INTEGRATED DESIGN ENGINEERING *Mechanical Emphasis- Fall 2026*

	Example					
	COURSE NUMBER (Cr.) Course Name (PR: Pre-Requisites) (CR: Co-Requisites) (Fall or Spring Only Course)					
1		**GEEN 1400 (3)** Engineering Projects	**APPM 1350 (4)** Calculus 1 For Engineers	**PHYS 1110 (4)** General Physics 1 (CR: APPM 1350)	**COEN 1500 (1)** First-Year Seminar	**Humanities & Social Science (2)**
2		**GEEN 1017 (3)** Engineering Drawing	**APPM 1360 (4)** Calculus 2 For Engineers (PR: APPM 1350)	**PHYS 1120 (4)** General Physics 2 (PR: PHYS 1110) (CR: APPM 1360)	**PHYS 1140 (1)** Experimental Physics (CR: PHYS 1120)	**Writing Requirement(3)**
3	**GEEN 2851 (3)** Statics & Structures (PR: APPM 1360, PHYS 1110)	**GEEN 2400 (3)** Engineering Projects for the Community (PR: GEEN 1400)	**APPM 2350 (4)** Calculus 3 For Engineers (PR: APPM 1360)		**MCEN 1030 (3)** Introduction to Engineering Computing (CR: APPM 1235 or 1350)	**Humanities & Social Science (3)**
4		**GEEN 3024 (3)** Materials Science for Engineers (PR: PHYS 1110)	**APPM 2360 (4)** Linear Algebra & Differential Equations (PR: APPM 1360)	**MCEN 2043 (3)** Dynamics (PR: GEEN 2851, APPM 1360)	**MCEN 1024 (3)** Chemistry of Energy & Materials	**Humanities & Social Science (3)**
5	**Concentration Course (3)**	**GEEN 3400 (3)** Invention & Innovation (PR: 57 credits)	**GEEN 3852 (3)** Thermodynamics (PR: PHYS 1110)	**MCEN 2063 (3)** Mechanics of Solids (PR: GEEN 2851, APPM 1360)	**MCEN 3021 (3)** Fluid Mechanics (PR: GEEN 2851, APPM 2350)	**Math or Science Electives (2)** See Page 2 for options
6	**Concentration Course (3)**	**GEEN 3853(4)** Data Analysis for Engineers (PR: APPM 2360, Computing, PHYS 1140) (CR: GEEN 3010, Writing) **Spring Only**	**GEEN 3010 (3)** Circuits for Engineers (PR: PHYS 1140) (CR: APPM 2360) **Spring Only**	**MCEN 3025 (4)** Component Design (PR: GEEN 1017, GEEN 3024, MCEN 2063)		**Humanities & Social Science (3)** Upper Division
7	**Concentration Course (3)**	**MCEN 4043(4)** System Dynamics (PR: GEEN 3010, MCEN 2043)	**MCEN 4045(4)** ME Design Project 1 See page 2 for requisites Fall Only	**Free Elective (3)**	**Free Elective (1)**	**Humanities & Social Science (3)** Upper Division
8	**Concentration Course (3)**		**MCEN 4085(3)** ME Design Project 2 (PR: MCEN 4045) Spring Only	**Free Elective (3)**	**Free Elective (3)**	**Free Elective (3)**

Effective: Fall 2026

Integrated Design Engineering Curriculum
Mechanical 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
- **MCEN 1030**: CSCI 1300, CHEN 1310, ECEN 1310
- **GEEN 1017:** MCEN 1025, MCEN 1026, BMEN 1025
- **GEEN 1400:** ASEN 1400, ASEN 1403, ECEN 1400
- **GEEN 2851:** CVEN 2121, MCEN 2023, ASEN 2401
- **GEEN 3010:** MCEN 3017, ECEN 3010, ASEN 3503, AREN 3040
- **GEEN 3024:** MCEN 2024
- **GEEN 3852:** AREN 2110, EVEN 3012, MCEN 3012, ASEN 2402
- **GEEN 3853:** MCEN 3047
- **MCEN 1024**: CHEN 1201, CHEN 1211, CHEM 1113
- **MCEN 2043:** CVEN 3111, ASEN 2403, PHYS 3210
- **MCEN 2063**: CVEN 3161, ASEN 3401
- **MCEN 3021:** CVEN 3313, CHEN 3200
- **MCEN 4043:** ECEN 3300 and ECEN 4138

Math or Science Electives

- Must reach 30 total math/science credits
- Visit the IDE Foundational Courses 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 declare their concentration using the college's **CEAS Add, Change, or Revise Engineering Major** form.

FE Exam

Completion of the FE Exam is required of all IDE students to graduate.

MCEN 4045 Requisite Information

- Pre-Requisites:
  - GEEN 2400, GEEN 3400, GEEN 3010, GEEN 3852
  - MCEN 3021, MCEN 3025
- Pre or Co-Requisite:
  - GEEN 3853 or MCEN 4043 (one needs to be taken as a pre-req; the other can be a co-req)
- Co-Requisite:
  - GEEN 3853 or MCEN 4043 (one needs to be taken as a pre-req; the other can be a co-req)
  - Writing

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: May 2026

Helpful Links

- Math or Science Electives
- IDE Emphasis Areas
- IDE Concentrations
- IDE Core Courses
- IDE Projects
- FE Exam

- H&SS Requirements
- CEAS Forms (including Petition, Incomplete Grade, and Independent Study)
- Declare/Change Your Concentration
- Study Abroad