B.S. Electrical & Computer Engineering  2017-2018 Academic Year
Electrical Engineering

Student Information
Name: __________________________ OSU ID: __________________________ OSU Admit Term: ______
Phone: __________________________ Email (name.number@osu.edu): __________________________

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Autumn</th>
<th>Spring</th>
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<tbody>
<tr>
<td>1</td>
<td>__ ENGR 1100 (Engineering Survey) 1 hr</td>
<td>__ ENGR 1182 (Fundamentals of Engr 2) 2 hr</td>
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<td></td>
<td>__ ENGR 1181 (Fundamentals of Engr 1) 2 hr</td>
<td>__ MATH 1172 (Engineering Math A) 5 hr</td>
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<td>__ MATH 1151 (Calculus I) 5 hr</td>
<td>__ CHEM 1250 (Chemistry for Engineers) 4 hr</td>
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<td>__ PHYSICS 1250 (Mechanics, Thermal, Waves) 5 hr</td>
<td>__ CSE 1222 (Intro Prog in C/C++) 3 hr</td>
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<td>General Education 3 hr</td>
<td>General Education 3 hr</td>
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<tr>
<td>2</td>
<td>__ PHYSICS 1251(E&amp;M, Optics, Modern Phys) 5 hr</td>
<td>__ MATH 2415 (Ord &amp; Part Diff Eqns) 3 hr</td>
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<td>__ MATH 2568 (Linear Algebra) 3 hr</td>
<td>__ ECE 2050 (Intro Discrete Time Sig &amp; Sys) 3 hr</td>
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<td>__ ECE 2060 (Intro Digital Logic) 3 hr</td>
<td>__ ECE 2020 (Intro Analog Systems &amp; Circuits) 3 hr</td>
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<td>General Education 3 hr</td>
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<td>General Education 3 hr</td>
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<td>3</td>
<td>__ ECE 3010 (Radio Freq &amp; Optical Eng) 3 hr</td>
<td>__ STAT 3470 (Prob &amp; Stats for Engineers) 3 hr</td>
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<td>__ ECE 3020 (Intro to Electronics) 3 hr</td>
<td>__ ECE 3027 (Electronics Laboratory) 1 hr</td>
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<td>__ ECE 3030 (Semiconductor Elec Devices) 3 hr</td>
<td>__ ECE 3040 (Sustainable Energy &amp; Power Sys I) 3 hr</td>
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<td>__ ECE 3050 (Signals &amp; Systems) 3 hr</td>
<td>General Education 3 hr</td>
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<td>__ ECE 3080 (Ethics &amp; Professionalism) 1 hr</td>
<td>Technical or Directed Electives 6 hr</td>
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<td>General Education 3 hr</td>
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<td>4</td>
<td>__ ISE 2040 (Engineering Economics) 2 hr</td>
<td>__ ECE 4900 (Capstone Design II) 3 hr</td>
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<td>__ ECE 3090 (Technical Writing &amp; Presentations) 1 hr</td>
<td>Technical or Directed Electives 12 hr</td>
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<td>__ ECE 3900 (Capstone Design I) 1 hr</td>
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<td></td>
<td>Technical or Directed Electives 10 hr</td>
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Total Hours to complete the degree program = 128

ECE 3010, 3020, 3030, 3040, and 3050 may be swapped between semesters in year three to facilitate taking later technical electives in the student’s domains of interest, as prerequisites permit.

Acceptance Criteria
Acceptance into this program is based on a cumulative point our ratio (CPHR) of 2.0 or greater; an eligibility point hour ratio (EPHR) of 2.9 or greater. Admission to major is considered only after a student has taken at least 12 credit hours for letter grade in their undergraduate career at OSU.

EPRH courses: MATH 1151, 1172; ENGR 1181, 1182; PHYSICS 1250, 1251; CHEM 1250; CSE 1222 (or their equivalents). Students must also complete the following courses: ENGR 1100; ENGLISH 1110.

If CPHR is 3.2 or greater after completion of all admission to major courses, the EPHR is not used and the applicant will be admitted. Transfer grades are not included in the EPHR or CPHR. Calculation of the EPHR must be based on at least 6 credit hours taken at OSU. Applications are accepted every academic term. Students must complete the online ECE Major Application no later than the third Friday of the semester in which the student is completing their pre-major requirements (i.e. the semester before the students wants to enter the major).

Revised 9/26/2017
Technical and Directed Electives (28 hours)
At least 16 hours of the Electives must be ECE Technical Electives.

- Must take a concentration of 6 hours in one of the domains below.
- Must take at least 3 hours in each of two other domains below.
- Must include at least one 5000 level ECE Technical Elective.
- At least one ECE Technical Elective course must be a lab. (Courses with a lab component are underlined in the domain lists.)

Communication and Signal Processing Domain: ECE 5000, 5007, 5101, 5200, 5206, 5207, 5400
Computer and Digital Systems Domain: ECE 3561, 3567, 5362, 5460, 5462, 5463, 5465
Control Systems Domain: ECE 3551, 3557, 5550, 5551, 5553, 5554, 5557, 5759
RF and Analog Electronic Circuits Domain: ECE 5020, 5021, 5022, 5027, 5120, 5227
Electromagnetics, Microwaves and Electro-optics Domain: ECE 5010, 5011, 5012, 5013, 5017, 5510
Sustainable Energy and Power Systems Domain: ECE 3047, 5025, 5041, 5042, 5043, 5047, 5127
Solid State Electronics and Photonics Domain: ECE 5031, 5033, 5037, 5131, 5132, 5137, 5237, 5530, 5832, 5833

Up to 12 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
Only one course per Social Science group may count.

   3 hr
   3 hr

Literature
  3 hr

Visual and Performing Arts
  3 hr

Historical Study
  3 hr

Second Historical Study or Cultures and Ideas
  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.
  0 / 3 hr

Foreign Language
Pre-approved substitutions
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.

University Capstone (Cross-Disciplinary Seminar)
Pre-approved substitutions
Completion of a Social Science 3597 or 4597 can be substituted for a Social Science general education course in any group. Completion of an Arts & Humanities 3597 or 4597 can be substituted for a Visual/Performing Arts general education course.

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