

ORAL ROBERTS UNIVERSITY
DEGREE: **Bachelor of Science**
MAJOR: **Engineering Physics (EGRP)**

DEGREE PLAN SHEET 2013-2014
**Engineering, Computing, Physics and
Mathematics Department**

TOTAL HOURS REQUIRED 138
Hours in Major 65
Hours in Cognate 17
Hours in General Education 56

Name _____
Z# _____ Date _____
Telephone _____ Email _____
Advisor _____

SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS	SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS
FRESHMAN Semester 1				FRESHMAN Semester 2			
_____	COMP 102	Reading/Writing in Liberal Arts*	3	_____	COM 101	Oral Communication	3
_____	THE 103	Spirit-Empowered Living	3	_____	CHE 112	General Chemistry II	3
_____	MAT 201	Calculus I++	4	_____	CHE 112	General Chemistry II Lab	1
_____	CHE 111	General Chemistry I	3	_____	MAT 202	Calculus II	4
_____	CHE 111	General Chemistry I Lab	1	_____	PHY 111	Physics I++	3
_____	EGR 101	Introduction to Engineering	2	_____	PHY 111	Physics I Lab++	1
_____	EGR 100	Engineering/Physics Seminar		_____	EGR 140	Engineering Graphics	2
_____	GEN 099	Whole Person Assessment	0	_____	EGR 100	Engineering/Physics Seminar	0
_____	PRF 070	Swimming Proficiency	0	_____	HPE 002	Health Fitness II	1
_____	HPE 001	Health Fitness I	1				18
			17				
SOPHOMORE Semester 3				SOPHOMORE Semester 4			
_____	MAT 321	Calculus of Functions of Several Variables	4	_____	MAT 211	Differential Equations	3
_____	PHY 112	Physics II	3	_____	EGR 210	Network Analysis I	3
_____	PHY 112	Physics II Lab	1	_____	EGR 210	Network Analysis I Lab	1
_____	EGR 252	Engineering Computational Methods	3	_____	PHY 211	Introduction to Modern Physics	3
_____	BLIT 110	Survey of Old Testament Literature	3	_____	PHY 211	Introduction to Modern Physics Lab	1
_____	HUM 103	Christian Worldview and Culture	3	_____	BLIT 120	Survey of New Testament Literature	3
_____	EGR 100	Engineering/Physics Seminar	0	_____	HUM	Humanities Options+++	3
_____	HPE	HPE Activity^	0.5	_____	EGR 100	Engineering/Physics Seminar	0
			17.5	_____	HPE	HPE Activity^	0.5
							17.5
JUNIOR Semester 5				JUNIOR Semester 6			
_____	_____	Social Sciences Elective+	3	_____	COMP 303	Critical Reading and Writing	3
_____	HUM	Humanities Options+++	3	_____	PHY 302	Heat and Thermodynamics	3
_____	PHY 331	Electromagnetic Theory OR	3	_____	HIS 101	American History	3
_____	PHY 401	Optics		_____	MAT 312	Linear and Matrix Algebra	3
_____	PHY 321	Electronics I	3	_____	GOV 101	American Government	3
_____	PHY 321	Electronics I Lab	1	_____	PHY 341	Advanced Physics Lab	1
_____	MAT 325	Probability and Statistics	3	_____	EGR 100	Engineering/Physics Seminar	0
_____	EGR 100	Engineering/Physics Seminar	0	_____	HPE	HPE Activity^	0.5
_____	HPE	HPE Activity^	0.5				16.5
			16.5				
SENIOR Semester 7				SENIOR Semester 8			
_____	PHY 311	Mechanics I: Statics	3	_____	HUM	Humanities Options+++	3
_____	PHY 401	Optics OR	3	_____	PHY 312	Mechanics II: Dynamics	3
_____	PHY 331	Electromagnetic Theory		_____	PHY 402	Quantum Mechanics	3
_____	_____	Technical Electives	6	_____	_____	Technical Electives	6
_____	PHY/EGR	Elective	3	_____	PHY 499	Senior Design and Research II	2
_____	PHY 498	Senior Design and Research I	2	_____	EGR 100	Engineering/Physics Seminar	0
_____	EGR 100	Engineering/Physics Seminar	0	_____	HPE	HPE Activity^	0.5
_____	HPE	HPE Activity^	0.5				17.5
			17.5				

- * 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 1 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 in 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 list of Humanities (HUM) options on the back.
- ** See list available from advisor or Department Chair.
- ^ HPE courses are 1 credit hour each, but students can petition to take them for .5 credits. Course work remains the same.
- NOTE: Some upper level courses may be offered only in alternate years. Students are advised to take electives under the guidance of the advisor.

BS in Engineering Physics (EGRP)

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
Chemistry (CHE 112 lecture and lab)			4
Mathematics (MAT 201)			4
American History (HIS 101)			3
American Government (GOV 101)			3
Social Sciences Elective (BUS 201 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
Major			
PHY	111	Physics I (lecture and lab)	4
PHY	112	Physics II (lecture and lab)	4
PHY	211	Modern Physics (lecture and lab)	4
PHY	302	Heat and Thermodynamics	3
PHY	311	Mechanics I: Statics	3
PHY	312	Mechanics I: Dynamics	3
PHY	321	Electronics I (lecture and lab)	4
PHY	331	Electromagnetic Theory	3
PHY	341	Advanced Physics Laboratory	1
PHY	401	Optics	3
PHY	402	Quantum Mechanics	3
PHY	498	Senior Design and Research I	2
PHY	499	Senior Design and Research II	2
MAT/PHY/			
EGR	_____	Elective (upper division)	15
EGR	100	Engineering Seminar	0
EGR	101	Introduction to Engineering	2
EGR	140	Engineering Graphics	2
EGR	210	Network Analysis (lecture and lab)	4
EGR	252	Engineering Computational Methods	3
Major Total			65
Cognate			
MAT	202	Calculus II	4
MAT	211	Differential Equations	3
MAT	312	Linear and Matrix Algebra	3
MAT	321	Calculus of Functions of Several Variables	4
MAT	325	Probability and Statistics	3
Cognate Total			17
Degree Total			138

*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.