

**Rules for double counting Engineering courses for SEAS students who are also majoring in Math.**

The number of courses which are part of the “core” of the engineering specialty is restricted. Unrestricted electives are not considered as part of the core and can be double counted. Many specialties require APMA 3110 which is not deemed sufficient to substitute for Math 3100/APMA3100. The core courses which can be double counted are as follows:

**Biomedical Engineering:** two courses: APMA 2130 - ODE and APMA 3100.

**Civil Engineering:** two courses: APMA 2130 - ODE and APMA 3080 -Linear algebra.

**Chemical Engineering:** one course: APMA 2130 - ODE.

**Electrical Engineering:** two courses: APMA 2130 - ODE and APMA 3100 - Probability. The fourth semester Mathematics elective is considered unrestricted so can be double counted if an approved course.

**Aerospace Engineering:** two courses: APMA 2130 - ODE and APMA 3140 - Applied PDEs.

**Mechanical Engineering:** one course: APMA 2130 - ODE. The fi semester Math elective is considered unrestricted so can be double counted if an approved course.

**Material Science and Engineering:** one course: APMA 2130 - ODE. The fourth semester Advanced Math elective is considered unrestricted so can be double counted if an approved course.

**Computer Engineering:** two courses: APMA 2130 - ODE and APMA 3100 - Probability.

**Engineering Science:** one course: APMA 2130 - ODE. The fourth semester Advanced Math elective is considered unrestricted so can be double counted if an approved course.

**Computer Science:** three courses: CS 4102 - Algorithms and two chosen from APMA 2130, 3080, 3100, 3120 satisfying the APMA elective credits in the fi and sixth semesters. CS 3102 is an approved Math elective but should not be double counted since the number of core courses counted would then exceed three.

**Systems Engineering:** three courses: APMA 2130 - ODE, APMA 3080 - Linear algebra, and APMA 3100 - Probability. APMA 3120, SYS 3021, and SYS 3060 are approved Math electives but should not be double counted since the number of core courses counted would then exceed three.