FIVE-YEAR PLAN - COMPUTER ENGINEERING DEGREE **Post Fall 2013**

This is a suggested schedule for students who start with Math 102 and wish to complete their degree in 5 years. The number of units required in each semester can be reduced by moving some courses into summer school. Students are encouraged to meet regularly with an advisor.

1st Year

Fall Semester		Spring Semester	
Course	Units	Course	Units
Math 102 - College Algebra	3	Math 104 - Trigonometry & Analytic Geometry	3
Freshman Composition (ex. Eng155)	3	Oral Communication (ex. Coms 151)	3
American History	3	Government	3
GE Course **	3	GE Course **	3
Total Units	12	Total Units	12

2nd Year

Fall Semester		Spring Semester	
Course	Units	Course	Units
Comp 110/L – Introduction to Algorithms and Programming & Lab	3,1	Math 150B - Calculus ll	5
Math 150A - Calculus l	5	Phys 220A/L - Mechanics & Lab	3,1
Math/Science Electives(*)[1]	3 - 5	Comp 182/L – Data Structures and Program Design & Lab	3,1
Total Units	12	Total Units	13

3rd Year

Fall Semester		Spring Semester	
Course	Units	Course	Units
Math 250 - Calculus lll	3	ECE 240/L - Elect Engr. Fund. & Lab	3,1
Phys 220B/L - Elect. & Magnetism & Lab	3,1	Comp 282 – Advanced Data Structures	3
GE Course[2]	3	Math or ECE 280 - Applied Differential Equations	3
GE Course[2]	3	Math/Science Electives[1]	3 - 5
Total Units	13	Total Units	13

4th Year

Fall Semester		Spring Semester**	
Course	Units	Course	Units
ECE 309 – Numerical Methods in Elect Engr.	2	ECE 351 – Linear Systems II	3
ECE 320/L – Theory of Digital Systems & Lab	3,1	ECE 442/L - Digital Electronics & Lab	3,1
ECE 340/L - Electronics l & Lab	3,1	ECE 425/L – Microprocessor Sys. & Lab	3,1
ECE 350 - Linear Systems l	3	CompE Elective[3]	3 - 4
MSE 304 - Engineering Econ. Analysis	3		
Total Units	16	Total Units	14

5th Year

Fall Semester		Spring Semester	
Course	Units	Course	Units
ECE 420 – Digital Systems Design w/ Programmable Logic	3	ECE 493 - Senior Design Project II	1
ECE 422 – Design of Dig. Computers	3	CompE Elective[3]	3 - 4
ECE 450 – Probabilistic Systems in EE Design and Analysis	3	CompE Elective[3]	3 - 4
ECE 492 - Senior Design Project l	2	GE Course[2]	3
CompE Elective[3]	3 - 4		
Total Units	14	Total Units	10

*Start Math/Science electives if they include chemistry or Biology, otherwise start them in the fall of the sophomore year.

[1]Math/Science electives must be selected from the list on the next page.

[2]See "Engineering Major General Education Planning Form" and/or DPR.

[3]CompE Electives must be selected from the list on the next page. A 4-unit course indicates a lecture/lab course, while a 3 unit course is lecture only. Students are always recommended to take the lab for lecture/lab courses. See "Instructions for Filing Senior Program", available in the ECE Department Office.

**Upper Division writing exam should be completed before the beginning of the Spring Semester in the Junior Year.

MATH/SCIENCE ELECTIVES
(6 Units Minimum)

		Course	Units
Biology 106/L	-	Biological Principles I	3,1
Biology 107/L	-	Biological Principles II	3,1
Chem 101/L	-	General Chemistry	4,1
Chem 102/L	-	General Chemistry II	4,1
Math 262	-	Introduction to Linear Algebra	3
Math 326	-	Discrete Mathematics	3
Phys 227/L	-	Physics III	4,1
Phys 375	-	Introduction to Quantum Physics	3

COMPUTER ENGINEERING ELECTIVES (CompE)
(12 Units Minimum)

		Course	Units
ECE 422L	-	Design of Digital Computers Lab	1
ECE 443/L	-	Pulse and Waveshaping Circuit Design	3,1
ECE 520/L	-	System on Chip Design & Lab	3,1
ECE 524/L	-	FPGA/ASIC Design & Optimization Using	3,1
		VHDL & Lab	
ECE 526/L	-	Verilog HDL for Digital Integrated Circuit	3,1
		Design & Lab	
ECE 527/L	-	Application Specific Integrated Circuit	3,1
		Development & Lab	
ECE 546	-	Very Large Scale Integrated Circuit Design	3
ECE 562	-	Data Communication Network	3
Comp 322/L	-	Introduction to Operating Systems and	3,1
		System Architecture and Lab	
Comp 380/L	-	Introduction to Software Engineering	2,1
Comp 424	-	Computer System Security	3
Comp 429	-	Computer Network Software	3
Comp 529	-	Advanced Network Topics	3
Comp 581	-	Open Source Software	3
Comp 598EA	-	Embedded Applications	3
Comp 598NSP	-	Advanced Network Security Projects	3