



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 in the program can earn up to 12 hours of dual-credit towards 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. At that time, students become eligible for graduate fellowships and scholarships. **To be eligible for a Graduate Council Fellowship, a student must have completed no more than 6 graduate-level hours when first classified as a graduate student.**

Eligibility

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

- a) have at least a 3.3 GPA;
- b) have completed 90 hours toward their BSAE degree; and
- c) submit an application to the graduate school including at least two letters of recommendation and a statement of purpose.

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, including GES 554 PDE
- 12 hours of elective coursework
- six hours of thesis research (Plan I) or an additional six hours of elective coursework (Plan II)

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. Special topic (or project) courses can be



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added to the schedule up until the last day to add a course. Plan II degrees require a culminating experience.

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.**

Students interested in AEM AMP should contact the Graduate Program Coordinator, Dr. James P. Hubner (phubner@eng.ua.edu).

Table 1. An example AMP curriculum for AEM

| Year 3* | |
|-------------------------------------------------|-------------------------------------------------|
| Fall | Spring |
| AEM 313 Aerodynamics | AEM 360 Astronautics |
| AEM 341 Aircraft Structures | AEM 368 Flight Mechanics |
| AEM 349 Applied Numerical Methods | AEM 413 Compressible Flow |
| ME 215 Thermodynamics | HU/L/FA Elective |
| HU/L/FA Elective | HI/SB Elective |
| 15 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 451/351 Aircraft Structural Design & Lab |
| AEM 495 Senior Seminar | HI/SB Elective |
| <i>AEM 508 Propulsion</i> | <i>AEM Graduate Elective (for Eng Elective)</i> |
| <i>AEM 520 CFD</i> | <i>AEM Graduate Elective (for AE Elective)</i> |
| 15 hours | 16 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>GES 554 PDE</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/>