

INTEGRATED DESIGN ENGINEERING *Electrical Emphasis— FALL 2022*

1	APPM 1350 (4) Calculus 1 For Engineers		GEEN 1400 (3) Engineering Projects	PHYS 1110 (4) General Physics 1 (CR: APPM 1350)	Writing Requirement(3)	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)		CSCI 1300 (4) Starting Computing	PHYS 1120 (4) General Physics 2 (PR: PHYS 1110)	PHYS 1140 (1) Experimental Physics (CR: PHYS 1120)	Humanities & Social Science (3)
3	APPM 2360 (4) Linear Algebra & Differential Equations (PR: APPM 1360)	GEEN 2400 (3) Engineering Projects for the Community (PR: GEEN 1400)	GEEN 2851 (3) Statics & Structures (PR: APPM 1360, PHYS 1110)	Science Elective (4) See Page 2 for Options	Science Lab Elective (1) See Page 2 for Options	Humanities & Social Science (3)
4	APPM 2350 (4) Calculus 3 For Engineers (PR: APPM 1360)		GEEN 3024 (3) Materials Science for Engineers (PR: PHYS 1140)	ECEN 2250 (3) Intro to Circuits & Electronics (PR: APPM 1360, PHYS 1120) (CR: APPM 2360)	ECEN 2350 (3) Digital Logic (CR: CSCI1300)	Humanities & Social Science (3)
5	Concentration Course (3)	GEEN 3400 (3) Invention & Innovation (PR: GEEN 2400)	GEEN 3852 (3) Thermodynamics (PR: PHYS 1110)	ECEN 2260 (3) Circuits as Systems (PR: ECEN 2250, APPM 2360)	ECEN 2270 (3) Electronics Design Lab (CR: ECEN 2260)	ECEN Elective 1 (3) See Page 2 for Options
6	Concentration Course (3)	Free Elective (3)	GEEN 3853(4) Data Analysis for Engineers (PR: APPM 2360, CSCI 1300, PHYS 1140) (CR: GEEN 3010, GEEN 3024, Writing)	ECEN Elective 2 (3) See Page 2 for Options	ECEN Elective 3 (3) See Page 2 for Options	
7	Concentration Course (3)		Free Elective or Concentration Course (3)	Free Elective (3)	ECEN 4610 (3) Capstone Lab Part 1 (PR:ECEN 2270, 2370, 3350,) Fall Only	Humanities & Social Science (3) Upper Division
8	Concentration Course (3)		Free Elective or Concentration Course (3)	Free Elective (3)	ECEN 4620 (3) Capstone Lab Part 2 (PR: ECEN 4610) Spring Only	Humanities & Social Science (3) Upper Division

Integrated Design Engineering Curriculum

Electrical 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 2851:** CVEN 2121, MCEN 2023
- **GEEN 3024:** ASEN 1022, MCEN 2024
- **GEEN 3852:** ASEN 2110, EVEN 3012, CHEN 3320, MCEN 3012
- **GEEN 3853:** MCEN 3047

Science Elective with Lab Options

- CHEN 1201 and CHEM 1114
- CHEN 1201 and CHEN 1203 and CHEM 1221
- CHEN 1211 and CHEM 1221
- CHEM 1113 and CHEM 1114 (approved for transfer students)
- EBIO 1210 and EBIO 1230
- EBIO 1220 and EBIO 1240
- MCDB 1150 and MCDB 1161 or MCDB 1171
- MCDB 2150 and MCDB 2161 or MCB 2171

Electrical Engineering Design Lab Electives

- ECEN 2360
- ECEN 2370
- ECEN 3250
- ECEN 3300
- ECEN 3400

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