# Electrical Engineering with Illinois Tech

Total Major hours at Wheaton: 43
Suggested hours per semester: 16-18

**Major Academic Plan (MAP) for Catalog Year 2024-2025**
**Major hours at Wheaton = 43**

The catalog is the final authority on CATC and major requirements; this is intended as a tool for planning purposes. Student course sequencing may vary depending on course offerings and other variables.

| **Fall Semester 1** | **Spring Semester 1[2]** | **Summer 1** |
|---|---|---|
| MATH 235: Calculus I[1]*<br>PHYS 231: Introductory Physics I[F, 1]*<br>ENGR 101: Intro. to Engineering (1)[S]<br><br>*CORE 101: First Year Seminar*<br>*CORE 131: H. Human Flourishing (1)*<br>*Language Core Competency* | MATH 236: Calculus II*<br>PHYS 232: Introductory Physics II[S]*<br><br><br>*ENGW 103: Writing*<br>*BITH or ARCH 211 Old Testament* | *Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), Wheaton in the Black Hills, non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.* |
| **Fall Semester 2** | **Spring Semester 2** | **Summer 2** |
| MATH 237: Calculus III*ENGR 334: Computer Modeling of<br>PHYS/ENGR 334: Physical Systems (2)[F]*<br>ENGR 211: Statics[F]* (3)<br><br>*Thematic Core Courses (4)[3]*<br>*BITH or ARCH 213: New Testament* | MATH 333: Differential Equations*<br><br>PHYS 331: Spacetime and Quanta*<br>ENGR 214: Innovative Design in Engr.[S]*<br><br>*COMM 101: Oral Communication (2)*<br>*Visual & Performing Arts (2)[3]* | *Consider study, internship or research options.* |
| **Fall Semester 3** | **Spring Semester 3** | **Summer 3** |
| CHEM 231: General Chemistry I[F]<br>IIT CS 115: Object-Oriented Progr. I (2)[4]<br><br><br><br>*Advanced Integrative Seminar[3]**<br>*Thematic Core Course (8)[3]* | ENGR 394/494: Ethics Capstone (2)*<br>IIT CS 116: Object-Oriented Programming II (2)[4]<br>IIT ECE 211: Circuit Analysis I (3)[4]<br>IIT ECE 218: Digital Systems[4]<br><br>*BITH 315: Christian Thought**<br>*Visual & Performing Arts (2)[3]* | *Consider study, internship or research options.* |
| All courses below this line are based on completion at Illinois Tech. | | |
| **Fall Semester 4** | **Spring Semester 4** | **Summer 4** |
| MATH 333: Matrix Algebra & Complex Variables (3)<br>ECE 213: Circuit Analysis 2<br>ECE 242: Digital Computers & Computing (3)<br>Science Elective (3)<br>IPRO: IPRO Elective 1 (3) | ECE 308: Signals & Systems (3)<br>ECE 311: Engineering Electronics<br>ECE 319: Fundamentals of Power Engineering<br>MATH 374: Probability & Statistics for Electrical & Computer Engineers (3) | *Consider study, internship or research options.* |
| **Fall Semester 5** | **Spring Semester 5** | **Summer 5** |
| ECE 307: Electrodynamics<br>Technical Elective 1<br>ECE 400+ P: Professional ECE Elective 1<br>ECE 400+ P: Professional ECE Elective 2 | ECE 400+ P: Professional ECE Elective 3<br>ECE 400+ P: Professional ECE Elective 4<br>ECE 400+ P: Professional ECE Elective 5<br>IPRO: IPRO Elective 2 (3)<br>Fundamentals of Engineering Exam (0) | |



Last updated: 4/23/2024

**Notes or Special Guidance for Majors**:

*Course has prerequisite

[F] Fall only course

[S] Spring only course

[#] Offered every other year

[1] Classes that meet CATC Thematic Core tags: MATH 235 (AAQR), PHYS 231 (SP). Engineering majors should use the Engineering checklist for CATC.

[2] ENGR 132: Engineering Graphics and CAD (3), is strongly recommended in this semester.

[3] Engineering majors should carefully select CATC Thematic Core courses. In addition to the Themes already covered with required courses (AAQR and SP, see footnote 1), Social Inquiry (SI) and the Visual and Performing Arts (VPA or 2 of VPAV/VPAM/VPAT) must be taken. 4 of the 5 remaining themes must also be taken by Engineering majors. See the Engineering checklist for the full CATC requirements. Double tagged courses are strongly encouraged.

[4] These courses are taken in partnership with Illinois Tech while finishing Wheaton requirements.

-All Engineering MAPs are also located on the Engineering Department webpage (link does not work). Please contact the Engineering Program Director, Jeff Yoder with questions. He can be reached at jeff.yoder@wheaton.edu.