INTEGRATED DESIGN ENGINEERING *Aerospace Emphasis- Fall 2025*

1	**APPM 1350 (4)** Calculus 1 For Engineers	**GEEN 1400 (3)** Engineering Projects	**ASEN 1030 (3)** Introduction to Computing in Aerospace Engineering (CR: APPM 1350)	**PHYS 1110 (4)** General Physics 1 (CR: APPM 1350)	**COEN 1500 (1)** First-Year Seminar	**Example** **COURSE NUMBER (Cr.)** Course Name (PR: Pre-Requisites) (CR: Co-Requisites) (Fall or Spring Only Course)
2	**APPM 1360 (4)** Calculus 2 For Engineers (PR: APPM 1350)		**MCEN 1024 (3)** Chemistry for Energy and Materials Science	**PHYS 1120 (4)** General Physics 2 (PR: PHYS 1110) (CR: APPM 1360)	**PHYS 1140 (1)** Experimental Physics (CR: PHYS 1120)	**Humanities & Social Science (2)**
3	**APPM 2360 (4)** Linear Algebra & Differential Equations (PR: APPM 1360)		**GEEN 2851 (3)** Statics for Engineers (PR: PHYS 1110, APPM 1360) Fall Only	**GEEN 3852 (3)** Thermodynamics for Engineers (PR: PHYS 1110) Fall Only	**ASEN 2501 (3)** Intro to Astronautics (PR : PHYS 1110, APPM 1360, ASEN 1320)	**Humanities & Social Science (3)**
4	**APPM 2350 (4)** Calculus 3 For Engineers (PR: APPM 1360)	**GEEN 2400 (3)** Engineering Projects for the Community (PR: GEEN 1400)		**ASEN 2502 (3)** Intro to Aeronautics (PR : PHYS 1110, APPM 1360, ASEN 1320)	**ASEN 2403 (3)** Intro to Dynamics (PR: GEEN 2851, ASEN 1320) (CR: APPM 2350)	**Humanities & Social Science (3)**
5	**Concentration Course (3)**	**GEEN 3400 (3)** Invention & Innovation (PR: 57 credits)	**Emphasis Elective #1- (1 of 2) (3)** See Page 2 for Options and Requisites	**ASEN 3404 (3)** Aerodynamics & Controls (PR: ASEN 2403, APPM 2350, APPM 2360)		**Writing Requirement(3)**
6	**Concentration Course (3)**	**Free Elective (3)**	**Emphasis Elective #1- (2 of 2) (3)** See Page 2 for Options and Requisites	**Emphasis Elective #2 (3)** See Page 2 for Options and Requisites	**Free Elective (3)**	**Humanities & Social Science (3)** Upper Division
7	**Concentration Course (3)**	**Free Elective (3)**	**ASEN 4018 (4)** Senior Projects 1 Design Synthesis See page 2 for requisites Fall Only	**Emphasis Elective #3 (3)** See Page 2 for Options and Requisites		**Free Elective (4)**
8	**Concentration Course (3)**	**Free Elective (4)**	**ASEN 4028 (4)** Senior Projects 2 Design Practicum (PR: ASEN 4018) Spring Only	**Math or Science Electives (3)** See page 2 for other options		**Humanities & Social Science (3)** Upper Division

Effective: Fall 2025

Integrated Design Engineering Curriculum
Aerospace Engineering Emphasis

Standard Course Substitutions

- **APPM 1350**: APPM 1345, MATH 1300
- **APPM 1360:** MATH 2300
- **APPM 2350:** MATH 2400
- **APPM 2360:** MATH 2130 and MATH 3430, MATH 2135 and MATH 3430
- **ASEN 1320**: CSCI 1300, CSCI 1320, CHEN 1310, ECEN 1310, MCEN 1030
- **ASEN 2403**: MCEN 2043, CVEN 3111
- **GEEN 1400:** ASEN 1400, ASEN 1403
- **GEEN 2851:** ASEN 2401, MCEN 2023, CVEN 2121
- **GEEN 3852:** ASEN 2402, MCEN 3012, AREN 2110, EVEN 3012
- **MCEN 1024:** CHEN 1201, CHEN 1211, CHEM 1113, CHEM 1400

Math or Science Electives

Must reach 30 total math/science credits
Visit the IDE Advising webpage for options.

Humanities & Social Science Electives/Writing Requirements

Visit the college's Humanities, Social Sciences, and Writing Requirements webpage for options.

Concentration

IDE majors are required to officially declare a Concentration by the end of their second year at the latest. Students who transfer into the IDE major after their second year must declare a Concentration by the end of their first semester in IDE. Students who have not declared a Concentration before those deadlines will receive a hold on their registration until they declare. Students can initiate the declaration process by emailing or meeting with an IDE Academic Advisor.

Emphasis Elective #1 Options (choose 2)

- **ASEN 3401:** Aerospace Structures
  - PR: GEEN 2851
  - RPR: APPM 2350, APPM 2360
- **ASEN 3402:** Aerospace Heat Transfer
  - PR: GEEN 3852, APPM 2360
  - CR: APPM 2350
- **ASEN 3403:** Aerodynamics
  - PR: GEEN 3852, APPM 2350, APPM 2360
- **ASEN 3503:** Aerospace Electronics
  - PR: ASEN 2403, APPM 2360, PHYS 1120

Emphasis Elective #2 Options (choose 1)

- **ASEN 3501:** Aerospace Experimental Methods
  - PR: GEEN 3852, ASEN 2403, APPM 2350, APPM 2360
  - RPR: ASEN 2501, ASEN 2502
- **ASEN 3502:** Aerospace Computational Methods
  - PR: GEEN 3852, ASEN 2403, APPM 2350, APPM 2360
  - RPR: ASEN 2501, ASEN 2502

Emphasis Elective #3 Options (choose 1)

- **ASEN 3405:** Astrodynamics (Astro Focus)
  - PR: ASEN 2501
  - CR: ASEN 3404
- **ASEN 3406:** Aircraft Dynamics (Aero Focus)
  - PR: ASEN 2502, ASEN 3403

ASEN 4018 Pre/Co-Requisite Information

- Pre-Requisites:
  - ASEN 3501 or ASEN 3502
  - Two of the following Emphasis Electives:
    - ASEN 3401, ASEN 3402, ASEN 3403, ASEN 3503
  - GEEN 2400, GEEN 3400

Grade Requirements

The minimum passing grade for a course that is a prerequisite or corequisite for another required course is a C-. If a grade of D+ or lower is received in a course which is a prerequisite to another, the student may not register for the subsequent course until the first grade has been raised to a C- or higher. If a grade of D+ or lower is received in a course which is a corequisite to another, the course must be repeated until a grade of C- or higher is achieved.

The minimum passing grade for all required engineering core, disciplinary emphasis, and concentration courses is a C-. The minimum passing grade for a course that is not specifically a prerequisite or corequisite for another required course is D-, if not otherwise noted above.

In addition, students need to have a cumulative and major GPA of at least 2.000 in order to graduate from the College of Engineering. **Pass/Fail** is only permitted for up to 6 Free Elective credits.

Updated: February 2025

Helpful Links

- IDE Emphasis Areas
- IDE Concentrations
- IDE Core Courses
- IDE Projects
- FE Exam

- H&SS Requirements
- CEAS Forms (including Petition, Incomplete Grade, and Independent Study)
- Study Abroad