

Mech and Aero - Joint (MAAJ)

Mechanical and Aerospace Engineering (Joint) (MAAJ) Courses

MAAJ 5001 [0.5 credit] (AMM 5101)
Theory of Elasticity

MAAJ 5002 [0.5 credit] (AMM 5102)
Advanced Stress Analysis

MAAJ 5003 [0.5 credit] (AMM 5103)
Theory Perfectly Plastic Solid

MAAJ 5004 [0.5 credit] (MCG 5104)
Theory of Plates and Shells

MAAJ 5005 [0.5 credit] (MCG 5105)
Continuum Mechanics

MAAJ 5006 [0.5 credit] (AMM 5106)
Advanced Topics in Elasticity

MAAJ 5007 [0.5 credit] (MCG 5107)
Adv. Dynamics w/Applications

MAAJ 5008 [0.5 credit] (MCG 5108)
Finite Element Analysis

MAAJ 5009 [0.5 credit] (MCG 5109)
Advanced Topics in Finite Element Analysis

MAAJ 5010 [0.5 credit] (MCG 5310)
Performance and Economics of V/Stol Aircraft

MAAJ 5011 [0.5 credit] (AMM 5138)
Advanced Topics in Advanced Materials and
Manufacturing

MAAJ 5012 [0.5 credit] (AMM 5364)
Computational Metallurgy

MAAJ 5013 [0.5 credit] (MCG 5125)
Advanced Dynamics

MAAJ 5014 [0.5 credit] (MCG 5314)
Ground Transportation Systems and Vehicles

MAAJ 5015 [0.5 credit] (MCG 5120)
Micro and Nano Systems

MAAJ 5021 [0.5 credit] (MCG 5321)
Methods of Energy Conversion

MAAJ 5022 [0.5 credit] (MCG 5322)
Nuclear Engineering

MAAJ 5025 [0.5 credit] (MCG 5325)
Wind Engineering

MAAJ 5026 [0.5 credit] (MCG 5326)
System Modelling, Dynamics and Control

MAAJ 5027 [0.5 credit] (MCG 5327)
Nonlinear System Analysis and Controls

MAAJ 5028 [0.5 credit] (MCG 5328)
3D Machine Vision: From Robots to the Space Station

MAAJ 5030 [0.5 credit] (MCG 5330)
Engineering Acoustics

MAAJ 5031 [0.5 credit] (MCG 5331)
Aero-Acoustics

MAAJ 5042 [0.5 credit] (MCG 5342)
Gas Turbines

MAAJ 5048 [0.5 credit] (MCG 5348)
Convective Heat and Mass Transfers

MAAJ 5050 [0.5 credit] (MCG 5300)
Fundamentals of Fluid Dynamics
Also listed as MECH 5000.

MAAJ 5051 [0.5 credit] (AMM 5130)
Deformation and Fracture of Engineering Materials

MAAJ 5052 [0.5 credit] (AMM 5122)
Failure Analysis of High-Temperature Protective
Coatings for Aerospace Applications

MAAJ 5053 [0.5 credit] (AMM 5124)
Fatigue and Damage Tolerance in Aircraft

MAAJ 5054 [0.5 credit] (MCG 5147)
Finite-Volume Methods for Compressible Flows

MAAJ 5055 [0.5 credit] (MCG 5148)
High-Performance Parallel Scientific Computing

MAAJ 5056 [0.5 credit] (AMM 5125)
Materials Characterization Techniques

MAAJ 5057 [0.5 credit] (AMM 5121)
Materials Selection in Engineering Design

MAAJ 5058 [0.5 credit] (MCG 5149)
Non-Equilibrium Gas Dynamics

MAAJ 5059 [0.5 credit] (MCG 5309)
Environmental Fluid Mechanics
Includes: Experiential Learning Activity
Also listed as MECH 5009.

MAAJ 5100 [0.5 credit] (MCG 5110)
Micromechanics of Solids

MAAJ 5101 [0.5 credit] (MCG 5111)
Gas Dynamics

MAAJ 5102 [0.5 credit] (AMM 5317)
Experimental Stress Analysis

MAAJ 5103 [0.5 credit] (AMM 5374)
Integrated Manufacturing - CIMS

MAAJ 5105 [0.5 credit] (MCG 5115)
Non-Linear Optimization

MAAJ 5107 [0.5 credit] (AMM 5117)
Intro to Composite Materials
Includes: Experiential Learning Activity

MAAJ 5108 [0.5 credit] (AMM 5118)
Introduction to Plasticity

MAAJ 5109 [0.5 credit] (AMM 5119)
Fracture Mechanics

MAAJ 5122 [0.5 credit] (MCG 5352)
Optimal Control Systems

MAAJ 5123 [0.5 credit] (MCG 5353)
Robotics

MAAJ 5151 [0.5 credit] (MCG 5311)
Dynamics and Aerodynamics of Flight
Includes: Experiential Learning Activity
Also listed as MECH 5101.

MAAJ 5152 [0.5 credit] (MCG 5301)
Theory of Viscous Flows

MAAJ 5153 [0.5 credit] (MCG 5303)
Incompressible Non-Viscous Flows

MAAJ 5154 [0.5 credit] (MCG 5304)
Compressible Non-Viscous Flows

MAAJ 5155 [0.5 credit] (MCG 5315)
Orbital Mechanics and Space Control
Includes: Experiential Learning Activity
Also listed as MECH 5105.

MAAJ 5156 [0.5 credit] (AMM 5381)
Lightweight Structures

MAAJ 5157 [0.5 credit] (MCG 5121)
Space Mission Analysis and Design

MAAJ 5158 [0.5 credit] (MCG 5308)
Experimental Methods in Fluid Mechanics

MAAJ 5159 [0.5 credit] (MCG 5122)
Smart Structures

MAAJ 5206 [0.5 credit] (AMM 5126)
Deformation of Materials

MAAJ 5209 [0.5 credit] (AMM 5129)
Hot Working of Metals

MAAJ 5251 [0.5 credit] (MCG 5354)
Guidance, Navigation and Control

MAAJ 5252 [0.5 credit] (MCG 5356)
Neuro and Fuzzy Control

MAAJ 5253 [0.5 credit] (MCG 5366)
Finite Element Analysis II

MAAJ 5254 [0.5 credit] (MCG 5483)
Fundamentals of Combustion
Also listed as MECH 5204.

MAAJ 5255 [0.5 credit] (MCG 5324)
Building Performance Simulation
Includes: Experiential Learning Activity
Also listed as MECH 5205.

MAAJ 5301 [0.5 credit] (MCG 5131)
Heat Transfer by Conduction

MAAJ 5302 [0.5 credit] (MCG 5132)
Heat Transfer by Convection

MAAJ 5303 [0.5 credit] (MCG 5133)
Heat Transfer by Radiation

MAAJ 5304 [0.5 credit] (MCG 5134)
Heat Transfer w/Phase Change

MAAJ 5305 [0.5 credit] (MCG 5343)
Advanced Thermodynamics

MAAJ 5306 [0.5 credit] (MCG 5136)
Special Studies in Fluid Mech and Heat Transfer

MAAJ 5307 [0.5 credit] (AMM 5137)
Special Studies in Solid Mechanics and Materials

MAAJ 5308 [0.5 credit] (MCG 5138)
Advanced Topics in Mechanical Engineering

MAAJ 5309 [0.5 credit] (MCG 5375)
CAD/CAM

MAAJ 5311 [0.5 credit] (MCG 5471)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5312 [0.5 credit] (MCG 5472)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5313 [0.5 credit] (MCG 5473)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5314 [0.5 credit] (MCG 5474)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5315 [0.5 credit] (MCG 5475)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5316 [0.5 credit] (MCG 5476)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5317 [0.5 credit] (MCG 5477)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5318 [0.5 credit] (MCG 5478)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5319 [0.5 credit] (MCG 5479)
Special Topics in Mechanical and Aerospace
Engineering

MAAJ 5340 [0.5 credit] (MCG 5344)
Gas Turbine Combustion

MAAJ 5352 [0.5 credit] (MCG 5332)
Instrumentation Techniques
Also listed as MECH 5302.

MAAJ 5354 [0.5 credit] (MCG 5334)
Computational Fluid Dynamics of Compressible Flow
Also listed as MECH 5304.

MAAJ 5356 [0.5 credit] (MCG 5306)
Theory of Subsonic Flows

MAAJ 5357 [0.5 credit] (MCG 5307)
Theory of Supersonic Flows

MAAJ 5401 [0.5 credit] (MCG 5141)
Statistical Thermodynamics

MAAJ 5402 [0.5 credit] (MCG 5370)
Special Topics in Mechanical and Aeronautical Engineering

MAAJ 5403 [0.5 credit] (MCG 5470)
Special Topics in Mechanical and Aerospace Engineering

MAAJ 5408 [0.5 credit] (MCG 5551)
Theorie d'Ecoulement Visqueux

MAAJ 5409 [0.5 credit] (MCG 5552)
Theorie de Turbulence

MAAJ 5451 [0.5 credit] (MCG 5341)
Turbomachinery
Includes: Experiential Learning Activity
Also listed as MECH 5401.

MAAJ 5452 [0.5 credit] (AMM 5144)
Superalloys and Ceramix-Metal Matrix Composites

MAAJ 5457 [0.5 credit] (MCG 5347)
Conductive and Radiative Heat Transfer
Also listed as MECH 5407.

MAAJ 5459 [0.5 credit] (MCG 5349)
Two-Phase Flow and Heat Transfer

MAAJ 5500 [0.5 credit] (MCG 5557)
Méthodes numeriques en mécanique

MAAJ 5501 [0.5 credit] (MCG 5151)
Laminar Flow Theory

MAAJ 5502 [0.5 credit] (MCG 5152)
Theory of Turbulance

MAAJ 5505 [0.5 credit] (MCG 5155)
Inviscid Flow Theory

MAAJ 5506 [0.5 credit] (MCG 5156)
Measurement of Fluid Mech

MAAJ 5507 [0.5 credit] (MCG 5157)
Num Comp:Fluid Dyn and Heat Tran

MAAJ 5509 [0.5 credit] (AMM 5159)
Advanced Production Planning and Control

MAAJ 5550 [0.5 credit] (MCG 5350)
Advanced Vibration Analysis
Includes: Experiential Learning Activity
Also listed as MECH 5500.

MAAJ 5555 [0.5 credit] (MCG 5355)
Stability Theory & Application
Also listed as MECH 5505.

MAAJ 5557 [0.5 credit] (MCG 5124)
Advanced Kinematics
Includes: Experiential Learning Activity
Also listed as MECH 5507.

MAAJ 5607 [0.5 credit] (MCG 5167)
Nuclear Reactor Engineering

MAAJ 5608 [0.5 credit] (AMM 5168)
Industrial Organization

MAAJ 5609 [0.5 credit] (MCG 5169)
Advanced Topics in Reliability Engineer

MAAJ 5652 [0.5 credit] (AMM 5362)
Failure Prevention

MAAJ 5655 [0.5 credit] (MCG 5365)
Finite Element Analysis I
Also listed as MECH 5605.

MAAJ 5656 [0.5 credit] (MCG 5367)
The Boundary Element Method
Includes: Experiential Learning Activity
Also listed as MECH 5607.

MAAJ 5657 [0.5 credit] (MCG 5361)
Creative Problem Solving and Design
Also listed as MECH 5601.

MAAJ 5659 [0.5 credit] (AMM 5123)
Microstructure and Properties of Materials
Also listed as MECH 5609.

MAAJ 5700 [0.5 credit] (MCG 5170)
Computer-Aided Design
Includes: Experiential Learning Activity

MAAJ 5701 [0.5 credit] (MCG 5171)
Applied Reliability Theory

MAAJ 5703 [0.5 credit] (MCG 5173)
Systems Engineer and Integration

MAAJ 5707 [0.5 credit] (MCG 5177)
Robot Mechanics

MAAJ 5709 [0.5 credit] (AMM 5179)
Manufacturing System Analysis

MAAJ 5750 [0.5 credit] (AMM 5345)
Surfaces and Coatings
Also listed as MECH 5700.

MAAJ 5751 [0.5 credit] (AMM 5369)
Metallic Phases and Transformations
Precludes additional credit for MECH 5701.

MAAJ 5802 [0.5 credit] (AMM 5182)
Theory of Elastic Instability

MAAJ 5804 [0.5 credit] (MCG 5184)
Mechatronics

MAAJ 5805 [0.5 credit] (MCG 5185)
Multivariable Digital Control

MAAJ 5806 [0.5 credit] (MCG 5186)
Non-Linear Disc Dyn and Control

MAAJ 5850 [0.5 credit] (MCG 5480)
Special Topics in Mechanical and Aerospace Engineering
Also listed as MECH 5800.

MAAJ 5851 [0.5 credit] (MCG 5380)
Safety and Risk Assessment of Nuclear Power

MAAJ 5852 [0.5 credit] (MCG 5483)
Special Topics in Mechanical and Aerospace Engineering
Also listed as MECH 5802.

MAAJ 5853 [0.5 credit] (MCG 5488)
Special Topics in Mechanical and Aerospace Engineering
Also listed as MECH 5803.

MAAJ 5854 [0.5 credit] (MCG 5384)
Special Topics in Mechanical and Aerospace Engineering
Also listed as MECH 5804.

MAAJ 5855 [0.5 credit] (MCG 5482)
Special Topics in Mechanical and Aerospace Engineering
Also listed as MECH 5805.

MAAJ 5857 [0.5 credit] (MCG 5487)
Special Topics in Mechanical and Aerospace Engineering
Also listed as MECH 5807.

MAAJ 5858 [0.5 credit] (MCG 5376)
Special Topics in Mechanical and Aerospace Engineering
Also listed as MECH 5808.

MAAJ 5901 [0.5 credit] (MCG 5191)
Combustion in Premixed Systems

MAAJ 5902 [0.5 credit] (MCG 5192)
Combustion in Diffusion System