



UNIVERSIDAD POLITÉCNICA DE PUERTO RICO

GRADUATE PROGRAMS IN MECHANICAL ENGINEERING

2026 - 2028



COURSE	COURSE TITLE	PRE-REQUISITES	2026-2027			2027-2028		
			FA	WI	SP	FA	WI	SP
	CORE COURSES							
ME 6014	Advanced Engineering Mathematics			X			X	
GMP 6510	Research Methodology		X	X	X	X	X	X
	GENERAL COURSES							
ME 6100	Advanced Engineering Thermodynamics			X				
ME 6110	Conduction and Radiation Heat Transfer		X					
ME 6120	Advanced Convection Heat Transfer and Fluid Mechanics	ME 6100						X
ME 6130	Gas Dynamics*	ME 6100			X			
ME 6140	High Speed Aerodynamics*	ME 6100				X		
ME 6150	Theory of Turbomachines			X				
ME 6160	Computational Fluid Dynamics				X			
ME 6170	Alternative and Renewable Energy Technologies				X			X
ME 6200	Advanced Solid Mechanics**							
ME 6220	Fracture Mechanics**							
ME 6250	Advanced Manufacturing Simulation							X
ME 6260	Introduction to Composite Materials					X		
ME 6270	Fundamentals of Tribology and Surface Layer Technology**							
ME 6300	Advanced Aerospace Structures*		X					
ME 6330	Finite Element Analysis							X
ME 6340	Vibration Systems						X	
ME 6350	Mechanical and Aerospace Control Systems*					X		
ME 6360	Optimization in Engineering Design						X	
ME 6390	Special Topics in Mechanical Engineering	Approval Required						
MMP 6000	Advanced Statistics and Quality Improvement	MGM 5700 or SC	X	X	X	X	X	X
MMP 6130	Six Sigma	MMP 6000	X		X	X		X
GMP 6010	Professional Writing and Presentations		X		X	X		X
GMP 6050	Professional Experience Through COOP Program	Approval Required						
	DESIGN PROJECT							
ME 6400	Design Project	Approval Required	X	X	X	X	X	X
ME 6401	Design Project Extension	ME 6400	X	X	X	X	X	X

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

** Subject to faculty availability.