New Student Advising

Electrical Engineering Program

The recommended courses for the first semester include 14 academic credits.

1. **CLS-101 Knowledge & Community (3 cr.)**
   or COM-110 Public Speaking (3 cr.)
   or any course fulfilling the University Seminar (US) Core requirement.

   For students coming right out of high school, we recommend taking CLS-101. CLS-101 is a small group class with reading of books and essays, writing assignments, and oral communication practice.

2. **M-171 Calculus I (4 cr.)**

   You should sign up for the appropriate math course based on your ACT/SAT/AP scores or the results of your MSU Math Placement Exam (MPLEX). If you do not place directly into Calc I, you should sign up for M-121 College Algebra or M-151 Precalculus, as necessary to reach Calc I as soon as you can. If you have previously studied college-level calculus via Advanced Placement (AP) credit or transfer credit from another college, you should enroll in the next course in the required math sequence.

3. **PHSX-220 General & Modern Physics I (4 cr.)**

   Calculus-based physics is very important for electrical engineering. The co-requisite course is M-171, meaning you can only take PHSX-220 if you are simultaneously taking or previously completed Calculus I. If you are not at or above the Calc I level, plan instead to enroll in an appropriate university Core class (for example, WRIT-101, or an A, H, S, or D Core class).

4. **EELE-101 Introduction to Electrical Fundamentals Lab (3 cr., 1 lec, 1 rct, & 1 lab)**

   This course provides an introduction to the methods, topics, and terminology of the electrical and computer engineering field. The lecture covers a wide range of topics and engineering math concepts. The lab involves learning to use the oscilloscope, digital multimeters, power supplies, signal generators, soldering, etc. Each student builds and tests a custom mini robot kit.

   Note that the prerequisite for EELE-101 is M-151 Precalculus, so if you did not place into Calc I, you should put off taking EELE-101 until you complete Precalc. If you are not eligible for EELE-101, you should instead enroll in a university Core class.

Note: Students with a strong academic background who are able to handle more than 14 credits may choose to take an additional course (e.g., writing, university core, CSCI-111). Please speak with an academic advisor regarding this recommendation.

If you have any special circumstances, such as additional AP credits, transfer courses, or plans for a double major, please talk to the ECE Department academic advisor for specific guidance and suggestions. In general, you may move ahead following the course sequence listed on the EE flow sheet as long as you have credits for the prerequisite courses.