

AE Specialty: Aeromechanics (Aerodynamics, Aeroelasticity, Structures)

The following courses are suggested for AE majors who want their degree to reflect their interest in investigating the interactions between aerodynamics and flexible structures, spanning the fields of fixed- and rotary-winged aircraft as well as spacecraft.

Math:

- Math 4581– Math Methods in Engineering
- Math 4305 – Linear Algebra

AE Options:

- *AE4220 – Intro to Structural Dynamics and Aeroelasticity
- AE4040 – Computational Fluid Dynamics
- [AE/ME 4791](#): Mechanical Behavior of Composites
- AEXXXX – Finite Element Methods

Free Electives:

- AE 3090 – Numerical Methods
- CS 2340/2345 – Programming Language (C++, Fortran or Python)

1st Year Graduate Electives:

- AE6030 – Unsteady Aerodynamics
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Note: computer skills recommended are Fortran (Aerodynamics), C++ (Structures), both (Aeroelasticity)

**Very strongly recommended based on employer feedback*