in fluid flow and heat transfer
2	4HP512	Nuclear Engineering
3	4HP513	Energy conservation and management
4	4HP514	Design of thermal turbo systems
Professional Elective 2		
1	4HP515	Design of hydro turbo machines
2	4HP516	Air conditioning system design
3	4HP517	Gas turbines



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Sr.No.	Category	Course Code	Course Name	L	T	P	Hrs	Credits	ISE-1	MSE*	ISE-2	ESE
Professional Core (Theory)												
1	PC	4HP521	Advance Heat transfer	3	0	0	3	3	10	30	10	50
2	PC	4HP522	Steam engineering	3	0	0	3	3	10	30	10	50
Professional Core (Lab)												
3	PC	4HP571	Heat Power Engineering Laboratory 3	0	0	4	4	2	25	25	25	25
4	PC	4HP572	Industrial Project	0	0	4	4	2	25	25	25	25
Professional Elective (Theory)												
5	PE	Refer list	Professional Elective 3	3	0	0	3	3	10	30	10	50
6	PE	Refer list	Professional Elective 4	3	0	0	3	3	10	30	10	50
Professional Elective (Lab)												
7	PE	4HP573	Heat Power Engineering Laboratory 4	0	0	4	4	2	25	25	25	25
Mandatory Life Skill Courses												
8	MC	Refer list	Mandatory Life Skill Course	2	0	0	2	0	10	30	10	50
Value Added Professional Courses #												
9	VAPC	Refer list	Value Added Professional Courses					#				
Value Added Life-Skill Courses #												
10	VALS	Refer list	Value Added Life Skill Courses					#				
Total				14	0	12	26	18				

Notes:

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Course List for F. Y. M. Tech. (Mechanical Heat Power Engineering) Sem-II AY 2020-21

Sr.No.	Course Code	Course Name
Professional Elective 3		
1	4HP531	IC engine design
2	4HP532	Design of heat exchanger
3	4HP533	Industrial refrigeration
Professional Elective 4		
1	4HP534	Cryogenics
2	4HP535	Modeling of IC engines
3	4HP536	Industrial air conditioning