ORAL ROBERTS UNIVERSITY | DEGREE PLAN SHEET 2012-2013 | TOTAL HOURS REQUIRED 137

DEGREE: **Bachelor of Science** | **Engineering, Computer Science, and** | Hours in Major 81

MAJOR: **Biomedical Engineering (EGRB)** | **Mathematics Department** | 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	____	BLIT	120	Survey of New Testament Literature	**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					
			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
_____	BIO	111	Introduction to Biology I	3	_____	PHS	223	Human Anatomy	3
_____	BIO	111	Introduction to Biology I Lab	1	_____	PHS	223	Human Anatomy Lab	1
____	BLIT	110	Survey of Old Testament Literature	3	_____	HUM	103	Christian Worldview and Culture	3
____	____	____	Social Science Elective+	3	_____	COM	101	Oral Communication	3
_____	EGR	100	Engineering/Physics Seminar	0	_____	EGR	100	Engineering/Physics Seminar	0
_____	HPE	_____	HPE Activity^	0.5	_____	HPE	_____	HPE Activity^	0.5
				18.5					17
					SUMMER				
					_____	HUM	_____	Humanities Options+++	3
			JUNIOR Semester 5					**JUNIOR Semester 6**	
_____	HUM	_____	Humanities Options+++	3	_____	COMP	303	Critical Reading and Writing	3
	CHEM	211	Organic Chemistry I	3	_____	HUM	____	Humanities Options+++	3
_____	CHEM	211	Organic Chemistry I Lab	1	_____	BE	310	Biomed Engineering Survey OR	3
_____	EE	311	Network Analysis II	3	_____	GOV	101	American Government	
_____	PHS	224	Human Physiology	3	_____	CHE	212	Organic Chemistry II	3
_____	PHS	224	Human Physiology Lab	1	_____	CHE	212	Organic Chemistry II Lab	1
_____	EE	321	Electronics I	3	_____	EE	322	Electronics II	3
	EE	321	Electronics I Lab	1	_____	EE	322	Electronics II Lab	1
_____	EGR	100	Engineering/Physics Seminar	0	_____	EGR	100	Engineering/Physics Seminar	0
_____	HPE	_____	HPE Activity^	0.5	_____	HPE	_____	HPE Activity^	0.5
				18.5					17.5
			SENIOR Semester 7					**SENIOR Semester 8**	
_____	HIS	101	American History	3	_____	GOV	101	American Government OR	3
_____	EGR	221	Mechanics I: Statics	3	_____	BE	310	Biomedical Engineering Survey	
_____	EE	360	Electromagnetic Theory		_____	EGR	222	Mechanics II: Dynamics	3
_____	EGR	252	Engineering Computational Methods	6	_____	BIO	____	Biology Lecture Options++++	3
_____	EGR	498	Senior Design and Research I	2	_____	BIO	_____	Biology Lab Options++++	1
_____	EGR	100	Engineering/Physics Seminar	0	_____	EGR	499	Senior Design and Research II	2
_____	HPE	_____	HPE Activity^	0.5	_____	EGR	100	Engineering/Physics Seminar	0
				14.5	_____	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 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.

++++ Select 3-hour lecture and 1-hour lab from one of the following: BIO 311, BIO 411, BIO 431, or BIO 370.

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

BS in Engineering **2012-2013**
Biomedical Engineering (EGRB)

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 201 recommended)			3
Health, Physical Education, and Recreation (Health Fitness (I and II, swimming course proficiency, and six 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
		Cognate Total	**11**
Major			
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	222	Mechanics II: Dynamics	3
EGR	252	Engineering Computational Methods	3
EGR	498	Senior Design and Research I	2
EGR	499	Senior Design and Research II	2
BE	310	Biomedical Engineering Survey	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
EGR	100	Engineering/Physics Seminar	0
CHE	112	General Chemistry I (lecture and lab)	4
CHE	211	Organic Chemistry I (lecture and lab)	4
CHE	212	Organic Chemistry II (lecture and lab)	4
PHY	112	Physics II (lecture and lab)	4
BIO	111	Introduction to Biology I (lecture and lab)	4
BIO	*	*Choice of one of the following (lecture and lab:) BIO 311, BIO 411, or BIO 431	4
PHS	223	Human Anatomy and Physiology I (lecture and lab)	4
PHS	224	Human Anatomy and Physiology II (lecture and lab)	4
		Major Total	**70**
		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 1 activity course per full-time semester at ORU.