

# **BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING**

with a minor in

## **THEATRICAL ENGINEERING**

### *2023-2024 Degree Requirements*

**TOTAL CREDITS FOR DEGREE AND MINOR:**

**146**

**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	<b>TE 402</b>	3 credits	<b>(Prof Prac in Theatrical Engr II)</b>

##### ***Choose Thematic Core courses in the following:***

Explore the World - Choice 1	<b>THEA 225</b>	3 credits	<b>(Theatre History I)</b>
Explore the World - Choice 2	<b>THEA 226</b>	3 credits	<b>(Theatre History II)</b>
Investigate Science	<b>CHEM 101</b>	3 credits	<b>(General Chemistry I)</b>
Investigate Mathematics	<b>MATH 190</b>	4 credits	<b>(Calculus I)</b>
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	<b>THEA 230</b>	3 credits	<b>(Introduction to Theatre)</b>
Discover Technology	<b>TE 101</b>	3 credits	<b>(Intro to Theatrical Engineering)</b>

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#### **MAJOR REQUIREMENTS: 88 cr.**

CHEM 103 General Chemistry Laboratory I (1)	EE 101	Circuit Analysis I (3)
MATH 210 Calculus II (4)	EE 102	Circuit Analysis II (3)
MATH 230 Linear Algebra (3)	EE 103	Circuit Analysis Laboratory I (1)
MATH 300 Calculus III (4)	EE 104	Circuit Analysis Laboratory II (1)
MATH 310 Differential Equations (3)	EE 221	Electronics I (4)
MATH 330 Mathematical Statistics (3)	EE 222	Electronics II (4)
PHYS 201 Fundamentals of Physics I (3)	EE 331	Electrical Power I (4)
PHYS 202 Fundamentals of Physics II (3)	EE 332	Electrical Power II (4)
PHYS 103 Physics Laboratory I (1)	EE 351	Digital Electronics I (4)
PHYS 104 Physics Laboratory II (1)	EE 352	Microprocessors I (4)
ET 204 Programming for Eng Tech (3)	EE 375	Signals and Systems (4)
ET 405 Fund Of Engineering Exam I (0)	<b>Technical Electives-Choose 16 cr.</b>	
ET 406 Fund Of Engineering Exam II (0)	EE 415	Electromagnetics (4)
TE 401 Prof Practice in Theatrical Engr I (3)	EE 425	Power Electronics (4)
ME 101 Statics (3)	EE 435	Electrical Distribution Systems (4)
ME 102 Dynamics (3)	EE 445	Control Systems (4)
	EE 455	Digital Electronics II (4)
	EE 465	Communication Electronics (4)
	EE 467	Digital Signal Processing (4)

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#### **PREREQUISITE AND CO-REQUISITE COURSES FOR THE MINOR: 12 cr.**

TE 101 Introduction to Theatrical Engineering (3)  
THEA 225 Theatre History I (3)  
THEA 226 Theatre History II (3)  
THEA 230 Introduction to Theatre (3)

#### **COURSES REQUIRED TO COMPLETE THE MINOR: 21 cr.**

PROD 100 Technical Practicum I (2)  
PROD 101 Technical Practicum II (2)  
PROD 124 Fundamentals of Design and Drawing (3)  
PROD 226 Scene Design I (3)  
PROD 227 Lighting I (3)  
PROD 229 Audio Design I (2)  
TE 401 Professional Practice in Theatrical Engineering I (3)  
TE 402 Professional Practice in Theatrical Engineering II (3)

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#### **STUDENT OUTCOMES**

**Upon successful completion of this program:**

- 1) Students will identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- 2) Students will 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) Students will communicate effectively with a range of audiences.
- 4) Students will 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 contexts.
- 5) Students will function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- 6) Students will develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.
- 7) Students will 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