MASTER OF SCIENCE IN AEROSPACE ENGINEERING

Aerospace Engineering

The aerospace engineering discipline involves the design, production, operation, and support of aircraft and spacecraft. Aerospace engineers solve problems, design aircraft and spacecraft, conduct research, and improve processes for the aerospace industry.

Mission

KU aerospace engineering is an international leader in aerospace education and is committed to developing a global community of choice for students, educators, and researchers by strategically aligning teaching, research, and service missions. A world-class graduate and undergraduate education focused on designing, simulating, building, testing, and flying aerospace vehicles is provided. The department invests in research infrastructure and chooses outstanding students, faculty, and staff to conduct basic and applied research of relevance to aerospace vehicles and systems. The department supports the aerospace profession by educating the public, by maintaining the KU aerospace short-course program, and by advising policy-makers in government, industry, and disciplinary professional organizations.

Educational Objectives

Aerospace engineering prepares graduates for professional practice in the aerospace industry and graduate study in aerospace engineering. Achievement is measured through assessment of the performance of graduates three to six years after graduation. Graduates must demonstrate the following measurable learning outcomes:

1. Competence in the analysis, test, and design of aerospace systems and components using contemporary techniques, equipment, and software.
2. An understanding of the professional responsibilities associated with the special public safety and economic aspects of the aerospace industry.
3. The ability to communicate analysis test, and design results to engineers and nonengineers.
4. The ability to work effectively in interdisciplinary teams.
5. An understanding of the need for lifelong learning.

Graduate Admission to the Department of Aerospace Engineering

Application Requirements

In order for applications to be considered complete, the following materials must be submitted online with the application by the posted deadline:

1. Transcripts from all degree granting institutions (If admitted, official transcripts must be sent for all applicants - including KU undergraduate students). In order for transcripts to be considered official, they must be sent directly from the institution either by mail or e-mailed directly to the university. KU does not consider transcripts that come from applicants or that have been in the applicant’s possession as official. You may be admitted by the department with the transcript you uploaded to the application; however, University Graduate Admissions must receive your official transcript - sent directly from your institution – before you will be officially admitted to the University. Degree conferral transcripts must be received by the end of your first semester of graduate enrollment to be eligible to continue enrollment. The official transcript must show that your undergraduate degree has been conferred.
2. Three letters of recommendation. Recommenders will receive instructions on submission at the time the application is submitted.
3. Resume or CV
4. GRE score report
5. Statement of Objectives
6. TOEFL or IELTS score report (International students only)
7. Statement of Financial Resources (International students only)

* Please note: All application materials must be received before any kind of decision is made. Documentation sent in addition to that requested above is not required and may be destroyed. Do not send paper documents unless requested.

Admissions Deadline

Our department priority deadlines for admission are:

Fall Admission: December 1 (all applicants)
Spring & Summer Admission: September 15 (all applicants)

For full consideration for fellowships, scholarships and research/teaching assistantships, applications should be received by December 1 (for fall admissions). Application materials should indicate the interest in financial assistance or research/teaching assistantships.

Application Fees

Domestic: $65
International: $85

Document Specifications

Letters of Recommendation

The letter of recommendation form should be completed and sent with a signed document from your chosen references. Recommenders will receive instructions on submission at the time the application is submitted.

Statement of Purpose

Only complete the Statement of Purpose Form. The essay should be no longer than the space provided on the form.

Statement of Financial Resources

As a part of the application process, all international students must submit credible evidence of financial support for the first year of study (http://iss.ku.edu/cost-sheets). Financial documents must be less than 6 months old, indicating the type and amount of currency in US dollars. If the bank account is not in the applicant’s name, please attach a statement signed by the account holder indicating the relationship to the student for whom the support will be provided. There is no form for the Statement of Financial Resources, please send only the form(s) of documentation listed below.

Acceptable evidence includes:

- Bank statement from checking, savings, stock holdings and/or certificate of deposit
- Bank letter on letterhead indicating date account opened, average balance and current balance
• Scholarship or sponsorship letter verifying amount, source and dates of award

Contact Information
Aerospace Engineering Graduate Director:
Graduate Program Director
The University of Kansas
Aerospace Engineering
2120 Learned Hall
1530 W. 15th Street
Lawrence, Kansas, 66045

E-mail Graduate Program Director, Dr. Charlie Zheng, at aeroshawk@ku.edu

KU Office of Graduate Studies:
The University of Kansas
Graduate Applications Processing Center
1450 Jayhawk Blvd, Room 313
Lawrence, Kansas 66045-7535
785-864-8040

E-mail the main university Office of Graduate Studies at Graduate@ku.edu or contact the School of Engineering Research & Graduate Studies office at GradEngr@ku.edu with general questions about admission.

KU (http://www.graduate.ku.edu), Graduate Studies Website (http://www.graduate.ku.edu)

Admissions Standards
Minimum Requirements for Doctoral Applicants
Students applying for admission to the Ph.D. or D.E. programs must have as a minimum an M.S. or M.E. in Aerospace Engineering, unless they are admitted on a Fast Track basis with a bachelor degree in engineering. The department graduate advisor will evaluate the total academic preparation to determine if additional courses are required to prepare the student for graduate work in aerospace engineering. Any undergraduate courses which must be taken do not carry graduate credit. Internships are not guaranteed.

Except for BSAE, MSAE or MEAE graduates from KU, all applicants must supply a recent Graduate Record Examination (GRE) and three letters of recommendation from individuals familiar with their academic record and performance. Applicants must have as a minimum a GPA of 3.5/4.0 for all courses taken during their M.S. or M.E. program.

GPA Requirements
Applicants must have a minimum GPA of 3.0 for a regular admission status. In exceptional cases applicants with a GPA between 2.75-2.99 may be granted provisional admission. In such instances the student must maintain a GPA of at least 3.0 during the first semester of graduate study at KU. Grades of D and F are not accepted. A student failing to maintain these standards will be dismissed from the graduate program. On rare occasions and as supported by other strong evidence of achievement (e.g., significant industrial experience), a provisional admission status may be granted to students with a cumulative GPA below 2.75. After one semester of full-time graduate studies and maintaining a GPA of at least 3.0, a provisionally-admitted students must file a petition to change his/her status to regular status.

Applicants from outside KU must submit Graduate Record Examination (GRE) scores and three letters of recommendation from individuals familiar with their academic performance.

Transfer Credit for Graduate Courses
Up to six hours of approved graduate work may be transferred to KU from other universities. Students with a B.S. degree from KU may transfer up to eight hours of approved graduate work from other universities.

GRE Requirements
Applicants must have a minimum of 50% on the Verbal and Analytical sections of the GRE and 85% on the Quantitative section. Applicants with lower scores, but otherwise exceptional record, will be considered for provisional admission.

English Proficiency Requirement
Receipt of an official copy (not student’s copy) of an applicant’s English proficiency standardized test scores (e.g. TOEFL) achieved not more than two years prior to the semester of first enrollment.

All students who are not native speakers of English and/or international students and who are admitted to campus-based programs are required to check in at the Applied English Center (http://www.aec.ku.edu) (AEC) upon arrival on campus. At that time, the AEC will confirm the student’s level of English proficiency and determine if English courses are required.

Refer to link (http://policy.ku.edu/graduate-studies/english-proficiency-international-students) to for university policy.

Funding
Scholarships/Fellowships - The Aerospace Engineering department nominates applicants for University and School of Engineering scholarships and fellowships based on academic merit and other selection criteria.

Graduate Teaching Assistantships (GTAs) - Teaching Assistantships are available and are awarded competitively based on academic qualifications through the department or school.

Graduate Research Assistantships (GRAs) - Students work with their potential academic advisor/mentor to obtain a funded position on a research project.

A variety of scholarships, fellowships, and assistantships are available to graduate students through the School of Engineering and KU. Learn more at http://www.engr.ku.edu/prospective/graduate/scholarships.html

Visit Us
The graduate program staff is happy to work with all prospective students in determining the fit between the student and the program. In order to determine this, we feel that visiting our campus in Lawrence is a very important step. In order to facilitate your visit to KU, there are two main options:

The first, and most preferred, option entails simply applying for admission to the program. All prospective students are welcome to attend our Open House in early November and some highly qualified admitted students may be invited to participate in Visitation Days in late February or early March (prior to the fall semester of your intended matriculation). These organized visitation opportunities will allow you time to gather a great deal of first-hand information which we hope will help you in making a final decision about whether to attend KU.
The second option is making arrangements to visit us on your own, outside of organized events. With early notification, we will do our best to work with you to provide information and schedule appointments with faculty when possible. Please contact us if you feel that this is the best option for you.

**Contact Information**

Please contact the AE Graduate Assistant at aerohawk@ku.edu or (785) 864-2960, to schedule a visit or with questions about the application process.

The University of Kansas
Aerospace Engineering
2120 Learned Hall
1530 W. 15th Street
Lawrence, Kansas, 66045

**M.S. Degree Requirements**

The Master of Science (M.S.) program in Aerospace Engineering (AE) has 2 options. The **Thesis Option** requires a minimum of 30 credit hours of graduate work including 6 hours earned in the satisfactory completion of a thesis. The **Project Option** requires a minimum of 33 hours of graduate work with an emphasis on an independent investigation that must include 3 hours of Special Projects, but a thesis is not required.

If a student enters the M.S. program in AE without an equivalent B.S. in AE background the department graduate advisor may require the student to enroll in selected undergraduate courses in AE and achieve a grade of C or higher in each, to achieve B.S. in AE degree equivalency. Such "make-up" courses do not count towards the M.S. in AE degree. All coursework, including undergraduate "make-up" courses, will appear on the transcript and be included in the GPA, but only graduate courses will be counted towards program completion.

Students must take at least one semester of AE 690, Professional Development for Graduate Students.

The candidate must pass a final oral examination in which the thesis or research project (results of the independent investigation) is defended and the candidate demonstrates a working knowledge in aerospace engineering.

**Advisory Committee**

As part of the Plan of Study (https://gradplan.engr.ku.edu/accounts/login/?next=) a student is required to form an advisory committee with a minimum of three Graduate Faculty, a minimum of two must be AE faculty members. Additional committee members may be selected by the student from either AE or other School of Engineering faculty members. The chairman of the committee must be an AE faculty member.

**Plan of Study**

Before the end of the first semester of graduate study the student must complete an online Plan of Study (https://gradplan.engr.ku.edu/accounts/login/?next=) which includes the following information:

1. Names of the three members of the thesis/project committee. As a general rule these committee members will be drawn from the AE faculty but exceptions may be approved.

2. Proposed thesis/project title or, at least proposed area of thesis/project research.

3. Proposed sequence of courses through the semester of graduation.

4. Proposed semester of graduation.

The Plan of Study shall indicate for each course which requirement is being satisfied. Unique situations can be accommodated with the combined approval of the AE department graduate advisor and the students major advisor.