AEROSPACE ENGINEERING, MS

for the degree of Master of Science in Aerospace Engineering (on campus & non-thesis online)

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overview of admissions & requirements: https://aerospace.illinois.edu/admissions/graduate (https://aerospace.illinois.edu/admissions/graduate/)
overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply (https://grad.illinois.edu/admissions/apply/)
department website: https://aerospace.illinois.edu/
program website: https://aerospace.illinois.edu/academics/graduate/ms-degree-program (https://aerospace.illinois.edu/academics/graduate/ms-degree-program/)
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college website: https://grainger.illinois.edu/
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The Department of Aerospace Engineering offers both MS with thesis (https://aerospace.illinois.edu/academics/graduate/ms-degree-program/ms-degree-thesis/) and MS non-thesis (https://ae.illinois.edu/academics/graduate/ms-degree-program/ms-degree-non-thesis-campus/) programs. Students in the MS with thesis program are required to have a research advisor and applicants are encouraged to contact department faculty (https://aerospace.illinois.edu/directory/faculty/) in their areas of interest to inquire about possible research and funding opportunities.

Interested students may specialize in computational science and engineering via the Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/) optional graduate concentration.

Admission Requirements

The Department of Aerospace Engineering accepts applications for admission to the MS with thesis and MS non-thesis graduate programs per the following deadlines:

Fall Admission
For MS with thesis admission and full consideration for funding opportunities: January 1
For MS non-thesis admission: July 1

Spring Admission
For MS with thesis admission and full consideration for funding opportunities: October 1
For MS non-thesis admission: December 1

Typically, the prerequisite for graduate study is the equivalent of the BS in Aerospace Engineering (https://aerospace.illinois.edu/academics/undergraduate/); however, graduates of curricula leading to degrees in other fields of engineering, the physical sciences, or mathematics may also be admitted to advanced study. A minimum grade point average of 3.00 (A = 4.00) for the last two years of undergraduate study is required. However, having a GPA higher than the minimum is no guarantee of admission. Scores on the Graduate Record Examination (GRE) (http://ets.org/) general test are required of all applicants. There are no minimum GRE score requirements.

Applicants to the Aerospace Engineering graduate program are asked to complete a supplemental form that will capture additional information about their specific interests. Applicants receive an email after submitting the online application which contains the link to the supplemental form. Applicants may select up to three areas from the following list:

- additive manufacturing
- aerospace structures
- combustion and propulsion
- experimental fluid mechanics
- information technology
- aeroacoustics
- aerospace systems design and simulation
- composite materials
- flow control
- laser and optical diagnostics
- aerodynamics
- applied aerodynamics
- computational fluid dynamics
- fracture mechanics and fatigue
- nanomechanics and micromechanics
- aeroelasticity
- astrodynamics
- computational mechanics
- GPS
- nanosatellites
- aerospace materials
- autonomous vehicles
- controls, dynamical systems and estimation
- hypersonics
- plasma physics

Information listed in this catalog is current as of 04/2022
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Members of the Aerospace Engineering Department have access to a wide range of excellent research facilities. These laboratories support a wide range of research areas in aerospace engineering and related engineering disciplines as described on the department's research area Web site (https://aerospace.illinois.edu/research/).

There are several nationally-renowned interdisciplinary centers in The Grainger College of Engineering where Aerospace Engineering faculty members engage in research along with many other campus faculty members. A list of these, along with links to full descriptions, appears on the department's interdisciplinary centers Web site (https://aerospace.illinois.edu/research/interdisciplinary-centers/). Among these are the Beckman Institute for Advanced Science and Technology, Center for Cryogenic High-Efficiency Electrical Technologies for Advanced Science and Technology, Center for Exascale-enabled Scramjet Design (CEESD), Center for Hypersonics and Entry Systems Studies (CHESS), Center for UAS Propulsion (CUP), Coordinated Science Lab (CSL), Micro and Nanotechnology Laboratory, Information Trust Institute (ITI), and the National Center for Supercomputing Applications (NCSA).

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### Other Graduate Programs in the Department of Aerospace Engineering

**degrees:**

- Aerospace Engineering, PhD (http://catalog.illinois.edu/graduate/engineering/aerospace-engineering-phd/)
  - **optional concentrations:**
    - Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
  - Aerospace Engineering, Direct PhD (https://aerospace.illinois.edu/academics/graduate/phd-program/phd-student-status-and-requirements/direct-phd/)
    - **optional concentrations:**
      - Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
  - Aerospace Systems Engineering (http://catalog.illinois.edu/graduate/engineering/engineering-meng/aerospace-systems/)
    - **available for:**
      - Engineering, MENG (http://catalog.illinois.edu/graduate/engineering/engineering-meng/)
The Department of Aerospace Engineering (AE) offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in Aerospace Engineering and a Master of Engineering in Engineering degree with a concentration in Aerospace Systems Engineering.

Opportunity also exists for specializing in energy and sustainability engineering via the

Energy and Sustainability Engineering (EaSE) Graduate Certificate Option (http://ease.illinois.edu/)