

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

2021-2022 Degree Requirements

TOTAL CREDITS FOR DEGREE: 131

Name: _____

ID Number: _____

UNIVERSITY CORE CURRICULUM: 43 cr.

Required Fundamental Course:

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	

MAJOR REQUIREMENTS: 88 cr.

CHEM 103	General Chemistry Laboratory I (1)	ME 101	Statics (3)
MATH 210	Calculus II (4)	ME 102	Dynamics (3)
MATH 230	Linear Algebra (3)	EE 101	Circuit Analysis I (3)
MATH 300	Calculus III (4)	EE 102	Circuit Analysis II (3)
MATH 310	Differential Equations (3)	EE 103	Circuit Analysis Lab I (1)
MATH 330	Mathematical Statistics (3)	EE 104	Circuit Analysis Lab II (1)
PHYS 201	Fundamentals of Physics I (3)	EE 221	Electronics I (4)
PHYS 202	Fundamentals of Physics II (3)	EE 222	Electronics II (4)
PHYS 103	Physics Laboratory I (1)	EE 331	Electrical Power I (4)
PHYS 104	Physics Laboratory II (1)	EE 332	Electrical Power II (4)
EGR 401	Engineering Design I (3)	EE 351	Digital Electronics I (3)
ET 204	Programming for Eng Tech (3)	EE 352	Microprocessors I (3)
ET 405	Fund. Of Engineering Exam I (0)	EE 375	Signals and Systems (4)
ET 406	Fund. Of Engineering Exam II (0)	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