



### **BSAE/MSAEM Accelerated Master's Program (AMP)**

The AEM department's Accelerated Master's 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;
- b) have completed 90 hours toward their BSAE degree including a few 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: <https://aem.eng.ua.edu/graduate/ms-program/>.

### **MSAEM Requirements**

MSAEM curriculum requirements are posted on the graduate page: <https://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 Mechanics core course and one Math core course)
- 18 hours of elective coursework
- six hours
  - thesis research (Plan I) or
  - elective coursework (Plan II) and the completion of a culminating experience (CE) 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.

**Table 1.** An example BSAE/MSAEM AMP curriculum

<b>Year 3*</b>	
<b>Fall</b>	<b>Spring</b>
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
<b>16 hours</b>	<b>15 hours – Apply to AMP</b>
<b>Year 4</b>	
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 or Math Grad Core (for Eng Elective)</i>
<i>AEM or Math Grad Core (for AE Elective)</i>	<i>AEM Graduate Elective (for AE Elective)**</i>
<b>15 hours</b>	<b>15 hours – Complete BSAE</b>
<b>Year 5</b>	
<i>AEM Grad Elective</i>	<i>AEM Grad Elective</i>
<i>AEM Grad Elective</i>	<i>AEM Grad Elective</i>
<i>AEM Grad Elective or Thesis Research</i>	<i>AEM Grad Elective or Thesis Research or CE</i>
<b>9 hours</b>	<b>9 hours – Complete MSAEM</b>

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

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

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