GADOMSKI SCHOOL OF ENGINEERING

B.S. IN ELECTRICAL ENGINEERING

Electronics & Systems Curricula

This ***sample paradigm*** shows a normal 4-year progression towards a degree in electrical engineering with an electronics and systems emphasis. Some of the courses should be taken in this order due to prerequisite structures; others may be switched.

FRESHMAN YEAR

Semester I		Credits
ECE 101	Intro to Engineering Problem Solving	3
ENG 123	Writing & Critical Literacy	3
MATH 131	Calculus I	3
CS 112 & 112L	Computers in Engr Problem Solving & Lab	4
CBU 101	Orientation	0
–	General Education	3
Total		**16**

Semester II		Credits
ECE 250	Digital Design	3
ENG 130	Writing & Critical Research	3
MATH 132	Calculus II	3
PHYS 150 & 150L	Physics I & Lab	4
–	General Education	3
Total		**16**

SOPHOMORE YEAR

Semester I		Credits
ECE 221	Electric Circuits I	3
CE 201	Statics	3
CHEM 115 & 115L	General Chemistry & Lab	4
MATH 231	Differential Equations	3
ECON 214 or 215	Princ. of Microeconomics or Princ. of Macroeconomics	3
Total		**16**

Semester II		Credits
ECE 222	Electric Circuits II	3
ECE 251 & 251L	Microprocessors & Lab	4
MATH 232	Calculus III	3
PHYS 251 & 251L	Physics II & Lab	4
Total		**14**

JUNIOR YEAR

Semester I		Credits
ECE 331 & 331 L	Electronics I & Lab	4
ECE 406	Electromagnetic Fields	3
ECE	ECE Major Elective (300 or 400 level)	3
MATH 309	Probability	3
–	General Education	3
Total		**16**

Semester II		Credits
ECE 322	Linear Controls	3
ECE 332 & 332L	Electronics II & Lab	4
ECE 335	Systems, Signals, Noise	3
MATH 405	Discrete Math	3
ECE	ECE Major Elective (300 or 400 level)	3
Total		**16**

SENIOR YEAR

Semester I		Credits
CE 351	Fundamentals of Engineering Economy	2
ECE 400	The Compleat Engineer	3
ECE 414	ECE Capstone I	3
ECE 477	Digital Signal Processing	3
–	ECE Major Elective (300 or 400 level)	3
Total		**14**

Semester II		Credits
ECE 415	ECE Capstone II	3
ECE 450	Computer Networks	3
–	Program Option (300 or 400 level)	3
–	General Education	6
Total		**15**

Total credits required for bachelor's degree completion: 123

GADOMSKI SCHOOL OF ENGINEERING

B.S. IN ELECTRICAL ENGINEERING

Computer Systems Curricula

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

FRESHMAN YEAR

Semester I		Credits
ECE 101	Intro to Engineering Problem Solving	3
ENG 123	Writing & Critical Literacy	3
MATH 131	Calculus I	3
ECE/CS 112 & 112L	Computers in Engr Problem Solving & Lab	4
CBU 101	Orientation	0
–	General Education	3
Total		**16**

Semester II		Credits
ECE 250	Digital Design	3
ENG 130	Writing & Critical Research	3
MATH 132	Calculus II	3
PHYS 150 & 150L	Physics I & Lab	4
CS 172 & 172L	Intro to Programming & Lab	4
Total		**16**

SOPHOMORE YEAR

Semester I		Credits
ECE 221	Electric Circuits I	3
CHEM 115 & 115L	General Chemistry & Lab	4
MATH 231	Differential Equations	3
PHYS 251 & 251L	Physics II & Lab	4
CS 234 & 234L	Data Structures/Program & Lab	4
Total		**18**

Semester II		Credits
CE 201	Statics	3
ECE 222	Electric Circuits II	3
ECE 251 & 251L	Microprocessors & Lab	4
MATH 232	Calculus III	3
CS 360	Object Oriented Programming	3
Total		**16**

JUNIOR YEAR

Semester I		Credits
ECE 331 & 331 L	Electronics I & Lab	4
ECE 350	Computer Systems	3
MATH 309	Probability	3
ECON 214 or 215	Princ. of Microeconomics or Princ. of Macroeconomics	3
ECE 406	Electromagnetic Fields	3
Total		**16**

Semester II		Credits
CE 351	Fundamentals of Engineering Economy	2
ECE 322	Linear Controls	3
ECE 332 & 332L	Electronics II & Lab	4
ECE 335	Systems, Signals, Noise	3
MATH 405	Discrete Math	3
Total		**15**

SENIOR YEAR

Semester I		Credits
ECE 400	The Compleat Engineer	3
ECE 414	ECE Capstone I	3
ECE 477	Digital Signal Processing	3
–	ECE Major Elective (300 or 400 level)	3
–	General Education	6
Total		**18**

Semester II		Credits
ECE 415	ECE Capstone II	3
ECE 450	Computer Networks	3
ECE 370	Operating Systems	3
–	General Education	6
Total		**15**

Total credits required for bachelor's degree completion: 131