

**Sample Electrical and Computer Engineering (ECE)
Program for PreMed Students**

FIRST YEAR	
Fall Semester	Spring Semester
1. WRITING 20/SS-H 1	1. SS-H 1/WRITING 20
2. CHEM 31L, Core Concepts in Chemistry	2. CHEM 32L, Modern Applications of Chemical Principles
3. MATH 31, Calculus I	3. MATH 32, Calculus II
4. EGR 53L, Comp Methods in Engineering	4. PHYSICS 61L, Mechanics
SOPHOMORE YEAR	
Fall Semester	Spring Semester
1. CHEM 151L, Organic Chemistry	1. CHEM 152L, Organic Chemistry
2. ECE 52L, Digital Systems	2. ECE 54L, Signals & Systems
3. MATH 103, Intermediate Calculus	3. MATH 107, Linear Algebra & Differential Equations
4. PHYSICS 62L, Electricity, Magnetism & Optics	4. BIOLOGY 101L, Molecular Biology
5. ECE 27L, Fundamentals of ECE	5. SS-H 2
JUNIOR YEAR	
Fall Semester	Spring Semester
1. COMPSCI 100E, Program Design & Analysis II	1. ECE 51L, Microelectronic Devices & Circuits or ECE 53L, Electromagnetic Fields
2. ECE Concentration Elective (1)	2. ECE Concentration Elective (2)
3. MATH 108, Ordinary & Partial Differential Equations	3. STA 113, Probability & Statistics or MATH 135, Probability or ECE 255, Probability for ECEs (see NOTE)
4. BIOLOGY 102L, Genetics & Evolution	4. SS-H 3
SENIOR YEAR	
Fall Semester	Spring Semester
1. ECE Concentration Elective (3)	1. ECE Concentration Elective (4)
2. ECE Elective or Approved ECE Design Elective	2. Approved ECE Design Elective or ECE Elective
3. ECE 53L, Electromagnetic Fields or ECE 51L, Microelectronic Devices & Circuits	3. SS-H 5
4. SS-H 4	4. ECE Elective

NOTES:

- **Pre-Med Requirements:** Students planning to attend medical school should schedule an appointment with Dean Scheiner at the [Office of Health Professions Advising](#). The premed program requires two courses in general chemistry (CHEM 31L & CHEM 32L), two semesters of organic chemistry (CHEM 151L & 152L taken in sophomore or junior year), BIOLOGY 25L and a second laboratory course in biology, and an ENGLISH or LIT course. AP credit CHEM 19 is acceptable for CHEM 31L. (Students who have previously completed CHEM 21L and 22L need not take CHEM 31L and 32L.)
- **WRITING 20:** University Writing Program, required in first year.
- **SS-H:** Social Sciences & Humanities, 5 required semester-course electives, appropriately distributed.
- **PHYSICS 61L & 62L:** Matriculating students who have AP credit for PHYSICS 61L (but not 62L) take PHYSICS 62L; those who have AP credit for PHYSICS 61L and 62L take PHYSICS 63L; and international students who have IPCs for GCE A-level physics take PHYSICS 63L *or* 143.
- **BIOLOGY 101L & 102L:** Two laboratory biology courses are required. AP BIOLOGY 19 is not sufficient.
- **ECE 51L and 53L:** The Faculty Advisor can provide guidance as to which ordering best matches topic interests for later ECE Elective courses.
- **STA 113** is recommended but students may substitute MATH 135 or ECE 255.
- **ECE Concentration Electives:** Four courses selected from the set approved for the ECE program. Courses must be selected from at least two areas, and at least two courses must be from the same area.
- **ECE Elective:** Any ECE course at the 100 level or above except ECE 148L, which latter course may be taken as a general Elective.
- **Approved Design Elective:** Approved Electrical Engineering Design Elective, required in Junior or Senior year. Currently ECE 123, 135, 154, 164, 251 and 261 are approved. The same course may not be used as a Concentration Elective and count as a required Design Elective or ECE Elective
- **Independent Study:** Accepted for up to two of the Elective ECE Courses and for any of the Free Electives, but not for any other required course in the ECE Program.