

Applied Math Electives

Atmospheric Sciences

ATMOS 5100 Introduction to Atmospheric Dynamics

ATMOS 5110 Synoptic-Dynamic Meteorology I

ATMOS 5300 Atmospheric Thermodynamics & Boundary Layer Processes

Biomedical Engineering

BME 4001 Biotransport/Biomolecular

BME 4250 Biomechanics I

BME 5005 Computational Neuroscience

BME 5433 Biological Statistical Signal Processing

BME 6002 Molecular Biophysics

BME 6250 Biomechanics II

Chemical Engineering

CH EN 3353 Fluid Mechanics

CH EN 3453 Heat Transfer

CH EN 4253 Process Design

CH EN 5203 State Space Control

Computer Science

CS 3200 Introduction to Scientific Computing

CS 4150 Algorithms

CS 4300 Artificial Intelligence

CS 4600 Introduction to Computer Graphics

CS 5150 Advanced Algorithms

CS 5310 Robotics

CS 5320 Computer Vision

CS 5610 Interactive Computer Graphics

CS 5630 Visualization for Data Science

Electrical and Computer Engineering

ECE 3300 Fundamentals of Electromagnetics and Transmission Lines

ECE 3500 Fundamentals of Signals and Systems

ECE 3510 Introduction to Feedback Systems

ECE 3740 Introduction to Quantum Theory and Relativity

ECE 5340 Numerical Techniques in Electromagnetics

ECE 5510 Random Processes

ECE 5520 Digital Communication Systems

ECE 5530 Digital Signal Processing
ECE 5670 Control of Electric Motors

Geology and Geophysics

GEO 5060 Global Geophysics
GEO 5210 Seismology I: Tectonophysics and Elastic Waves
GEO 5220 Seismology II: Exploration and Engineering Seismology
GEO 5240 Electromagnetic Methods
GEO 5250 Inversion Theory and Applications
GEO 5320 Signal and Image Processing in the Geosciences
GEO 5330 Seismic Sources
GEO 5360 Fluid Methods

Mechanical Engineering

ME EN 5600 Intermediate Thermodynamics
ME EN 5700 Intermediate Fluid Dynamics
ME EN 5710 Aerodynamics
ME EN 5810 Thermal Systems Design

Metallurgical Engineering

MET E 5670 Mineral Processing I
MET E 5680 Design and Advanced Control for Plant Operation
MET E 5710 High-Temperature Chemical Processing
MET E 5750 Transport and Rate Phenomena

Mining Engineering

MG EN 5050 Mine Ventilation and Air Conditioning
MG EN 5150 Mechanics of Materials
MG EN 5160 Rock Mechanics Applications

Physics

PHYS 3010 Physics IV- Intermediate Mechanics with Special Relativity
PHYS 4010 Physics V- Electromagnetism and Quantum Mechanics
PHYS 4760 Thermal and Statistical Physics
PHYS 5110 Introduction to Nuclear and Particle Physics
PHYS 5450 Introduction to Quantum Mechanics
PHYS 5510 Solid-State Physics I
PHYS 5520 Solid- State Physics II
PHYS 5580 Cosmology