

EE 07-09

Date: _____

_____, _____
Last Name

First Name

Curriculum Worksheet for the Electrical Engineering Classes of 2007 through 2009.

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
Fall [17cr]	Spring [15cr]	Fall [17-18cr]	Spring [17-18cr]	Fall [17cr]	Spring [15-16cr]	Fall [14-16cr]	Spring [14-16cr]
ENGIN 112 Intro. to ECE [3cr] [Note 1]	ECE 122 Intro. to ECE II (Object-Oriented Programming, Java) [4cr] [Note 1]	ECE 211 Circuit Analysis I [4cr]	ECE 212 Circuit Analysis II [4cr]	ECE 313 Signals & Systems [4cr]	ECE 314 Intro. Prob. & Random Procs. [4cr]	ECE 415 Senior Design Project I [2cr]	ECE 416 Senior Design Project II [2cr]
PHYSICS 151+153 Gen. Physics I - Mechanics + lab [3+1cr]	PHYSICS 152+154 Gen. Physics II – Thermo. and Electromag. + lab [3+1cr]	ECE 242 Data Structures & Algorithms (w/ Java) [4cr]	ECE 232 Hardware Organization & Design [4cr]	ECE 323 Electronics I [4cr]	ECE 324 Electronics II [3cr]	EE Elective [3cr] [Note 5]	EE Elective [3or4cr] [Note 5]
MATH 131 Calculus I [4cr]	MATH 132 Calculus II [4cr]	MATH 331 Differential Equations [3cr]	MATH 235 Linear Algebra [3cr]	ECE 353 Computer Systems Lab I [3cr]	ECE 333 Fields and Waves [4cr]	EE Elective [3or4cr] [Note 5]	EE Elective or Thematic Elective 4 [3 or 4cr] [Notes 4 & 5]
ENGLWRIT 112 College Writing or Social World Elec. [3cr] [Note 2]	Social World Elec. or ENGLWRIT 112 College Writing [3cr] [Note 2]	Social World Elective [3cr] [Note 2]	MATH 233 Multivariate Calculus [3cr]	ECE 344 Semiconductor Devices and Materials [3cr]	Thematic Elective 2 [3or4cr] [Note 4]	Thematic Elective 3 [3or4cr] [Note 4]	Social World Elective [3cr] [Note 2]
Social World Elective [3cr] [Note 2]		“Biology/ Thematic Elective” [Important: See Notes 3 & 4 for details]	“Biology/ Thematic Elective” [Important: See Notes 3 & 4 for details]	ENGIN 351 Writing in Engineering [3cr] (formerly ENGIN 390W)	ECE 303 Junior Seminar [1cr]	Social World Elective [3cr] [Note 2]	Social World Elective [3cr] [Note 2]
		(Take ENGIN 112, Intro. to ECE I, unless it was taken previously. See advisor to adjust schedule. [3cr] [Note 1])					

The curriculum notes can be found on the reverse side of this worksheet.

EE 07-09

- Notes for the Electrical Engineering Curriculum for the Classes of 2007 through 2009. -

The abbreviations "ECE" and "E&C-ENG" are equivalent. They are both abbreviations of "Electrical and Computer Engineering". "ECE" tends to be used in departmental publications and "E&C-ENG" is used on SPIRE and on official schedules and transcripts.

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.

Note 1

In the fall semester, choose one of the following:
ENGIN 103 Intro. to Engineering I (Fall 2005 offering)
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
ENGIN 112 is taught by ECE faculty members and is recommended for all students considering CSE or EE as majors.

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

MIE 123 Intro. to Mech. & Industrial Engin. II
Note that ECE 122 or its equivalent is required for CSE and EE majors. It is a prerequisite for ECE 232.

A student who is admitted to CSE or EE after meeting the first year admission requirements but has taken ENGIN 103 (Fall 2005 offering), 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 103 (Fall 2005 offering), 110, 111 or 113 will be allowed to count ENGIN 103, 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 • Biology

CSE and EE students must take either BIOLOGY 100 (offered each Fall semester) or BIOLOGY 102 (offered each Spring semester). (Either course will fulfill the General Education Biological Science (BS) requirement.)

Students who are interested in pursuing more advanced coursework in Biology should take BIOLOGY 100, normally followed by BIOLOGY 101 as the Spring semester Thematic Elective. BIOLOGY 102 is a condensed version of the material in BIOLOGY 100-101 and is the appropriate choice for students who do not plan to pursue further studies in Biology, Biochemistry or Bioengineering.

Note 4 • Thematic Electives

Thematic Electives are meant to allow in-depth study in a field outside of ECE that is relevant to the student's career objectives and interests. An appropriate set of electives for each field are drawn from courses in the sciences, mathematics and management. It is intended that the list of Thematic Elective fields and courses will evolve along with industrial and research directions in Electrical and Computer Engineering. The current tracks include:
(1) Biology/Biochemistry/Bioengineering; (2) Physics; (3) General Science (courses from Biology, Chemistry and Physics); (4) Mathematics; and (5) Management. The courses which form these tracks are posted on the ECE web site (<http://www.ecs.umass.edu/ece/>).

Note 5 • EE Electives

The EE electives must include at least two 500-level courses that may not be used to fill the requirements for any other major. Refer to the ECE web site (<http://www.ecs.umass.edu/ece/>) for additional information concerning the EE Electives.

EE Electives, in numerical order:

- ECE 354 Computer Systems Lab II (2nd sem) 4cr
- ECE 373 Software Intensive Engineering (1st sem)
- 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 571 - Microelectronic Fabrication (2nd sem) 4cr
- ECE 572 - Optoelectronics (1st sem)
- ECE 580 - Feedback Control Systems (1st sem) 4cr
- ECE 581 - Digital Control of Dynamic Systems (2nd sem)
- ECE 584 - Microwave Engineering I (1st sem) 4cr
- ECE 585 - Microwave Engineering II (2nd sem)