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

DEGREE PLAN SHEET 2012-2013
Engineering, Computer Science, and Mathematics Department

TOTAL HOURS REQUIRED	138
Hours in Major	65
Hours in Minor	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 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 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 it 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 2012-2013
Engineering Physics Concentration (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 (Health Fitness I and II, swimming course or proficiency, and six 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/Minor			
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/Minor 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.