



University of Illinois at Urbana-Champaign Aerodynamics and Flight Mechanics Certificate

Program Description



Aerodynamics and Flight Mechanics are among the most basic aspects of Aerospace Engineering. The Aerospace Engineering faculty includes world-class experts in both theoretical and practical aspects of aerodynamics and flight mechanics.

Admission Requirements

Students who are eligible to enroll in these certificate programs are current Aerospace Engineering graduate students OR non-degree students that have:

- BS degree in engineering or science from an accredited college in the United States or an approved institution of higher learning abroad. Basic background knowledge in the area of Aerospace Engineering is required for success in this certificate. Students with a non-engineering BS must have acquired this knowledge through coursework and/or through professional experience in order to qualify.
- GPA of 3.0/4.0 or higher for the last 60 semester hours in a BS program. Students who do not meet the 3.0/4.0 GPA criterion may still be eligible to enroll if they have significant experience outside of the classroom. Such students are encouraged to contact us at aerospace@uillinois.edu to determine if they are eligible to register for online classes and to participate in the certificate program.

Program Details

- Students wanting a certificate must fill out an application form declaring this intent before enrollment in the last course to be counted toward the certificate.
- Please email the completed application form along with your transcripts and current CV to Staci McDannel. Please include the courses you plan to take in your email.
- Students must earn a B or higher in each course. Courses cannot be applied to multiple certificates. However, courses taken while pursuing certificates can be applied toward the MS AE degree. Up to 12 hours of coursework taken by non-degree students and/or those pursuing certificates can be transferred into the MS AE degree. A separate application is needed for the MS AE program.

Degree Requirements

This certificate requires students to complete graduate-level courses for 12 credit hours in the area of Aerodynamics and Flight Mechanics. Courses that can be applied toward this certificate are the following:

- AE 410: Computational Aerodynamics (3 or 4)
- AE 416: Applied Aerodynamics (3 or 4)
- AE 419: Flight Mechanics (3 or 4)
- AE 451: Aeroelasticity (3 or 4)
- AE 515: Wing Theory (4)
- AE 550: Nonlinear Aeroelasticity (4)

Program Contacts

Program Coordinators:

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Program URL: <https://aerospace.illinois.edu/academics/graduate/certificates#aerodynamics>