B.S. Electrical & Computer Engineering

Computer Engineering

Student Information

Name: _____ OSU Email: _____

Suggested Curriculum

This should be used as a **guide** only. Semester offerings are subject to change.

Year	Autumn	Spring
1	___ ENGR 1100 *(Engineering Survey)* 1 hr ___ ENGR 1181 *(Fundamentals of Engr 1)* 2 hr ___ MATH 1150 *(Precalculus)* 5 hr ___ *CHEM 1250 *(E&M, Optics, Modern Phys)* 4 hr ___ General Education 3 hr	___ ENGR 1182 *(Fundamentals of Engr 2)* 2 hr ___ MATH 1151 *(Calculus 1)* 5 hr ___ PHYSICS 1250 *(Mechanics, Thermal, Waves)* 5 hr ___ CSE 1222 *(Intro Prog in C/C++)* 3 hr ___ General Education 3 hr
2	___ Math 1172 *(Engineering Math A)* 5 hr ___ PHYSICS 1251 *(E&M, Optics, Modern Phys))* 5 hr ___ CSE 2221 *(Software 1: Components)* 4 hr ___ PHILOS 1332……………………………... 3 hr	___ MATH 2568 *(Linear Algebra)* 3 hr ___ ECE 2060 *(Intro Digital Logic)* 3 hr ___ ECE 2020 *(Intro Analog Systems & Circuits)* 3 hr ___ CSE 2321 *(Foundations 1: Discrete Structures)* 3 hr ___ CSE 2231 *(Software 2: Development & Design)* 4 hr
3	___ Math 2415 *(Ord & Part Diff Eqns)* 3 hr ___ ECE 2050 *(Intro Discrete Time Sig & Systms)* 3 hr ___ ECE 2560 *(Intro Microcontroller-Based Systems)* 2 hr ___ CSE 2451 *(Advanced C Programming)* 2 hr ___ ISE 2040 *(Engineering Economics)* 2 hr ___ General Education 3 hr ___ General Education 3 hr	___ STAT 3470 *(Prob & Stats for Engineers)* 3 hr ___ ECE 3090 *(Technical Writing & Presentations)* 1 hr ___ ECE 3020 *(Intro to Electronics)* 3 hr ___ ECE 3561 *(Advanced Digital Design)* 3 hr ___ ECE 3567 *(Microcontroller Lab)* 1 hr ___ Technical or Directed Electives 3 hr ___ General Education 3 h
4	___ ECE 3905 *(Capstone Design I)* 3 hr ___ ECE 3027 *(Electronics Laboratory)* 1 hr ___ ECE 5362 *(Computer Architecture & Design)* 3 hr ___ CSE 2431 *(Sys2: Intro Operating Systems)* 3 hr ___ General Education 3 hr ___ Technical or Directed Electives 4 hr	___ ECE 4905 *(Capstone Design II)* 3 hr ___ General Education 3 hr ___ Technical or Directed Electives 9 hr

Total Hours to complete the degree program = 133

*Student may take Chemistry 1210 or 1250 to meet chemistry requirement

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Acceptance Criteria

Acceptance into this program is based on a holistic review of the student's record including an essay. Admission to major is considered only after a student has taken at least 12 credit hours of letter grade in their undergraduate career at OSU and have completed the following courses: MATH 1151, 1172; ENGR 1181, 1182; PHYSICS 1250, (or their equivalents).
Applications are accepted Autumn and Spring semester ONLY. Students must complete the online ECE Major Application the semester in which the student is completing their pre-major requirements (i.e. the semester before the students wants to enter the major). For more information please visit our website (https://ece.osu.edu/current-students/application-ece-major) or see an Academic Advisor in the Department of Electrical and Computer Engineering.

Technical and Directed Electives (16 hours)

- At least 9 hours of the Technical Electives must be ECE or CSE courses from these lists:
    - ECE 3050, 4567, 3551, 5020, 5101, 5300 (4300), 5560, 5200, 5206, 5460, 5462, 5463, 5465, 5554
    - CSE 3241, 3461, 5242, 5361, 5441
    - One of ECE 4300 or 5300 or CSE 5523

- Must include at least one 5000 level ECE or CSE Technical Elective.

- Up to 7 hours of the Electives may be Directed Electives from the ECE approved list. Directed Electives generally include: courses required for entry into other engineering majors; required and technical elective courses in other engineering majors; pre-med courses; business or entrepreneurship courses; math, statistics, physics and chemistry courses at higher level than required in the ECE core; and other physical science or biological science courses. For physical science or biological science courses a maximum of 7 hours numbered below 2000 may be counted as Directed Electives. (ece.osu.edu/currentstudents/undergrad/forms)

General Education Requirement

Writing and Communication
English 1110.xx	3 hr
Second Writing Course	3 hr

Social Science
Must choose each course from a distinct subgroup of this category.
	3 hr
	3 hr

Literature
	3 hr

Visual and Performing Arts
	3 hr

Historical Study
	3 hr

Second Historical Study or Cultures and Ideas
PHILOS 1332	3 hr

Social Diversity in the U.S. or Global Diversity
Some courses may overlap with another GE category, See course list.
	0 / 3 hr

Ethics
Some courses may overlap with another GE category, See course list.
Student must take PHILOS 1332	0 / 3 hr

Optional: Foreign Language

Foreign Language 1103 Course: credit (including EM) for a foreign language sequence through 1103, or credit for a foreign language course with a prerequisite of 1103, can be used to satisfy the Cultures & Ideas Gen Ed category.

Foreign Language Minor Courses: completion of a foreign language minor permits a student to overlap up to 6 credit hours between the Gen Ed and minor. A curricular petition must be submitted to the student's program, which will forward it to the college for review. The courses must meet the spirit of the Gen Ed category for which overlap is requested.

Ethics: ECE students must take philosophy 1332 to fulfill their General Education Ethics requirement.

See the list of approved general education courses for additional details: www.advising.engineering.osu.edu.