

ORAL ROBERTS UNIVERSITY  
 DEGREE: **Bachelor of Science in Engineering**  
 MAJOR: **Engineering**  
 CONCENTRATION: **Electrical Engineering (EGR/EEC)**

DEGREE PLAN SHEET **2021-2022**  
**School of Engineering**

TOTAL HOURS REQUIRED 130  
 Hours in Major 27  
 Hours in Concentration 37  
 Hours in Cognate 18  
 Hours in General Education 48

Name \_\_\_\_\_  
 Z# \_\_\_\_\_ Date \_\_\_\_\_  
 Telephone \_\_\_\_\_ Email \_\_\_\_\_  
 Advisor \_\_\_\_\_

SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS	SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS
<b>FRESHMAN Semester 1</b>				<b>FRESHMAN Semester 2</b>			
_____	COMP 102	Composition II*	3	_____	COM 101	Oral Communication	3
_____	THE 104	Spirit-Empowered Living	2	_____	THE 105	Spirit-Empowered Leadership	2
_____	MAT 201	Calculus I++	4	_____	MAT 202	Calculus II	4
_____	CHE 111	General Chemistry I	3	_____	PHY 111	Physics I++	3
_____	CHE 111L	General Chemistry I Lab	1	_____	PHY 111L	Physics I Lab++	1
_____	EGR 101	Introduction to Engineering	2	_____	EGR 140	Engineering Graphics	2
_____	EGR 100	Engineering/Physics Seminar	0	_____	EGR 100	Engineering/Physics Seminar	0
_____	GEN 150	Intro to Whole Person Education	1	_____	HPE 155	Health Fitness	1
_____	PRFH 070	Swimming Proficiency	0				16
			16			Every student must take a "GO" course	

<b>SOPHOMORE Semester 3</b>				<b>SOPHOMORE Semester 4</b>			
_____	MAT 321	Calculus III	4	_____	MAT 211	Differential Equations	3
_____	PHY 112	Physics II	3	_____	EGR 210	Network Analysis I	3
_____	PHY 112L	Physics II Lab	1	_____	EGR 210L	Network Analysis I Lab	1
_____	EGR 252	Engineering Computational Methods	3	_____	EGR 231	Heat and Thermodynamics	3
_____	EGR 221	Mechanics I: Statics	3	_____	EGR 222	Mechanics II: Dynamics	3
_____	BLIT 111	Christian Life I	2	_____	CMPE 340	Digital Systems Design	3
_____	EGR 100	Engineering/Physics Seminar	0	_____	CMPE 340L	Digital Systems Design Lab	1
_____	HPE _____	HPE Activity^	0.5	_____	EGR 100	Engineering/Physics Seminar	0
			16.5	_____	HPE _____	HPE Activity^	0.5
							17.5

<b>JUNIOR Semester 5</b>				<b>JUNIOR Semester 6</b>			
_____	_____	Foreign Language ~	3	_____	BLIT 122	Christian Life II	2
_____	MAT 325	Probability and Statistics	3	_____	COMP 303	Critical Reading and Writing	3
_____	EE 311	Network Analysis II	3	_____	PHY 211	Introduction to Modern Physics #	3
_____	EE 321	Electronics I	3	_____	PHY 211L	Introduction to Modern Physics Lab#	1
_____	EE 321L	Electronics I Lab	1	_____	EE 322	Electronics II	3
_____	EGR 330	Control Systems #	3	_____	EE 322L	Electronics II Lab	1
_____	EGR 100	Engineering/Physics Seminar	0	_____	MAT 312	Linear and Matrix Algebra	3
_____	HPE _____	HPE Activity^	0.5	_____	EGR 100	Engineering/Physics Seminar	0
			16.5	_____	HPE _____	HPE Activity^	0.5
							16.5

<b>SENIOR Semester 7</b>				<b>SENIOR Semester 8</b>			
_____	HPE 400	Lifelong Wellness^	0.5	_____	GOV/HIS _____	Civics Elective **	3
_____	HUM _____	Humanities Options+++	3	_____	_____	Social Sciences Elective+	3
_____	EGR 461	Engineering Management and Economy	2	_____	HUM _____	Humanities Options+++	3
_____	EE 360	Electromagnetic Theory	3	_____	_____	Technical Elective	3
_____	_____	Technical Elective	3	_____	EGR 499	Senior Design and Research II	2
_____	_____	Technical Elective	3	_____	PRFR 001	FE Exam Proficiency	0
_____	EGR 498	Senior Design and Research I	2	_____	EGR 100	Engineering/Physics Seminar	0
_____	EGR 100	Engineering/Physics Seminar	0	_____	HPE _____	HPE Activity^	0.5
			16.5				14.5

- \* If the student is required to enroll in COMP 101, then COMP 102 must be taken before semester 6 and one of the other General Education courses will be taken by correspondence or summer school.
- ++ Students who need Precalculus in semester I should take Calculus I in the spring and Physics I in the summer.
- + PSY 201 Principles of Psychology, MUS 208 Music in World Cultures, SWK 202 Introduction to Social Work, SOC 101 Introduction in Sociology, SOC 201 Marriage and Family, SOC 323 Child and Family in the Social Context, BUS 201 Principles of Economics I , or FIN 244 Personal Financial Planning (recommended)
- \*\* See list of Civics options on the back.
- +++ See list of Humanities (HUM) options on the back.
- # May be taken in senior year (switched with technical elective.)
- ~ Foreign Language 101 or 102 will require an additional credit hour.

**BS in Engineering - Electrical Engineering Concentration (EGR/EEC)**

<b>General Education</b>			<b>Credit Hours</b>
Introduction to Whole Person Education (GEN 150) Counts as HPE Activity			1
Composition (COMP 102, 303)			6
Oral Communication (COM 101)			3
Humanities (HUM: 201*, 202*, 203*, 204*, 333, 342; ART: 103, 104, 307; DANP 125; DRAM: 215, 304; MUS 130) *At least one course must be chosen from courses marked with asterisks.			6
Civics (GOV 101, GOV, 103, HIS 110, HIS 111, or HIS 200)			3
Foreign Language (101, 102, 203 or 204) * fulfills "GO" course requirement			3
Biblical Literacy (BLIT 111, 222)			4
Theology (THE 104, 105)			4
Chemistry (CHE 111 lecture and lab)			4
Physics (PHY 111 lecture and lab)			4
Mathematics (MAT 325)			3
Social Sciences Elective (Choice of one of the following: PSY 201, MUS 208, SWK 202, SOC 101, SOC 201, SOC 323, BUS 201 or FIN 244-recommended.)			3
Health Science (one course per full-time semester at ORU, including HPE 155 and 400, swimming course or proficiency, and electives.)			4
<b>General Education Total</b>			<b>48</b>
<b>Major</b>			
EGR	100	Engineering/Physics Seminar	0
EGR	101	Introduction to Engineering	2
EGR	140	Engineering Graphics	2
EGR	210	Network Analysis I (lecture and lab)	4
EGR	221	Mechanics I: Statics	3
EGR	231	Heat and Thermodynamics	3
EGR	461	Engineering Management and Economy	2
EGR	498	Senior Design and Research I	2
EGR	499	Senior Design and Research II	2
PRFR	001	FE Exam Proficiency	0
PHY	112	Physics II (lecture and lab)	4
EGR	252	Engineering Computational Methods	3
<b>Major Total</b>			<b>27</b>
<b>Electrical Engineering Concentration (EE)</b>			
PHY	211	Introduction to Modern Physics (lecture and lab)	4
EGR	222	Mechanics II: Dynamics	3
EGR	330	Control Systems	3
EE	311	Network Analysis II	3
EE	321	Electronics I (lecture and lab)	4
EE	322	Electronics II (lecture and lab)	4
EE	360	Electromagnetic Theory	3
CMPE	340	Digital Systems Design (lecture and lab)	4
<b>Choice of three of the following technical elective courses:</b>			<b>9</b>
EE	325	Design with Standard Components	
EE	450	Digital Signal Processing	
EGR	331	Design of Control Systems	
CMPE	312	Computer Networks and Communications	
CMPE	441	Microprocessor Systems Design	
CMPE	443	Computer Architecture	
CMPE	450	Special Topics: Artificial Intelligence	
<b>Electrical Engineering Concentration Total</b>			<b>37</b>
<b>Cognate</b>			
MAT	201	Calculus I	4
MAT	202	Calculus II	4
MAT	211	Differential Equations	3
MAT	312	Linear and Matrix Algebra	3
MAT	321	Calculus III	4
<b>Cognate Total</b>			<b>18</b>
<b>Degree Total</b>			<b>130</b>

\*All students must pass the seminar course each semester they are enrolled in this major.