<table>
<thead>
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<th>FIRST YEAR</th>
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<th>SECOND YEAR</th>
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<th>THIRD YEAR</th>
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<th>FOURTH YEAR</th>
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<tr>
<td>Social World Elec. [3 cr] [Note 2]</td>
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<td>(Take ENGIN 112, Intro. to ECE I, unless it was taken previously. See advisor to adjust schedule. [3 cr] [Note 1])</td>
<td>Social World Elec. [3 cr] [Note 2]</td>
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The curriculum notes can be found on the reverse side of this worksheet.

UNIVERSITY OF MASSACHUSETTS AMHERST • DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
www.ecs.umass.edu/ece/

Updated Sep. 2010
The abbreviations “ECE” and “E&C-ENG” are equivalent. They are both abbreviations of “Electrical and Computer Engineering.”

It is important that the Undergraduate Catalog posted on SPIRE (http://spire.umass.edu) be consulted for course descriptions and course requisites. It is the student’s responsibility to refrain from enrolling in any course for which she or he does not have all of the published requisites.

Details regarding the ECE Minimum Grade Requirement may be found at http://ece.umass.edu/ece/undergraduate/mgr-policy.

### Note 1

In the fall semester, choose one of the following:
- ENGIN 110 Intro. to Chemical Engineering I
- ENGIN 111 Intro. to Civil & Environmental Engineering I
- ENGIN 112 Intro. to Electrical & Computer Engineering I
- ENGIN 113 Intro. to Mechanical & Industrial Engineering I

**ENG112 is a required course in the CSE and EE programs.*

In the spring semester, choose one of the following:
- CHE 120 (ChE)
- CEE 121 Intro. to Civil & Env. Engin. II
- ECE 122 Intro. to ECE II (Object-Oriented Programming)
  (Language: Java) (or CMPSCI 121)
- MIE 123 Intro. to Mech. & Industrial Engin. II

**Note that ECE 122 (or CMPSCI 121) is required for CSE and EE majors. It is a prerequisite for ECE 242.

*A student who is admitted to CSE or EE after meeting the first year admission requirements but has taken **ENGIN 110, 111 or 113 instead of ENGIN 112 in the first year must take ENGIN 112 in the Fall semester of the second year (This will require either the Thematic Elective or the Social World Elective to be postponed.) A student who earns a C or better in ENGIN 112 after earning a C or better in ENGIN 110, 111 or 113 will be allowed to count ENGIN 110, 111 or 113 as a Thematic Elective.

### Note 2 • Social World Electives

Take two of the six social world electives in the first year. First year students either take ENGLWRIT 112 and one Social World Elective in the Fall and one Social World Elective in the Spring, or they take two Social World Electives in the Fall and ENGLWRIT 112 in the Spring.

Over the course of the degree program, choose six Social World Electives consisting of:
1. One Literature elective: AL
2. One Literature or Art elective: AL, AT or I
3. One Historical Studies elective: HS
4. One Social and Behavioral elective: SB
5. One Social and Behavioral elective: SB or I
6. One more elective: AL, AT, HS, SB or I

**One of the six Social World electives must carry the G designation and another must carry the U designation.

### Note 3 • ECE 197SA • ECE Systems Appreciation

It is highly recommended and expected that all ECE first year students will enroll in **ECE 197SA • ECE Systems Appreciation, Spring Semester, 1 cr.

This optional course focuses on the basic functionality of example ECE systems and explores the technological and scientific principles on which they are based. The goal is to provide a deeper understanding of the operation of these systems and to spark interest in some of the more advanced topics in ECE.

### Note 4 • Biology

CSE and EE students must take either BIOLOGY 100 (Fall only) or BIOLOGY 102 (Spring only). BIOLOGY 100 is the appropriate choice for students who plan to pursue further studies in Biology, Biochemistry or Bioengineering.

### Note 5 • Thematic Electives

Thematic Elective 1 is required. Thematic Electives 2 & 3 are optional and are meant to allow in-depth study in a field outside of ECE that is relevant to the student’s career objectives and interests. There are seven approved thematic elective tracks:
1. Biology/Biochemistry; 2. Chemistry; 3. Physics; 4. General Science (Biology, Chemistry and Physics) 5. Mathematics (6) Physics / Mathematics (7) Engineering Management (Note: This track is only for students who intend to complete the Engineering Management minor.)

The official thematic electives document is posted at http://ece.umass.edu/ece/flowcharts.

### Note 6 • EE Electives

Choose four EE electives. The electives must include at least two 500-level courses that may not be used to fill the requirements for any other major.

**EE Electives, in numerical order:**
- ECE 354 Computer Systems Lab II (2nd sem) 4cr
- ECE 373 Software Intensive Engineering (1st sem) 4cr
- ECE 374 Computer Networks & the Internet
- ECE 558 - Intro. to VLSI Design (1st sem) 4cr
- ECE 559 - VLSI Design Project (2nd sem)
- ECE 563 - Intro. to Comm. & Signal Processing (1st sem)
- ECE 564 - Communication Systems (2nd sem) 4cr
- ECE 565 - Digital Signal Processing (2nd sem) 4cr
- ECE 572 - Optoelectronics (1st sem)
- ECE 580 - Feedback Control Systems (1st sem) 4cr
- ECE 584 - Microwave Engineering I (1st sem) 4cr
- ECE 585 - Microwave Engineering II (2nd sem)

Many ECE 597 Special Topics courses are allowed. Please inquire at the ECE Undergraduate Office before enrolling.

### Note 7 • Five-Year B.S./M.S. in Electrical & Computer Engineering

The Department of Electrical and Computer Engineering offers a five-year program through which students can obtain a Bachelor of Science degree in Electrical Engineering or Computer Systems Engineering as well as a Master of Science degree in Electrical and Computer Engineering within a five-year time frame. During the senior year, two graduate-level courses are taken that are later transferred into the M.S. program. More information is posted at http://ece.umass.edu/ece/five-year-program.

Updated Oct. 2010