

## AOE Graduate Level Course Prerequisites

### AOE 5024: Vehicle Structures

- Prerequisites: None

### AOE 5034 (ESM 5304): Mechanical and Structural Dynamics

- Prerequisites: AOE 5024
- Effective Summer I 2000

### AOE 5054 (ESM 5454): Elastic Stability

- Prerequisites: AOE 3124 or CEE 3404 or Graduate Standing
- Effective Summer I 2007

### AOE 5064 (ESM 5064): Structural Optimization

- Prerequisites: None

### AOE 5074: Advanced Ship Structural Analysis

- Prerequisites: AOE 5024
- Effective Summer I 2000

### AOE 5084: Submarine Design

- Prerequisites: None

### AOE 5104: Advanced Aero and Hydrodynamics

- Prerequisites: None

### AOE 5114: High Speed Aerodynamics

- Prerequisites: AOE 3114 or Graduate Standing
- Effective Summer I 2007

### AOE 5135-5136 (ME 5135-5136): Vehicle Propulsion

- Prerequisites: AOE 3114 and ME 3134 or Graduate Standing
- Effective Summer I 2007

### AOE 5144: Boundary Layer Theory and Heat Transfer

- Prerequisites: AOE 5104
- Effective Summer I 2007

### AOE 5204: Vehicle Dynamics and Control

- Prerequisites: AOE 3134 and (AOE 3234 or AOE 4140) or Graduate Standing
- Effective Summer I 2007

### AOE 5234: Orbital Mechanics

- Prerequisites: AOE 4134 or Graduate Standing
- Effective Summer I 2007

### AOE 5244: Optimization Techniques

- Prerequisites: AOE 3134 and MATH 4564 or Graduate Standing
- Effective Summer I 2007

### AOE 5304: Advanced Naval Architecture

- Prerequisites: None

### AOE 5305-5306: Marine Engineering

- Prerequisites: ME 3134 or Graduate Standing
- Effective Summer I 2007

### AOE 5314: Naval Ship System Design and Effectiveness

- Prerequisites: AOE 5304 and AOE 5405
- Effective Fall 2012

AOE 5315: Naval Ship Design

- Prerequisites: AOE 5304, AOE 5305, AOE 5314, AOE 5334, and AOE 5074
- Effective Fall 2011

AOE 5316: Naval Ship Design

- Prerequisites: AOE 5315
- Effective Fall 2011

AOE 5334: Advanced Ship Dynamics

- Prerequisites: AOE 3234 and MATH 4564 or Graduate Standing
- Effective Summer I 2007

AOE 5374: Rationally-Based Design of Ocean Structures

- Prerequisites: AOE 5074
- Effective Summer I 2007

AOE 5434G (ME 5434): Advanced Introduction to Computational Fluid Dynamics

- Prerequisites: None

AOE 5444G: Advanced Dynamics of High-Speed Craft

- Prerequisites: None

AOE 5454: Advanced Aerospace and Ocean Engineering Instrumentation

- Prerequisites: AOE 3014 and AOE 3034 or Graduate Standing
- Effective Summer I 2007

AOE 5734 (ECE 5734)(ME 5584): Convex Optimization

- Prerequisites: None

AOE 5744 (ECE 5744) (ME 5544): Linear Systems Theory

- Prerequisites: ECE 4405 or ECE 4624 or ECE 4634 or ME 4504 or AOE 4004 or Graduate Standing
- Effective Fall 2010

AOE 5754 (ECE 5754)(ME 5554): Applied Linear Systems

- Prerequisites: ECE 4405 or ECE 4624 or ECE 4634 or ME 4504 or AOE 4004 or Graduate Standing
- Effective Fall 2010

AOE 5764 (ECE 5764)(ME 5564): Applied Linear Control

- Prerequisites: AOE 5744 or AOE 5754 or ME 5554 or ME 5544 or ECE 5744 or ECE 5754
- Effective Fall 2013

AOE 5774 (ECE 5774)(ME 5574): Nonlinear Systems Theory

- Prerequisites: ECE 4405 or ECE 4624 or ECE 4634 or ME 4504 or AOE 4004 or Graduate Standing
- Effective Fall 2010

AOE 6024: Aeroelasticity

- Prerequisites: AOE 5034, AOE 5104, and AOE 5214
- Effective Summer I 2000

AOE 6114: Transonic Aerodynamics

- Prerequisites: AOE 3114, AOE 4404, and AOE 5144
- Effective Summer I 2007

AOE 6124: Hypersonic Aerodynamics

- Prerequisites: AOE 5114
- Effective Summer I 2007

AOE 6145: Computational Fluid Dynamics

- Prerequisites: AOE 3114, AOE 4404, and AOE 5104
- Effective Summer I 2007

AOE 6154: Turbulent Shear Flow

- Prerequisites: AOE 5144
- Effective Summer I 2007

AOE 6204: Advanced Vehicle Dynamics and Control

- Prerequisites: AOE 5024 and AOE 5204
- Effective Spring 2011

AOE 6434 (ME 6434): Computational Fluid Dynamics and Heat Transfer

- Prerequisites: (ME 5404, ME 5314 and AOE 3114) or (AOE 3114 and ME 4404) or (ME 4404 and ME 5104)
- Effective Summer I 2007

AOE 6444 (ME 6444)(CS 6444): Verification and Validation in Scientific Computing

- Prerequisites: None

AOE 6744 (ECE 6744)(ME 6544): Linear Control Theory

- Prerequisites: ECE 5744 or ECE 5754 or ME 5544 or ME 5554 or AOE 5744 or AOE 5754
- Effective Spring 2010

AOE 6774: (ECE 6774)(ME 6574): Adaptive Control Systems

- Prerequisites: (ECE 5774 and ECE 5744) or (ME 5544 and ME 5574) or (AOE 5774 and AOE 5744)
- Effective Spring 2010

## AOE 4000 Level Course Prerequisites

### AOE 4004: Computer-Aided Control System Design

- Prerequisites: AOE 3034
- Effective Spring 2009

### AOE 4124: Configuration Aerodynamics

- Prerequisites: AOE 3014 and AOE 3114
- Effective Summer I 2007

### AOE 4024 (ESM 4734): An Introduction to the Finite Element Method

- Prerequisites: AOE 2074 and MATH 2224 or MATH 2204 or MATH 2204H
- Effective Summer II 2014

### AOE 4134: Astromechanics

- Prerequisites: ESM 2304
- Effective Fall 2008

### AOE 4054 (CEE 4444)(ESM 4444): Stability of Structures

- Prerequisites: AOE 3024 or CEE 3404
- Effective Spring 2009

### AOE 4140: Spacecraft Dynamics and Control

- Prerequisites: AOE 3034 and AOE 4134
- Effective Spring 2009

### AOE 4064: Fluid Flows in Nature

- Prerequisites: AOE 3014 or CEE 3304 or ESM 3024 or ME 3404
- Effective Spring 2009

### AOE 4154: Aerospace Engineering Laboratory

- Prerequisites: AOE 3054, AOE 3114, AOE 3124, and (AOE 3134 or AOE 4140)
- Effective Fall 2008

### AOE 4065-4066: Aircraft Design

- Prerequisites: AOE 3054, AOE 3114, AOE 3124, and AOE 3134
- Effective Fall 20011

### AOE 4165-4166: Spacecraft Design

- Prerequisites: AOE 3054, AOE 3114, AOE 3124, and AOE 4140
- Effective Fall 2011

### AOE 4084 (ESM 4084): Engineering Design Optimization

- Prerequisites: MATH 2224 or MATH 2204 or MATH 2204H
- Effective Summer II 2014

### AOE 4174 (ME 4174): Spacecraft Propulsion

- Prerequisites: AOE 4234 or ME 4234
- Effective Spring 2009

### AOE 4114: Applied Computational Aerodynamics

- Prerequisites: AOE 3044 and AOE 3114
- Effective Summer I 2007

### AOE 4214: Ocean Wave Mechanics

- Prerequisites: AOE 3014 and MATH 4564
- Effective Summer I 2007

AOE 4234 (ME 4234): Aerospace Propulsion Systems

- Prerequisites: (AOE 3114 and ME 3134) or (ME 3404 and ME 3124)
- Effective Fall 2008

AOE 4414: Computer-Aided Space Mission Planning

- Prerequisites: AOE 2074 and (AOE 4134 or ECE 2164)
- Effective Fall 2013

AOE 4244 (ME 4244): Marine Engineering

- Prerequisites: AOE 3204 and (ME 3134 or ME 3124)
- Effective Spring 2009

AOE 4434: Introduction to Computational Fluid Dynamics

- Prerequisites: MATH 2214
- Effective Fall 2013

AOE 4254: Ocean Engineering Laboratory

- Prerequisites: AOE 3054 and AOE 3264
- Effective Fall 2008

AOE 4264: Principles of Naval Engineering

- Prerequisites: (AOE 2204 or AOE 3204) and (MATH 2224 or MATH 2204 or MATH 2204H)
- Effective Summer II 2014

AOE 4265-4266: Ship Design

- Prerequisites: AOE 3054, AOE 3224, AOE 3264, AOE 4214, and AOE 4244
- Co-requisites: AOE 4334 for AOE 4265
- Effective Fall 2011

AOE 4274: Computer Based Design of Ocean Structures

- Prerequisites: AOE 3224
- Effective Fall 2008

AOE 4334: Ship Dynamics

- Prerequisites: AOE 3014, AOE 3034, AOE 4214, and MATH 4564
- Effective Fall 2008

AOE 4344: Dynamics of High-Speed Marine Craft

- Prerequisites: AOE 3264 and AOE 4334
- Effective Spring 2009

AOE 4404 (MATH 4404): Applied Numerical Methods

- Prerequisites: (AOE 2074 or ESM 2074) and MATH 4564
- Effective Spring 2009