

Summary of Curriculum Changes in Aerospace Engineering (effective 3/31/06)

Please note: these changes affect ALL students in the aerospace engineering major, regardless of when you were admitted to Penn State. We will examine each student's Degree Audit and make course substitutions, if necessary, to ensure that you do not have to take more credits than required when you were admitted to the degree program.

1. Requirements of E MCH 11 & 13 (6 cr.) can be also satisfied with E MCH 210 (5 cr.).
2. Requirement of PHYS 213 (2 cr.) has been dropped.
3. Requirement of MATH 251 (4 cr.) has been replaced with MATH 250 (3 cr.)
4. AERSP 311 & 312 have each been reduced from 4 cr. to 3 cr.
5. Requirement of ME 30 (3 cr.) has been replaced with ME 23 (3 cr.); students at locations where ME 23 is not offered should take ME 30.
6. Requirement of AERSP 302 (3 cr.) has been dropped. (A modified version of this course will become AERSP 470 – an Aerospace Technical Elective). Please note that if you have completed AERSP 302, you can use it as an Aerospace Technical Elective)
7. AERSP 401A and 402A have each been increased from 2 cr. to 3 cr.
For Fall 2006 only, these courses must still be offered for just 2 cr.; we will offer required sections of AERSP 497E and 497F for 1 cr. to compensate for the missing credit – these will meet concurrently with your 401A or 402A classes.
8. A required Limited Elective (3 cr.) has been added (select from list on next page – students who completed PHYS 213 and MATH 251 prior to May 15, 2006 may use PHYS 213 plus 1 cr. from MATH 251 to count as the Limited Elective).
9. AERSP 301 and 311 are now C-required. (students who received a D in AERSP 301 prior to Fall 2006 may petition to replace that C requirement with a grade of C or better in E MCH 13, which was C-required until now; students who received a D in AERSP 311 prior to Fall 2006 may petition to replace that C requirement with a grade of C or better in at least 3 credits of MATH, PHYS, or engineering courses that are not C-required now).
10. AERSP 405W and 406W (total of 4 cr.) have been replaced with a single laboratory course: AERSP 305W (3 cr.).
For Fall 2006, this will be offered as AERSP 497A (3 cr.) and AERSP 497B (3 cr.) – same course, just different schedule of experiments. For coop and other students who have taken AERSP 405W or 406W: you will register for a section of AERSP 497A or B that is compatible with your schedule; we will then move you into a special section that includes only the lab component (either fluids or structures) that you have not completed.
11. Requirement of EE 305 (3 cr.) has been replaced with the choice of EE 305, or AERSP 440 (Aerospace Software Engineering – spring semesters), or EE 210 (4 cr.).

ROTC Students:

Upon completion of the ROTC program, ROTC students may use 3 cr. of ROTC for GHA (Health and Physical Activity) and 3 cr. of ROTC as follows: if they are using PHYS 213 and MATH 251 for the Limited Elective (as stated in #8 above), then these 3 cr. of ROTC may be used as the Technical Elective; otherwise, these 3 cr. of ROTC may be used as the Limited Elective. ROTC students may use AERSP 302 as an Aerospace Technical Elective.

Coop/Internship Students:

Coop/internship students may use 3 cr. of Coop/Internship courses for the Technical Elective, and 3 cr. of Coop/Internship as follows: if they are using PHYS 213 and MATH 251 for the Limited Elective (as stated in #8 above), then these 3 cr. of Coop/Internship may be used as an Aerospace Technical Elective; otherwise, these 3 cr. of Coop/Internship may be used as the Limited Elective. Coop/Internship students may use AERSP 302 as an Aerospace Technical Elective.

All Aerospace Majors:

If you completed PHYS 213 and MATH 251 prior to May 15, 2006, students may use 2 cr. of PHYS 213 and 1 cr. of MATH 251 together as the Limited Elective.

Aerospace Technical Electives (9 credits)

Students must select 9 credits as follows:

Aerospace Technical Electives -- 6 credits -- must be 400-level AERSP courses.

AERSP 302 also counts.

AERSP 204H/404H may be used for a maximum of 3 cr. of Aerospace Technical Electives.

AERSP 494 and 496 involve research or projects agreed upon by both the student and faculty *before* registering for these credits. A Department Registration Form must be completed at the beginning of each semester in which AERSP 494 or 496 credits are scheduled.

Technical Elective -- 3 credits -- must be 400-level courses chosen from the following programs: ACS, A E, AERSP, A B E, ASTRO, BIOE, CH E, C E, CMPSC, CSE, E E, E MCH, E SC, F SC, I E, MATH, M E, METAL, METEO, NUC E, PHYS.

Also permitted in this category: ASTRO 291, 292, PHYS 237, Coop/Internship courses, EG 497B (2 cr.) ProEngineer Tutorial, EG 497G (2 cr.) AutoCAD tutorial.

Limited Elective (3 credits)

Students must select 3 credits from any of the following categories:

- Courses in the Aerospace Technical Elective list
- Courses needed to fulfill requirements for a minor
- Foreign-language courses (at any level)
- Courses in the Engineering Entrepreneurship Program
- Courses in the Engineering Leadership Development Program
- 3 credits of ROTC upon completion of the ROTC program
- 3 credits of Coop/Internship
- 2 cr. of Phys 213 and 1 cr. from MATH 251 (only if these courses were completed prior to May 15, 2006)