

INTEGRATED DESIGN ENGINEERING *Environmental Emphasis – FALL 2024*

1	APPM 1350 (4) Calculus 1 For Engineers		GEEN 1400 (3) Engineering Projects	PHYS 1110 (4) General Physics 1 (CR: APPM 1350)	Humanities & Social Science (3)	Example COURSE NUMBER (Cr.) Course Name (PR: Pre-Requisites) (CR: Co-Requisites) (RPR: Recommended Pre-Requisites) (Fall or Spring Only Course)
2	APPM 1360 (4) Calculus 2 For Engineers (PR: APPM 1350)		CHEN 1310 (3) Intro to Engineering Computing	PHYS 1120 (4) General Physics 2 (PR: PHYS 1110) (CR: APPM 1360)	PHYS 1140 (1) Experimental Physics (CR: PHYS 1120)	Writing Requirement(3)
3	APPM 2350 (4) Calculus 3 For Engineers (PR: APPM 1360)	GEEN 2400 (3) Engineering Projects for the Community (PR: GEEN 1400)	GEEN 2851 (3) Statics & Structures (PR: APPM 1360, PHYS 1110) Fall Only	GEEN 3852 (3) Thermodynamics (PR: PHYS 1110) Fall Only	CHEN 1201 (4) General Chemistry for Engineers 1 (PR: 1 yr. HS Chemistry or CHEM 1021, HS Algebra)	
4	APPM 2360 (4) Linear Algebra & Differential Equations (PR: APPM 1360)	Free Elective (3)	GEEN 3024 (3) Materials Science for Engineers (PR: PHYS 1110) Spring Only	CVEN 3313 (3) Theoretical Fluid Mechanics (PR: GEEN 2851) (Spring Only)	CHEN 1203 (2) General Chemistry for Engineers 2 (PR: CHEN 1201)	CHEM 1221 (1) Engineering Chemistry Lab (CR: CHEN 1203)
5	Free Elective (3)	GEEN 3010 (3) Circuits for Engineers (PR: PHYS 1140) (CR: APPM 2360)	GEEN 3400 (3) Invention & Innovation	CVEN 3323 (3) Hydraulic Engineering (PR: CVEN 3313) Fall Only	CVEN 3414 (3) Fundamentals of Environmental Engineering (PR: CHEN 1201, APPM 1360)	Humanities & Social Science (3)
6	Concentration Course (3)	Free Elective (3)	GEEN 3853(4) Data Analysis for Engineers (PR: APPM 2360, CSO 1300, PHYS 1140) (CR: GEEN 3010, Writing) Spring Only	EVEN Elective 1 (3) See page 2 for options		Humanities & Social Science (3)
7	Concentration Course (3)	Concentration Course (3)	Free Elective (1)	EVEN Elective 2 (3) See page 2 for options	EVEN 4464 (3) Environmental Engineering Processes (PR: CVEN 3313, CVEN 3414) Fall Only	Humanities & Social Science (3) Upper Division
8	Concentration Course (3)	Free Elective (3)	Free Elective (3)	EVEN 4434 (4) Senior Design Project (PR: CVEN 3424 or EVEN 4464) (RPR: EVEN 4464) Spring Only		Humanities & Social Science (3) Upper Division

Integrated Design Engineering Curriculum

Environmental Engineering Emphasis

Approved Course Substitutions

- **APPM 1350:** MATH 1300
- **APPM 1360:** MATH 2300
- **APPM 2350:** MATH 2400
- **APPM 2360:** MATH 2130 and MATH 3430, MATH 2135 and MATH 3430
- **CHEN 1201:** CHEN 1211, MCEN 1024, CHEM 1113
- **CHEN 1203:** CHEM 1133
- **CHEN 1310:** ASEN 1320, CSCI 1320, CSCI 1300, ECEN 1310
- **CVEN 3313:** CHEN 3200, MCEN 3021
- **EVEN 4434:** CVEN 4434
- **EVEN 4464:** CVEN 4464
- **GEEN 1400:** ASEN 1400, ASEN 1403, ECEN 1400
- **GEEN 1017:** AREN 1027, CVEN 1027, MCEN 1025 or EMEN 4100
- **GEEN 2851:** CVEN 2121, MCEN 2023, ASEN 2001/2701/2401
- **GEEN 3010:** ECEN 3010, MCEN 3017
- **GEEN 3024:** MCEN 2024
- **GEEN 3852:** ASEN 2110, MCEN 3012, ASEN 2002/2702/2402
- **GEEN 3853:** CVEN 3227, MCEN 3047

EVEN Electives

- **CVEN 3424:** Water & Wastewater Treatment (Spring Only)
- **CVEN 3434:** Introduction to Applied Ecology (Spring Only)
- **CVEN 4333:** Engineering Hydrology
- **CVEN 4474:** Hazardous & Industrial Waste Management
- **EVEN 4404 or CVEN 4404:** Water Chemistry (Fall Only)
- **EVEN 4484:** Introduction to Environmental Microbiology (Spring Only)
- **MCEN 4131:** Air Pollution Control Engineering (Fall Only)

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.

Math or Science Electives

- Must reach at least 30 total math & science credits.
- [This is a list](#) of CU Boulder courses that have been approved to satisfy this requirement.
- Visit the [IDE Advising](#) webpage for more information.

Humanities & Social Science Electives/Writing Requirements

Visit the college's [Humanities, Social Sciences, and Writing Requirements](#) webpage for options.

FE Exam

Completion of the [FE Exam](#) is required of all IDE students to graduate.

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.

EVEN 4434 Pre-Requisites

- EVEN 4464 or CVEN 3424
- GEEN 2400
- GEEN 3400

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](#)