

# PhD Mechanical Engineering Core Courses

## Course Outline: PhD Mechanical Engineering Core Courses

Course No.	Course Title
ME-6001	Advanced Engineering Mathematics
ME-6002	Simulation and Modeling
ME-6003	Advanced Statistics and Data Mining

\*Common to all Mechanical, Industrial Engineering and Engineering Management students.  
Specialization in Thermo Fluids

Course No.	Course Title
ME-6101	Computational Fluid Dynamics
ME-6102	Advanced Fluid Mechanics
ME-6103	Advanced Heat Transfer
ME-6104	Advanced Topics in Thermal System Engineering

## Specialization in Applied Mechanics and Design

Course No.	Course Title
ME-6201	Advanced Mechanical Vibration
ME-6202	Finite Element Analysis
ME-6203	Advanced Computer Aided Design
ME-6204	Advanced Topics in Applied Mechanics and Design

## Specialization in Energy Engineering

Course No.	Course Title
ME-6301	Renewable Energy Technologies
ME-6302	Energy Systems Modeling & Analysis
ME-6303	Advanced Nuclear Engineering
ME-6304	Advanced Topics in Energy Engineering