Curriculum for M.Sc Thermal Power Engineering

Two options, each with total credit hours of 30, will be offered:

(A) Thesis Option: 8 Subjects (24 credit hours) + Research Thesis (6 credit hours)
(B) Non-thesis option: 10 Subjects (30 credit hours)

Course Code	Course Title
Group-A	**Compulsory Subjects**
TPE-501	Thermal Power Systems
TPE-502	Advanced Heat and Mass Transfer
TPE-503	Advanced HVAC Systems
ME-601	Research Methods and Engineering Analysis
Group-B	**Elective Subjects {(Any four for option (A); any six for option (B)}**
TPE-504	Advanced Thermodynamics
TPE-505	Gas Turbine Engineering
TPE-506	Advanced Aerodynamics
TPE-507	Air Pollution Engineering
TPE-508	Convection Heat Transfer
TPE-509	Advanced IC Engines
TPE-510	Thermal Energy Storage Systems
TPE-511	Carbon Capture, Storage and Utilization
TPE-512	Advanced Fluid Dynamics
TPE-513	Clean Coal Technologies
TPE-514	Sustainable Energy Systems
TPE-515	Energy Efficiency & Conservation
TPE-516	Fuel and Combustion
TPE-517	Energy Management
TPE-518	Turbo Machinery
TPE-519	High Pressure Boilers
TPE-601	Radiation Heat Transfer
TPE-602	Advanced Experimental Methods in Thermal and Fluid Engineering
TPE-603	Computational Fluid Dynamics
TPE-604	Compressible Fluid Flow
TPE-605	Energy System Modeling
TPE-606	Micro and Nano Fluids
ME-501	Mathematical Methods
ME-502	Environmental Management and Safety
ME-503	Advanced Mechanical Vibration
ME-504	Condition Monitoring
ME-505	Experimental Methods
ME-602	Modeling & Simulation
ME-603	Advanced Finite Element Methods
ME-604	Machine Noise and Vibration Analysis
ME-605	Failure Analysis of Engineering Materials
ME-606	Computer Aided Die and Fixture Design
ME-607	Welding and NDT
ME-608	Reliability and Quality Engineering
Group-C	**Research Thesis**
TPE-700	Research Thesis in the Relevant Area and Oral Examination {Compulsory for Option (A)}