



BSAE/MSAEM Accelerated Masters Program (AMP)

The AEM department's Accelerated Masters Program allows highly-motivated BSAE students to complete the requirements for both a BS in aerospace engineering and an MS in aerospace engineering and mechanics in a five-year period. A student accepted into the program is allowed to take graduate courses and can earn up to 12 hours of dual-credit hours toward their BS and MS degrees.

Following successful completion of all requirements for their BSAE, students in AMP are awarded their undergraduate degree. Students then continue taking graduate courses until the requirements for the MS degree are met. Students in AMP are classified as undergraduates until they complete all of the requirements for the undergraduate degree. They cannot hold graduate assistantships until they are classified as graduate students; however, in some cases can use remaining UG scholarship funds for graduate coursework (consult with the Undergraduate Scholarship office).

Eligibility

Students normally apply to the AMP at the end of their junior year. To be considered for admission, BSAE students must:

- a) have at least a 3.7 GPA if admitted after August 2023;
- b) have completed 90 hours toward their BSAE degree including a couple AEM 300-level courses in the junior year of the flow chart; and
- c) complete an on-line application to the graduate school (two letters of recommendation and a statement of purpose are required by the department).

AE Electives Eligible for Dual Credit

Both 500- and 600-level graduate courses may be used to meet the AE elective requirements toward the BSAE. Most graduate-level courses are taught on a one-, two- or four-year rotation; consult the course rotation document found on the MSAEM web page: <http://aem.eng.ua.edu/graduate/ms-program/>.

MSAEM Requirements

MSAEM curriculum requirements are posted on the graduate page: <http://aem.eng.ua.edu/graduate/ms-program/>. There are two plans (thesis and non-thesis); both require 30 hours of coursework which includes:

- six hours core coursework (one Aerospace core course and one Mechanics core course)
- six hours mathematics coursework
- 12 hours of elective coursework
- six hours of thesis research (Plan I) or an additional six hours of elective coursework (Plan II) and the completion of a culminating experience project

By arrangement with a faculty member, students may pursue special topic (or project) courses as elective credits. These appear as AEM 594 in published course schedules but are not open for enrollment without prior arrangement with the instructor.



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Table 1 shows an example AEM AMP course schedule for the third through fifth years. During the last academic year (summer, fall and winter), typically 18 hours would need to be completed to finish the program. Completing in five years is not required. **Students should work with their prospective research advisor or the Graduate Program Coordinator during their senior year to appropriately plan their coursework.**

In addition to the BSAE/MSAEM AMP, **there are also joint BSAE/MSME AMP and BSME/MSAEM AMP programs.** These programs allow the student to change programs between their BS and MS degrees and still earn up to six or nine hours of dual credit, respectively. Students interested in these programs should contact the AEM Graduate Program Coordinator, Dr. James P. Hubner (pjhubner@eng.ua.edu).

Table 1. An example BSAE/MSAEM AMP curriculum

Year 3*	
Fall	Spring
AEM 313 Aerodynamics	AEM 368 Flight Mechanics
AEM 341/351 Aircraft Structures and Lab	AEM 413 Compressible Flow
AEM 360 Astronautics	ME 349 Applied Numerical Methods
ME 215 Thermodynamics	HU/L/FA Elective
HU/L/FA Elective	HI/SB Elective
16 hours	15 hours – Apply to AMP
Year 4	
AEM 402 Aerospace Design I	AEM 404 Aerospace Design II
AEM 468 Flight Dynamics and Control	AEM 451 Aircraft Structural Design
AEM 495 Senior Seminar	HI/SB Elective
<i>AEM 508 Propulsion</i>	<i>AEM 520 (for AE Comp Elective, if offered)**</i>
<i>AEM Graduate Elective (for AE-Eng Elective)</i>	<i>AEM Graduate Elective (for AE Elective)</i>
15 hours	15 hours – Complete BSAE
Year 5	
<i>AEM Graduate Core</i>	<i>AEM Graduate Core</i>
<i>AEM Graduate Elective or Thesis Research</i>	<i>AEM Graduate Elective or Thesis Research</i>
<i>Math Graduate Elective</i>	<i>Math Graduate Elective</i>
9 hours	9 hours – Complete MSAEM

*Assumes first two years of BSAE coursework completed as shown on the BSAE flowchart:

<http://aem.eng.ua.edu/undergraduate/aerospace-engineering/>

**The BSAE students must complete six hours of “C” designated courses. Consult with the BSAE advisor.