

EGRP

ORAL ROBERTS UNIVERSITY

DEGREE PLAN SHEET 2011-2012

TOTAL HOURS REQUIRED

138

Engineering, Computer Science, Physics & Mathematics Department

Hours in Major

59

DEGREE: Bachelor of Science

Hours in Minor

17

MAJOR: ENGINEERING PHYSICS (EGRP)

Hours in General Education

56

Hours in Electives

6

Name _____
 ID _____ Date _____
 Telephone _____ Email _____
 Advisor _____

SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS	SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS
<u>FRESHMAN Semester 1</u>				<u>FRESHMAN Semester 2</u>			
_____	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	0	_____	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				

<u>SOPHOMORE Semester 3</u>				<u>SOPHOMORE Semester 4</u>			
_____	MAT 321	Calculus of Functions of Several Variable	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 101	Humanities: Humanitas	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

<u>JUNIOR Semester 5</u>				<u>JUNIOR Semester 6</u>			
_____	HUM _____ +	Social Sciences Elective	3	_____	COMP 303	Critical Reading and Writing	3
_____	PHY 331 +++	Humanities Options	3	_____	PHY 302	Heat & Thermodynamics	3
_____	PHY 401	Electromagnetic Theory OR	3	_____	HIS 101	American History	3
_____	PHY 321	Optics	3	_____	MAT 312	Linear and Matrix Algebra	3
_____	PHY 321	Electronics I	3	_____	MAT 325	Probability and Statistics	3
_____	PHY 321	Electronics I Lab	1	_____	PHY 341	Advanced Physics Lab	1
_____	GOV 101	American Government	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				

<u>SENIOR Semester 7</u>				<u>SENIOR Semester 8</u>			
_____	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	3	_____	PHY 402	Quantum Mechanics	3
_____	PHY/EGR	Technical Elective	3	_____	PHY	Technical Elective	3
_____	PHY 498	Senior Design & Research I	2	_____	PHY 499	Senior Design & Research II	2
_____	EGR 100	Engineering/Physics Seminar	0	_____	EGR 100	Engineering/Physics Seminar	0
_____	HPE _____ ^	HPE Activity	0.5	_____	HPE _____ ^	HPE Activity	0.5
			14.5				14.5

KEY

- * 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.

B.S. in Engineering Physics (EGRP)

2011-2012

<u>General Education</u>			<u>Credit Hours</u>
Whole Person Assessment (GEN 099)			0
English (COMP 102, 303)			6
Oral Communication (COM 101)			3
Humanities (HUM 101 plus three of the following: HUM 222*, 233*, 244*, 250, 255, 260, 270, 301*, 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
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<u>General Education Total</u>			<u>56</u>
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<u>Major</u>			
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 Research and Design I	2
PHY	499	Senior Research and Design II	2
PHY/EGR		Elective (upper division)	9
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
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Major Total			<u>59</u>
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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
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Minor Total			<u>17</u>
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Electives			6
DEGREE TOTAL			<u><u>132</u></u>

*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 1 activity course per full-time semester at ORU.