



Maulana Azad
NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal-462003
DEPARTMENT OF MECHANICAL ENGINEERING
M. Tech. in Mechanical Engineering
With Specialization in: Thermal Engineering
SCHEME OF STUDY (Revised April 2020)

FIRST SEMESTER

Course No.	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
MTH 101TH	Advanced Mathematics	3	1	-	4
TH102	Advanced Thermodynamics	3	1	-	4
TH103	Advanced Heat & Mass Transfer	3	1	-	4
TH104	Fluid Flow & Gas Dynamics	3	1	-	4
	Elective 1(A)	3	1	-	4
	Elective 2(B)	3	1	-	4
TH105	Thermal Engg. Lab - I	-	-	2	1
TH106	Seminar – I	-	-	2	1
TH107	Communication skill NPTEL/MOOC/HUM Dept	2	-	-	2
Total Hours 30		Total Credits			28
Total Credits (Cumulative) 28					

SECOND SEMESTER

Course No.	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
TH201	Power Generation System	3	1	-	4
TH202	Thermal Environmental Engg.	3	1	-	4
TH203	Theory and Design of Heat Exchangers.	3	1	-	4
	Elective 3(A)	3	1	-	4
	Elective 4(A)	3	1	-	4
	Elective 5(C)	3	1	-	4
TH204	Thermal Engg. Lab - II	-	-	2	1
TH205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
TH206	Seminar-II	-	-	2	1
Total Hours 30		Total Credits			28
Total Credits (Cumulative) 56					

THIRD SEMESTER

Course No.	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
TH301	Project Phase-I	-	-	24	12
Total Hours 24 Total Credits (Cumulative) 68		Total Credits			12

FOURTH SEMESTER

Course No.	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
TH 401	Project Phase-II	-	-	24	12
Total Hours 24 Total Credits (Cumulative) 80		Total Credits			12

LIST OF ELECTIVES

Group A Program Electives

TH501	Renewable Energy
TH502	Refrigeration System & Component Design
TH503	Computational Fluid Dynamics
TH504	Theory and Design of Gas Turbines
TH505	Theory and Design of Turbomachines
TH506	Design and Simulation of IC Engines
TH507	Advanced Fluid Mechanics
TH508	Micro-Fluidics
TH509	Convective Heat & Mass Transfer
TH510	Instrumentation & Control
TH511	Entrepreneurship & Skill Development
TH512	Design of Thermal systems
TH513	Thermal Power Plant Engg

Group B Department Electives (for other programs of same department only)

TH 601	Renewable Energy
TH 602	Computational Fluid Dynamics
TH 603	Micro-Fluidics
TH 604	Advanced Fluid Mechanics
TH 605	Theory and Design of Turbomachines

Group C Institute Electives (for other departments only)

TH 701	Renewable Energy
TH 702	Entrepreneurship & Skill Development
TH 703	Thermal Power Plant Engg
TH 704	Convective Heat & Mass Transfer
TH 705	Theory and Design of Turbomachines
TH 706	Theory and Design of Gas Turbines