

Aerospace Engineering

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The Department of Aerospace Engineering offers graduate study leading to the degrees of Master of Science in Aerospace Engineering and Doctor of Philosophy with an Aerospace Engineering concentration. Distance-learning options for these degrees are also available (see <http://www.bcolearning.msstate.edu>). Major areas of study are:

- fluid mechanics,
- aerodynamics,
- computational fluid dynamics,
- structures and composites,
- structural dynamics,
- design optimization,
- structural reliability,
- fatigue and fracture,
- dynamics and controls,
- satellite engineering, and
- orbital mechanics.

The Raspet Flight Research Laboratory, operated by the Bagley College of Engineering, is a unique University facility for graduate aeronautical research and education and has been an integral part of the Aerospace Engineering Department activities for decades. The department is a major participant in the Center for Advanced Vehicular Systems (CAVS) where members of this faculty provide primary leadership in computational simulations. Other department facilities include a low speed wind tunnel, a blow-down supersonic wind tunnel, and a fatigue and fracture testing laboratory. Graduate research and teaching assistantships are available.

Admission Criteria

In addition to meeting the requirements discussed in the General Requirements for Admission section of this publication, the minimum requirement for regular admission to the graduate program is a B.S. degree in Aerospace Engineering or a closely related field, with a 3.00/4.00 GPA for the junior and senior years. An applicant with a B.S. degree from a program that is not accredited by EAC/ABET (Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology) must submit GRE general-test scores. Applicants required to take the TOEFL examination (see Admission section for more details) must have a minimum score of 550 PBT (213 CBT or 79 iBT) or an IELTS score of 6.5. Applicants for the Ph.D. program should have a M.S. degree in Aerospace Engineering or a closely related field. Exceptionally qualified applicants (GPA in excess of 3.50/4.00 for junior and senior years) can apply for direct admission to the Ph.D. program.

Contingent Admission

A student whose B.S. or M.S. degree is not in Aerospace or Mechanical Engineering may be granted contingent admission, depending on qualifications and experience. Typically, the contingency is removed by taking undergraduate prerequisite courses in the first few terms after admission. Specific conditions are handled on a case-by-case basis. For more information, please contact the Graduate Coordinator.

Provisional Admission

A student who has not fully met the requirements for regular admission may be granted admission as a degree-seeking graduate student with provisional status. Please refer to the General Requirements for Admission section for more details. The minimum acceptable undergraduate grade point average for admission as a provisional student is 2.75/4.00 for the junior and senior years.

Academic Performance and Continued Enrollment

Continued enrollment in the graduate program in Aerospace Engineering is contingent upon satisfactory performance in the courses and research and satisfactory performance toward completion of the degree. Satisfactory performance is achieved when all four of the following criteria are fulfilled:

1. The student maintains a B average or better on
 - a. all undergraduate prerequisite courses;
 - b. all graduate courses completed;
 - c. all graduate courses included on the program of study.
2. The student has no more than one grade less than C.
3. If the student registers for research credits in a given term, he/she receives a Satisfactory (S) grade at the end of the term.
4. The student has a major advisor and a supervisory graduate committee after the first two terms of enrollment.

Should the cumulative GPA (in any of the three categories of the first criterion) be less than a 3.00/4.00 at the end of a term, the student will be placed on probation. Should the student earn a second grade less than C, the student will be terminated immediately. Should the student receive an Unsatisfactory (U) grade on research credit hours attempted, he/she will be placed on probation.

The probationary period is defined to be one term (summer counts as one term if the student is enrolled). If at the end of the probationary period the student has not remedied his/her deficiency (i.e., has not achieved a 3.00 GPA, has not scheduled research credit hours and received a satisfactory grade), then his/her program of study will be terminated. A student may appeal termination of his/her program of study to the Aerospace Engineering graduate coordinator. If the appeal at the program level is unsuccessful, the student may then appeal to the college dean. If the appeal at the college level is unsuccessful, the student may then appeal to the Provost and Vice President for Academic Affairs.

Further Information

For information about the program or financial support, contact the Aerospace Engineering Graduate Coordinator (p. 1) .

Master of Science in Aerospace Engineering - Thesis

ASE 8XXX	Coursework	12
ASE XXXX	Additional graduate-level coursework	12
Thesis research/dissertation		6
Total Hours		30

A master's degree student must pass a final oral examination upon completion of all course requirements.

Master of Science in Aerospace Engineering - Non-Thesis

ASE 8XXX	Coursework	15
ASE XXXX	Additional graduate-level coursework	18
Total Hours		33

A master's degree student must pass a final oral examination upon completion of all course requirements.

Doctor of Philosophy with Aerospace Engineering Concentration

ASE 8XXX	Coursework	15
ASE XXXX	Additional graduate-level coursework	15
Dissertation research/dissertation		20
Total Hours		50

The number of course hours required of a Ph.D. student depends on each student's needs. In order to be admitted to candidacy for the Ph.D. degree, a student must pass a doctoral qualifying examination, have his/her dissertation topic approved, and sit for a candidacy examination. A final dissertation defense and an oral examination of the candidate are also required.