BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING
SUGGESTED FIVE-YEAR COURSE SEQUENCE 2012-2013

FIRST YEAR

First Semester				*Second Semester*			
ENGL	101	Introduction to College Writing	3 +	ENGL	102	College Writing & Rhetoric	3
MATH	143	Pre-Calculus Algebra/Analytic	3 +	PHYS	211	Engineering Physics I & Lab	4*
MATH	144	Analytic Trigonometry	1 +	ECE	101 **(S)**	Foundations of ECE	2*
CS	120	Computer Science I	4 *	MATH	170	Analytic Geometry/Calculus I	4*
ISEM	101	Integrated Seminar	3				
			14				13

SECOND YEAR

First Semester				*Second Semester*			
PHYS	212	Engineering Physics II & Lab	4 *	ECE	210	Circuits I	3*
CHEM	111	Principles of Chemistry	4 *	ECE	211	Circuits I Lab	1*
MATH	175	Analytic Geometry & Calculus II	4 *	ECE	292 **(S)**	Sophomore Seminar	0**
MATH	330	Linear Algebra	3	ENGR	210	Engineering Statics	3*
				MATH	310	Ordinary Differential Equations	3*
				HS/INT			3
			15				13

THIRD YEAR

First Semester				*Second Semester*			
ECE	212	Circuits II	3 *	STAT	301	Probability & Statistics	3
ECE	213	Circuits II Lab	1 *	ECE	310	Fundamentals of Electronics	3
MATH	275	Analytic Geometry & Calculus III	3 *	ECE	311	Fund of Electronics Lab	1
ECE	240	Digital Logic	3 *	ENGL	317	Technical Writing	3
ECE	241	Digital Logic Lab	1 *	HS/INT			3
ENGR	220	Engineering Dynamics	3 *				
			14				13

FOURTH YEAR

First Semester				*Second Semester*			
ECE	320	Energy Systems	3	ECE	330	Electromagnetic Theory	3
ECE	321	Energy Systems Lab	1	ECE	331	EM Theory Lab	1
ECE	340	Microcontrollers	3	TE			3
ECE	341	Microcontrollers Lab	1	ES			3
ECE	350	Signals & Systems	3	HS/INT			3
ECE	351	Signals & Systems Lab	1				
			12				13

FIFTH YEAR

First Semester				*Second Semester*			
ECE	480	EE Senior Design	3	ECE	481	EE Senior Design II	3
ECE	491 **(F)**	Senior Seminar	0	TE			3
ENGR	360	Engineering Economy	2	TE			3
TE			3	TE			3
TE			3				
HS/INT			3				
			14				12

TOTAL CREDITS = 133 (128 counted toward degree)

* ***A C or better is required in these courses before upper division electrical and computer engineering courses may be taken.***
** ***A passing grade in ECE 292 is required before upper division electrical and computer engineering courses may be taken.***

\+ ENGL 101 and/or MATH 143 and 144 may be required prior to taking Engl 101 and/or Math 170 depending on standardized test or placement test scores. However, they are not part of the electrical engineering curriculum. The entire English and/or math sequence may be moved up one semester if these courses are not taken.

HS - Humanities and social sciences. Satisfy three conditions: (1) AMST 301 or PHIL 103, (2) ECON 201 or 202 or 272, (3) They are from an approved list.
INT- One approved international course. The list of approved courses is found in the UI catalog. Courses exist that simultaneously satisfy the HU/SS and INT course requirement.
TE - Technical electives. Eighteen credits required and satisfy three conditions: (1) Nine credits (minimum) from the following ECE courses: 410 (S) (or 416 (F)), 420 (S), 430 (every third semester), 440 (S) (or 443 (F)), 450 (F) & 460 (F). (2) Three credits (minimum) from upper-division ECE courses, (3) The remaining six credits from upper-division ECE, and approved engineering, math, physics, and computer science courses.
ES - Upper division engineering science elective, a minimum of three credits required. Engineering science elective credits may be obtained from the following courses: ENGR 320, ENGR 335, ENGR 350, or MATH/PHYS/ENGR 428

The total credits of ISEM, humanities, social science, international, American diversity, and senior experience must be at least 18 credits and must satisfy the requirement J-3-d found in the UI catalog.

Students majoring in electrical engineering who accumulate grades of D's and F's in mathematics, science, or engineering courses that are used to satisfy graduation requirements, including repeats and transfer courses will be required to undergo special advising as per department bylaws.

Cooperative educational experiences are available through the university Cooperative Education Office and the department co-op coordinator to give the students industrial experience in their chosen field. Academic credit for co-op participation may be earned but may not be used as part of the program of study.

Courses offered only during a semester are identified above with a letter in parentheses by the course number: "F" refers to fall only courses and "S" to spring only courses.