

2019-2020 SAMPLE PARADIGM for a B.S. in Electrical Engineering (Computer Systems Curricula) & Computer Science

This sample paradigm shows a normal 4-year progression towards a degree in both electrical engineering and computer science. Some of the courses should be taken in this order due to prerequisite structures; others may be switched.

FRESHMAN YEAR - Semester I

ECE/CS 112 & 112L	Comp in Engr Pro Solv & Lab	4 crs.
ENG 111	English Composition I	3 crs.
Math 131	Calculus I	3 crs.
ECE 101	Intro Engineering Problem Solving	3 crs.
PSYC 105	General Psychology	3 crs.
CBU 101	Orientation	0 cr.
	<i>Total</i>	<i>16 crs.</i>

FRESHMAN YEAR - Semester II

ECE/CS 172 & 172L	Intro to Programming & Lab	4 crs.
ECE 250	Digital Design	3 crs.
ENG 112	English Composition II	3 crs.
MATH 132	Calculus II	3 crs.
PHYS 150 & 150L	Physics I & Lab	4 crs.
	<i>Total</i>	<i>17 crs.</i>

SOPHOMORE YEAR - Semester I

ECE 221	Electric Circuits I	3 crs.
CS 234 & 234L	Structured Programming & Lab	4 crs.
MATH 231	Differential Equations	3 crs.
CHEM 115 & 115L	General Chemistry & Lab	4 crs.
PHYS 251 & 251L	Physics II & Lab	4 crs.
	<i>Total</i>	<i>18 crs.</i>

SOPHOMORE YEAR - Semester II

CE 201	Statics	3 crs.
ECE 222	Electric Circuits II	3 crs.
ECE 251	Microprocessors	3 crs.
ECE 251	Microprocessor Lab	1 cr.
ECE/CS 360	Object Oriented Programming Design	3 crs.
MATH 232	Calculus III	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>19 crs.</i>

JUNIOR YEAR - Semester I

ECE 331	Electronics I	3 crs.
ECE 331L	Junior Lab I	1 cr.
ECE/CS 350	Computer Systems	3 crs.
ECE 406	Electromagnetic Fields	3 crs.
MATH 309	Probability	3 crs.
ME 202	Dynamics	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>19 crs.</i>

JUNIOR YEAR - Semester II

ECE 314	Engineering Economy	3 crs.
ECE 322	Linear Controls	3 crs.
ECE 332	Electronics II	3 crs.
ECE 332L	Junior Lab II	1 cr.
ECE 335	Systems, Signals, Noise	3 crs.
CS 370	Operating Systems	3 crs.
MATH 405	Discrete Mathematics	3 crs.
	<i>Total</i>	<i>19 crs.</i>

SENIOR YEAR - Semester I

ECE 400	The Compleat Engineer	3 crs.
ECE 411	ECE Project I	3 crs.
ECE 471	Database Design	3 crs.
ECE 477	Digital Signal Processing	3 crs.
Math	Elective (300/400 level course)	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>18 crs.</i>

SENIOR YEAR - Semester II

ECE 412	ECE Project II	3 crs.
CS 440	Algorithms	3 crs.
CS 460	Topics in Computer Science	3 crs.
ECE 450	Computer Networks	3 crs.
	General Education	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>18 crs.</i>

Total credits required for bachelor's degree completion: 144