BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

2024-2025 Degree Requirements

TOTAL CREDITS FOR DEGREE: 131

Name: _____ **ID Number:** _____

UNIVERSITY CORE CURRICULUM: 43 cr.

Required Fundamental Courses

COMM 101	Oral Comm. & Pres.		3 credits	
ENGL 101	College Composition		3 credits	
UNIV 101	City-University Life		3 credits	
Senior Capstone		**EGR 402**	3 credits	**(Engineering Design II)**

Choose Thematic Core courses in the following:

Explore the World - Choice 1		3 credits	
Explore the World - Choice 2		3 credits	
Investigate Science	**CHEM 101**	3 credits	**(General Chemistry I)**
Investigate Mathematics	**MATH 190**	4 credits	**(Calculus I)**
Interpret Creative Works		3 credits	
Understand People - Choice 1		3 credits	
Understand People - Choice 2		3 credits	
Succeed in Business		3 credits	
Appreciate & Apply the Arts		3 credits	
Discover Technology	**EGR 101**	3 credits	**(Introduction to Engineering)**

MAJOR REQUIREMENTS: 88 cr.

CHEM 103 General Chemistry Laboratory I (1)

MATH 210 Calculus II (4)
MATH 230 Linear Algebra (3)
MATH 300 Calculus III (4)
MATH 310 Differential Equations (3)
MATH 330 Mathematical Statistics (3)

PHYS 201 Fundamentals of Physics I (3)
PHYS 202 Fundamentals of Physics II (3)
PHYS 103 Physics Laboratory I (1)
PHYS 104 Physics Laboratory II (1)
EGR 401 Engineering Design I (3)

ET 204 Programming for Eng Tech (3)
ET 405 Fund. Of Engineering Exam I (0)
ET 406 Fund. Of Engineering Exam II (0)

ME 101 Statics (3)
ME 102 Dynamics (3)
EE 101 Circuit Analysis I (3)
EE 102 Circuit Analysis II (3)
EE 103 Circuit Analysis Lab I (1)
EE 104 Circuit Analysis Lab II (1)
EE 221 Electronics I (4)
EE 222 Electronics II (4)
EE 331 Electrical Power I (4)
EE 332 Electrical Power II (4)
EE 351 Digital Electronics I (3)
EE 352 Microprocessors I (3)
EE 375 Signals and Systems (4)

Technical Electives-Choose 16 cr.

EE 415 Electromagnetics (4)
EE 425 Power Electronics (4)
EE 435 Electrical Distribution Sys (4)
EE 445 Control Sys (4)
EE 455 Digital Electronics II (4)
EE 465 Comm Electronics (4)
EE 467 Dig Sig Proc (4)

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STUDENT OUTCOMES

Upon successful completion of this program:

1) An ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics;

2) An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors:

3) An ability to communicate effectively with a range of audiences;

4) An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental and societal factors;

5) An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment,establish goals, plan tasks, and meet objectives;

6) An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions; and

7) An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

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EE Course Number Key

The first digit represents the course's level:

- 1xx = freshman
- 2xx = sophomore
- 3xx = junior
- 4xx = senior

The second digit represents the course's curricular area:

- x0x = networks
- x1x = electromagnetics
- x2x = electronic devices and circuits
- x3x = power machines and systems
- x4x = controls
- x5x = digital electronics and systems
- x6x = communications and signal processing
- x7x through x9x = general topics

The third digit represents the course's position in a sequence:

- xx5 through xx9 = stand-alone course that is not part of a sequence
- xx1 = first course in a sequence
- xx2 = second course in a sequence