

# Bachelor of Science in Electrical Engineering with Computer Science Focus

Required 129 credits (36 of which must be numbered 300 or above) including:

## I. Essential Studies Requirements (see University listing)

## II. Electrical Engineering required courses

Code	Title	Credits
EE 101	Introduction to Electrical Engineering	1
EE 201 & 201L	Introduction to Digital Electronics and Digital Electronics Laboratory	4
EE 206 & 206L	Circuit Analysis and Circuits Laboratory I	4
EE 304	Computer Aided Measurement and Controls	3
EE 313 & 313L	Linear Electric Circuits and Circuits Laboratory II	4
EE 314 & 314L	Signals and Systems and Signal and Systems Laboratory	4
EE 316	Electric and Magnetic Fields	3
EE 318	Engineering Data Analysis	3
EE 321 & 321L	Electronics I and Electronics Laboratory I	4
EE 405 & 405L	Control Systems I and Control Systems Laboratory	4
EE 409	Distributed Networks	3
EE 421 & 421L	Electronics II and Electronics Lab II	4
EE 451	Computer Hardware Organization	3
EE 452 & 452L	Embedded Systems and Embedded Systems Design Laboratory	4
EE 480	Senior Design I	3
EE 481	Senior Design II	3
<b>Total Credits</b>		<b>54</b>

## III. Program Required Electives

Code	Title	Credits
<b>Electrical Engineering Electives <sup>2</sup></b>		<b>6</b>
<b>Total Credits</b>		<b>6</b>

## IV. College of Engineering and Mines requirements

Code	Title	Credits
ENGR 340	Professional Integrity in Engineering	3
ENGR 460	Engineering Economy	3
<b>Total Credits</b>		<b>6</b>

## V. Requirements outside of the College of Engineering and Mines

Code	Title	Credits
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	4
MATH 165	Calculus I	4
MATH 166	Calculus II	4
MATH 207	Introduction to Linear Algebra	2
MATH 208	Discrete Mathematics	3

MATH 265	Calculus III	4
MATH 266	Elementary Differential Equations	3
PHYS 251	University Physics I	4
or PHYS 251C & 251CL	University Physics I and University Physics I Lab	
PHYS 252	University Physics II	4
or PHYS 252C & 252CL	University Physics II and University Physics II Lab	
<b>Total Credits</b>		<b>32</b>

## VI. Computer Science Focus requirements

Code	Title	Credits
CSCI 130	Introduction to Scientific Programming	4
or CSCI 160	Computer Science I	
CSCI 161	Computer Science II	4
CSCI 265	Introduction to Programming Languages	3
<b>Computer Science Electives <sup>3</sup></b>		<b>3</b>
<b>Total Credits</b>		<b>14</b>

<sup>1</sup> Grade "C" or better in all EE courses required for graduation.

<sup>2</sup> Maximum of three credits of EE 490 Electrical Engineering Problems is allowed as an independent study, it can count towards one of the Electrical Engineering or non-Electrical Engineering elective requirements, it cannot be double counted. 2 credits of EE 397 Cooperative Education Cooperative (40 hours/week) is equivalent to 3 credits of the EE Electives with S/U grading, maximum 4 credits of EE 397 is equivalent to maximum of 6 credits of EE Elective.

<sup>3</sup> Computer Science Elective choices: Any Computer Science course at the 300-level or higher

<sup>4</sup> Students must ensure all appropriate pre-requisites are met prior to registering for all courses in the curriculum.