

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE**  
**GALLOGLY COLLEGE OF ENGINEERING**  
**THE UNIVERSITY OF OKLAHOMA**

Academic Year
For Students Entering the Oklahoma State System for Higher Education <b>Summer 2023 through Spring 2024</b>

General Requirements	
Minimum Total Credit Hours .....	128
<b>Minimum Retention/Graduation Grade Point Averages:</b>	
Overall - Combined and OU .....	2.00
Major - Combined and OU .....	2.00
Curriculum - Combined and OU .....	2.00

Program
<b>Electrical Engineering</b>
<b>B350</b>
Bachelor of Science

OU encourages students to complete at least 32 hours of applicable coursework each year to have the opportunity to graduate in 4 years.

**GENERAL EDUCATION AND COLLEGE REQUIREMENTS**

Courses designated as Core I, II, III, IV, or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list, including at least one upper-division Gen. Ed. course outside of the student's major. **Courses graded P/NP will not apply.**

**A grade of C or better is required in each course in the curriculum, including all prerequisite courses.**

**UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS) AND COLLEGE REQUIREMENTS**

Code	Title	Credit Hours
<b>Core Area I: Symbolic and Oral Communication</b>		
<i>English Composition</i>		
ENGL 1113	Principles of English Composition	3
ENGL 1213	Principles of English Composition	3
or EXPO 1213	Expository Writing	
<i>Language (0-10 hours in the same language)</i>		
This requirement can be met by two years of the same language in high school:		0-10
Beginning Course (0-5 hours)		
Beginning Course, continued (0-5 hours)		
<i>Mathematics</i>		
MATH 1914	Differential and Integral Calculus I (Core I) <sup>1,2</sup>	4
<b>Core Area II: Natural Science (including one laboratory)</b>		
PHYS 2514	General Physics for Engineering and Science Majors (Core II) <sup>2</sup>	4
CHEM 1315	General Chemistry (Core II-Lab) <sup>2</sup>	5
or CHEM 1335	General Chemistry I: Signature Course	
<b>Core Area III: Social Science</b>		
P SC 1113	American Federal Government	3
Choose one course <sup>3</sup>		3
<b>Core Area IV: Arts &amp; Humanities</b>		
<i>Artistic Forms</i>		
Choose one course <sup>3</sup>		3
<i>Western Culture</i>		
HIST 1483	United States to 1865	3
or HIST 1493	United States, 1865 to the Present	
Choose one course (excluding HIST 1483 and HIST 1493) <sup>3</sup>		3
<i>World Culture</i>		
Choose one course <sup>3</sup>		3
<b>Core Area V: First-Year Experience</b>		
Choose one course <sup>3</sup>		3
<b>Total Credit Hours</b>		<b>40-50</b>

<sup>1</sup>MATH 1823, MATH 2423, MATH 2433, and MATH 2443 sequence can be substituted for MATH 1914, MATH 2924, and MATH 2934.

<sup>2</sup>Major support requirements that also satisfy University General Education requirements.

<sup>3</sup>To be chosen from the University-Wide General Education Approved Course List. Three of these hours must be upper-division (3000-4000). See list in the Class Schedule.

**FREE ELECTIVES**

Electives to bring total applicable hours to the minimum total required for the degree including a minimum of 40 upper-division hours.

**Bachelor of Science in Electrical Engineering accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>, under the General Criteria and the Electrical, Computer, Communications, Telecommunication(s) and Similarly Named Program Criteria.**

In order to progress in your curriculum in the Gallogly College of Engineering, and as a specific graduation requirement, a **grade of C or better** is required in each course in the curriculum, including all prerequisite courses.

**MAJOR REQUIREMENTS**

Code	Title	Credit Hours
<b>Required Courses</b>		
ECE 2214	Digital Design	4
ECE 2713	Digital Signals and Filtering	3
ECE 2723	Electrical Circuits I	3
ECE 2523	Probability, Statistics and Random Processes	3
ECE 3613	Electromagnetic Fields I	3
ECE 3723	Electrical Circuits II	3
ECE 3773	Electrical and Computer Engineering Circuits Laboratory	3
ECE 3813	Introductory Electronics	3
ECE 3113	Energy Conversion I	3
ECE 3223	Microprocessor System Design	3
ECE 3793	Signals and Systems	3
ECE 3873	Electrical and Computer Engineering Electronics Laboratory	3
ECE 3323	Introduction to Solid State Electronic Devices	3
ECE 4273	Digital Design Laboratory	3
ECE 4773	Laboratory (Special Projects)	3
<b>ECE Electives</b>		
Choose three 4000-level or higher ECE electives <sup>1</sup>		9
Choose one ECE course from approved list <sup>1</sup>		3
<b>Total Credit Hours</b>		<b>58</b>

<sup>1</sup>Electives to be selected from list available in the ECE Office, DEH-150.

**MAJOR SUPPORT REQUIREMENTS**

Code	Title	Credit Hours
<b>Math and Science</b>		
MATH 2924	Differential and Integral Calculus II	4
MATH 2934	Differential and Integral Calculus III	4
MATH 3113	Introduction to Ordinary Differential Equations	3
MATH 3333	Linear Algebra I	3
PHYS 2524	General Physics for Engineering and Science Majors	4
PHYS 3223	Modern Physics for Engineers	3
<b>Professional Elective</b>		
Choose 3-hour course from an approved list maintained by the department		3
<b>Additional College Requirements</b>		
ENGR 1411	Pathways to Engineering Thinking	1
ENGR 2002	Professional Development	2
C S 1313	Programming for Non-Majors with C	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>Engineering transfer students may take ENGR 3511 in place of ENGR 1411.

More information in the catalog: (<http://ou-public.courseleaf.com/gallogly-engineering/electrical-computer-engineering/electrical-engineering-bachelor-science/>).

### SUGGESTED SEMESTER PLAN OF STUDY

**Bachelor of Science in Electrical Engineering accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>, under the General Criteria and the Electrical, Computer, Communications, Telecommunication(s) and Similarly Named Program Criteria.**

**In order to progress in your curriculum in the Gallogly College of Engineering, and as a specific graduation requirement, a grade of C or better is required in each course in the curriculum, including all prerequisite courses.**

Two college-level courses in a single world language are required; this may be satisfied by successful completion of 2 years in a single world language in high school. Students who must take a language at the University will have an additional 6-10 hours of coursework.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
<b>FRESHMAN</b>	ENGL 1113	Principles of English Composition ( Core I )	3	ENGL 1213 or EXPO 1213	Principles of English Composition ( Core I ) or Expository Writing	3
	CHEM 1315	General Chemistry ( Core II-Lab ) <sup>1</sup>	5	MATH 2924	Differential and Integral Calculus II <sup>2</sup>	4
	HIST 1483 or HIST 1493	United States to 1865 ( Core IV ) or United States, 1865 to the Present	3	PHYS 2514	General Physics for Engineering and Science Majors ( Core II )	4
	MATH 1914	Differential and Integral Calculus I ( Core I ) <sup>2</sup>	4	C S 1313	Programming for Non-Majors with C	3
	ENGR 1411	Pathways to Engineering Thinking <sup>3</sup>	1		Approved Elective: First-Year Experience (Core V) <sup>4</sup>	3
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>17</b>
<b>SOPHOMORE</b>	MATH 2934	Differential and Integral Calculus III <sup>2</sup>	4	MATH 3113	Introduction to Ordinary Differential Equations	3
	PHYS 2524	General Physics for Engineering and Science Majors	4	ECE 2713	Digital Signals and Filtering	3
	ECE 2214	Digital Design	4	ECE 2723	Electrical Circuits I	3
	ENGR 2002	Professional Development	2	ECE 2523	Probability, Statistics and Random Processes	3
		Approved Elective, Social Science (Core III) <sup>4</sup>	3	P SC 1113	American Federal Government ( Core III )	3
					Approved Elective, Artistic Forms (Core IV) <sup>4</sup>	3
<b>CREDIT HOURS</b>		<b>17</b>	<b>CREDIT HOURS</b>		<b>18</b>	
<b>JUNIOR</b>	PHYS 3223	Modern Physics for Engineers	3	MATH 3333	Linear Algebra I	3
	ECE 3613	Electromagnetic Fields I	3	ECE 3113	Energy Conversion I	3
	ECE 3723	Electrical Circuits II	3	ECE 3223	Microprocessor System Design	3
	ECE 3773	Electrical and Computer Engineering Circuits Laboratory	3	ECE 3793	Signals and Systems	3
	ECE 3813	Introductory Electronics	3	ECE 3873	Electrical and Computer Engineering Electronics Laboratory	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>
<b>SENIOR</b>	ECE 3323	Introduction to Solid State Electronic Devices	3	ECE 4773	Laboratory (Special Projects)	3
	ECE 4273	Digital Design Laboratory	3		ECE Elective <sup>5</sup>	3
		ECE 4000-level or higher Elective <sup>5</sup>	3		ECE 4000-level or higher Elective <sup>5</sup>	3
		ECE 4000-level or higher Elective <sup>5</sup>	3		Professional Elective <sup>5</sup>	3
		Approved Elective, Western Culture (Core IV) <sup>4</sup>	3		Approved Elective, World Culture (Core IV) <sup>4</sup>	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>

<sup>1</sup> CHEM 1315 can be substituted with CHEM 1335 (Fall only).

<sup>2</sup> MATH 1823, MATH 2423, MATH 2433, and MATH 2443 sequence can be substituted for MATH 1914, MATH 2924, and MATH 2934.

<sup>3</sup> Engineering transfer students may take ENGR 3511 in place of ENGR 1411.

<sup>4</sup> To be chosen from the University-Wide General Education Approved Course List. Three of these hours must be upper-division(3000-4000). See list in the Class Schedule.

<sup>5</sup> Electives to be selected from list available in the ECE Office, DEH-150.

Courses designated as Core I, II, III, IV or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list.