ORAL ROBERTS UNIVERSITY | DEGREE PLAN SHEET 2013-2014 | TOTAL HOURS REQUIRED 137

DEGREE: **Bachelor of Science in Engineering** | **Engineering, Computing, Physics and** | Hours in Major 41

MAJOR: **Engineering—Electrical Concentration (EGR/EEC)** | **Mathematics Department** | Hours in Concentration 40

Hours in General Education 56

Name _____

Z# _____ Date _____

Telephone _____ Email _____

Advisor _____

SEMESTER TAKEN	COURSE CODE		COURSE TITLE	CREDIT HOURS
			FRESHMAN Semester 1	
	COMP	102	Reading/Writing in Liberal Arts*	3
	THE	103	Spirit-Empowered Living	3
	MAT	201	Calculus I**	4
	CHE	111	General Chemistry I	3
	CHE	111	General Chemistry I Lab	1
	EGR	101	Introduction to Engineering	2
	EGR	100	Engineering/Physics Seminar	0
	GEN	099	Whole Person Assessment	0
	PRF	070	Swimming Proficiency	0
	HPE	001	Health Fitness I	1
				17
			SOPHOMORE Semester 3	
	MAT	321	Calculus of Functions of Several Variables	4
	PHY	112	Physics II	3
	PHY	112	Physics II Lab	1
	EGR	252	Engineering Computational Methods	3
	EGR	221	Mechanics I: Statics	3
	BLIT	110	Survey of Old Testament Literature	3
	EGR	100	Engineering/Physics Seminar	0
	HPE	____	HPE Activity^	0.5
				17.5
			JUNIOR Semester 5	
	____	____	Social Sciences Elective+	3
	HUM	____	Humanities Options+++	3
	EE	311	Network Analysis II	3
	EE	321	Electronics I	3
	EE	321	Electronics I Lab	1
	EGR	330	Control Systems#	3
	EGR	100	Engineering/Physics Seminar	0
	HPE	____	HPE Activity^	0.5
				16.5
			SENIOR Semester 7	
	HIS	101	American History	3
	EGR	461	Engineering Management and Economy	2
	EE	360	Electromagnetic Theory	3
	____	____	Technical Elective++	3
	____	____	Technical Elective++	3
	EGR	498	Senior Design and Research I	2
	EGR	100	Engineering/Physics Seminar	0
	HPE	____	HPE Activity^	0.5
				16.5

SEMESTER TAKEN	COURSE CODE		COURSE TITLE	CREDIT HOURS
			FRESHMAN Semester 2	
	COM	101	Oral Communication	3
	HUM	103	Christian Worldview and Culture	3
	MAT	202	Calculus II	4
	PHY	111	Physics I**	3
	PHY	111	Physics I Lab**	1
	EGR	140	Engineering Graphics	2
	EGR	100	Engineering/Physics Seminar	0
	HPE	002	Health Fitness II	1
				17
			SOPHOMORE Semester 4	
	MAT	211	Differential Equations	3
	EGR	210	Network Analysis I	3
	EGR	210	Network Analysis I Lab	1
	EGR	231	Heat and Thermodynamics	3
	EGR	222	Mechanics II: Dynamics	3
	CMPE	340	Digital Systems Design	3
	CMPE	340	Digital Systems Design Lab	1
	EGR	100	Engineering/Physics Seminar	0
	HPE	____	HPE Activity^	0.5
				17.5
			SUMMER	
	BLIT	120	Survey of New Testament Literature	3
	HUM	____	Humanities Options+++	3
			JUNIOR Semester 6	
	COMP	303	Critical Reading and Writing	3
	HUM	____	Humanities Options+++	3
	MAT	____	Math Elective (Upper Division)	3
	EE	322	Electronics II	3
	EE	322	Electronics II Lab	1
	____	____	Technical Elective++	3
	EGR	100	Engineering/Physics Seminar	0
	HPE	____	HPE Activity^	0.5
				16.5
			SENIOR Semester 8	
	GOV	101	American Government	3
	PHY	211	Modern Physics	3
	PHY	211	Modern Physics Lab	1
	____	____	Technical Elective++	3
	EGR	499	Senior Design and Research II	2
	EGR	100	Engineering/Physics Seminar	0
	HPE	____	HPE Activity^	0.5
				12.5

* 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.

\+ BUS 201 Principles of Economics I (recommended), PSY 201 Principles of Psychology, SOC 101 Introduction to Sociology, FIN 244 Personal Financial Planning, SOC 201 Marriage and Family, MUS 208 Music in World Cultures, SWK 202 Introduction to Social Work, or SOC 323 Child and Family in the Social Context

++ See back of degree plan sheet for listing of courses available as electives.

+++ See list of Humanities (HUM) options on the back.

\# May be taken in fall of senior year (switched with technical elective)

^ HPE courses are 1 credit hour each, but students can petition to take them for .5 credits. Course work remains the same.

2013-2014

BS in Engineering - Electrical Concentration (EGR/EEC)

General Education	**Credit Hours**
Whole Person Assessment (GEN 099)	0
English (COMP 102, 303)	6
Oral Communication (COM 101)	3
Humanities (HUM 103 plus three of the following: HUM 222*, 233*, 244*, 250, 255, 260, 270, 333*, COMP 101) *At least one course must be chosen from courses marked with asterisks.	12
Biblical Literature (BLIT 110, 120)	6
Theology (THE 103)	3
Chemistry (CHE 111 lecture and lab)	4
Physics (PHY 111 lecture and lab)	4
Mathematics (MAT 201)	4
American History (HIS 101)	3
American Government (GOV 101)	3
Social Sciences (BUS 101 recommended)	3
Health, Physical Education, and Recreation (one course per full-time semester at ORU, including HPE 001 and 002, swimming course or proficiency, and activity electives.)**	5
General Education Total	**56**

Cognate			
MAT	202	Calculus II	4
MAT	211	Differential Equations	3
MAT	321	Calculus of Functions of Several Variables	4
MAT	____	Elective (upper division)	3
		Cognate Total	**14**
Major			
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
PHY	112	Physics II (lecture and lab)	4
EGR	252	Engineering Computational Methods	3
		Major Total	**27**
		Electrical Engineering Concentration (EE)	
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
		Choice of four of the following courses:	12
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	Artificial Intelligence	
		Electrical Engineering Concentration Total	**40**
		Degree Total	**137**

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

**After passing HPE 001 and 002, students must take and pass one activity course per full-time semester at ORU.