



Universidad Politécnica de Puerto Rico
Graduate School
Master Program in Mechanical Engineering



**M.E.Mech.Eng.
Mechanical Engineering**

Core Courses: 6 credit-hours
General Courses: 24 credit-hours
Design Project Course: 3 credit-hours
Total: 33 credit-hours

Core Courses

6 credit-hours

ME 6014 – Advanced Engineering Mathematics
GMP 6510 – Research Methodology

General Courses

Must select 24 credit-hours

ME 6100 – Advanced Engineering Thermodynamics
ME 6110 – Conduction and Radiation Heat Transfer
ME 6120 – Advanced Convection Heat Transfer and Fluid Mechanics
ME 6130 – Gas Dynamics*
ME 6140 – High Speed Aerodynamics*
ME 6150 – Theory of Turbomachines
ME 6160 – Computational Fluid Dynamics
ME 6170 – Alternative and Renewable Energy Technologies
ME 6200 – Advanced Solid Mechanics
ME 6220 – Fracture Mechanics
ME 6240 – Tools, Tooling and Machine Tool Design
ME 6250 – Advanced Manufacturing Simulation
ME 6260 – Introduction to Composite Materials
ME 6270 – Fundamentals of Tribology and Surface Layer Technology
ME 6300 – Advanced Aerospace Structures*
ME 6330 – Finite Element Analysis
ME 6340 – Vibration Systems
ME 6350 – Mechanical and Aerospace Control Systems*
ME 6360 – Optimization in Engineering Design
ME 6390 – Special Topics in Mechanical Engineering
MMP 6000 – Advanced Statistics and Quality Improvement
MMP 6130 – Six Sigma
GMP 6010 – Professional Writing and Presentations
GMP 6050 – Professional Internship through COOP Program

* Students who take these courses will obtain a **Specialization** in the **Aerospace Area**.

Design Project

(3 credits)

ME 6400 – Design Project (Approval Required)
ME 6401 – Design Project Extension (Approval Required)

Contact Information:
Graduate School

E-mail: escuelagraduada@pupr.edu
Phone: 787-622-8000 Ext. 686