

INTEGRATED DESIGN ENGINEERING *Mechanical Emphasis- Fall 2022*

1	GEEN 1400 (3) Engineering Projects		APPM 1350 (4) Calculus 1 For Engineers	MCEN 1024 (3) Chemistry of Energy & Materials	CSCI 1300 (4) Starting Computing	Example COURSE NUMBER (Cr.) Course Name (PR: Pre-Requisites) (CR: Co-Requisites) Fall or Spring Only Course
2	GEEN 1017 (3) Engineering Drawing Spring Only		APPM 1360 (4) Calculus 2 For Engineers (PR: APPM 1350)	PHYS 1110 (4) General Physics 1 (CR: APPM 1350)	Writing Requirement(3)	Humanities & Social Science (3)
3	GEEN 2851 (3) Statics & Structures (PR: APPM 1360, PHYS 1110) Fall Only	GEEN 3852 (3) Thermodynamics (PR: PHYS 1110) Fall Only	APPM 2350 (4) Calculus 3 For Engineers (PR: APPM 1360)	PHYS 1120 (4) General Physics 2 (PR: PHYS 1110,)	PHYS 1140 (1) Experimental Physics (PR/CR: PHYS 1120)	Humanities & Social Science (3)
4	GEEN 2400 (3) Engineering Projects for the Community (PR: GEEN 1400)	GEEN 3024 (3) Materials Science for Engineers (PR: PHYS 1110) Spring Only	APPM 2360 (4) Intro to Differential Equations with Linear Algebra (PR: APPM 1360)	MCEN 2043 (3) Dynamics (PR: MCEN 2023, APPM 1360)		Humanities & Social Science (3)
5	Concentration Course (3)	GEEN 3010 (3) Circuits for Engineers (PR: PHYS 1140, PR/CR: APPM 2360) Fall Only	GEEN 3400 (3) Invention & Innovation (PR: GEEN 2400)	MCEN 2063 (3) Mechanics of Solids (PR: MCEN 2023, APPM 1360)	Free Elective (3)	Free Elective (2)
6	Concentration Course (3)	GEEN 3853(4) Data Analysis for Engineers (PR: APPM 2360, CSCI 1300, PHYS 1140) (CR: GEEN 3010, GEEN 3024, Writing) Spring Only	MCEN 3025 (3) Component Design (PR: GEEN 1017, GEEN 3024, MCEN 2063)	MCEN 3021 (3) Fluid Mechanics (PR: MCEN 2023, APPM 2350)		Humanities & Social Science (3) Upper Division
7	Concentration Course (3)		MCEN 4045(3) ME Design Project 1 (PR:) (CR: Writing) Fall Only	MCEN 4043(3) System Dynamics (PR: APPM 2360, GEEN 3010, MCEN 2043) (CR: Writing)	Free Elective or Concentration Course (3)	Free Elective (3)
8	Concentration Course (3)		MCEN 4085(3) ME Design Project 2 (PR: MCEN 4085) Spring Only	Free Elective (3)	Free Elective or Concentration Course (3)	Humanities & Social Science (3) Upper Division

Integrated Design Engineering Curriculum

Mechanical Engineering Emphasis

Standard Course Substitutions

- **APPM 1350:** MATH 1300
- **APPM 1360:** MATH 2300
- **APPM 2350:** MATH 2400
- **APPM 2360:** MATH 2130 and MATH 3430
- **CSCI 1300:** CSCI 1320 or ASEN 1320 approved for transfer students
- **GEEN 1017:** AREN 1027, CVEN 1027, MCEN 1025
- **GEEN 2851:** CVEN 2121, MCEN 2023
- **GEEN 3010:** ECEN 3010
- **GEEN 3024:** ASEN 1022, MCEN 2024
- **GEEN 3852:** ASEN 2110, EVEN 3012, CHEN 3320, MCEN 3012
- **GEEN 3853:** MCEN 3047
- **MCEN 1024:** CHEN 1201, CHEN 1211 (CHEM 1113 approved for transfer students)
- **MCEN 2043:** CVEN 3111
- **MCEN 2063:** CVEN 3161
- **MCEN 3021:** CVEN 3313, CHEN 3200
- **MCEN 4043:** ECEN 3300 and ECEN 4138

Humanities & Social Science Electives/Writing Requirements

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

Grade Requirements

The minimum passing grade for a prerequisite or co-requisite course within the Mechanical Engineering Emphasis is a C. This requirement includes courses completed in another program or department (APPM, PHYS, etc.). The minimum passing grade for standalone classes is a **D-**. 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 16 Free Elective credits.

Updated: Fall 2022