

ORAL ROBERTS UNIVERSITY
DEGREE: Bachelor of Science
MAJOR: Biomedical Chemistry (BMC)
CONCENTRATION: Research

DEGREE PLAN SHEET 2012-2013
Biology and Chemistry Department

TOTAL HOURS REQUIRED 129
Hours in General Education 57
Hours in Major 25
Hours in Concentration 9
Hours in Cognate 12
Hours in General Electives 5
Biology Minor 21

Name _____
Z No. _____ Date _____
Telephone _____ Email _____
Advisor _____

COURSE EARNED	COURSE CODE	COURSE TITLE	CREDIT HOURS	COURSE EARNED	COURSE CODE	COURSE TITLE	CREDIT HOURS
FRESHMAN Semester 1				FRESHMAN Semester 2			
_____	CHE 111	General Chemistry I Lecture	3	_____	CHE 112	General Chemistry II Lecture	3
_____	CHE 111	General Chemistry I Laboratory	1	_____	CHE 112	General Chemistry II Lab	1
_____	MAT 201	Calculus I	4	_____	MAT 202	Calculus II (Cognate)	4
_____	COMP 102	Reading and Writing in Liberal Arts	3	_____	BIO 112	Introductory Biology II Lecture	3
_____	BIO 111	Introductory Biology I Lecture	3	_____	BIO 112	Introductory Biology II Laboratory	1
_____	BIO 111	Introductory Biology I Laboratory	1	_____	COM 101	Oral Communication	3
_____	HPE 001	Health Fitness I	1	_____	HPE 002	Health Fitness II	1
_____	PRF 070	Swimming Proficiency	0				16
_____	GEN 099	Whole Person Assessment	0				
_____	PHP 100	Pre-Health Professions Seminar (semester 1 or 2)	1				
			17				

SOPHOMORE Semester 3				SOPHOMORE Semester 4			
_____	CHE 211	Organic Chemistry I Lecture (F)	3	_____	CHE 212	Organic Chemistry II Lecture (S)	3
_____	CHE 211	Organic Chemistry I Laboratory (F)	1	_____	CHE 212	Organic Chemistry II Lab (S)	1
_____	PHY 101	General Physics I Lecture	3	_____	CHE 300	Quantitative Analysis Lecture (S)	2
_____	PHY 101	General Physics I Laboratory	1	_____	CHE 300	Quantitative Analysis Lab (S)	2
_____	BIO ____	Biology Elective Lecture	3	_____	PHY 102	General Physics II Lecture	3
_____	BIO ____	Biology Elective Laboratory	1	_____	PHY 102	General Physics II Laboratory	1
_____	BLIT 110	Survey of Old Testament Literature	3	_____	BLIT 120	Survey of New Testament Literature	3
_____	HUM 103	Christian Worldview and Culture	3	_____	HUM ____	Humanities Elective	3
_____	HPE ____	HPE Activity	0.5	_____	HPE ____	HPE Activity	0.5
			18.5				18.5

JUNIOR Semester 5				JUNIOR Semester 6			
_____	CHE 303	Physical Chemistry I Lecture (F)	3	_____	CHE 303	Physical Chemistry I Lab (S)	1
_____	CHE 400	Chemical Instrumentation Lecture (F)	2	_____	CHE 449	Chemistry Research (S)	1
_____	CHE 400	Chemical Instrumentation Lab (F)	2	_____	CHE ____	Concentration Elective	3
_____	CHE 459	Biochemistry Lecture	3	_____	BIO ____	Biology Elective Lecture	3
_____	CHE 459	Biochemistry Lab	1	_____	BIO ____	Biology Elective Laboratory	1
_____	BIO 370	Methods in Biotechnology	1	_____	COMP 303	Critical Reading and Writing	3
_____	HPE ____	HPE Activity	0.5	_____	HUM ____	Humanities Elective	3
			12.5	_____	HPE ____	HPE Activity	0.5
				_____	Prepare for Summer Internship Program		0
							15.5

*Biochemistry is recommended prior to taking the MCAT in April-August.

CHEMISTRY INTERNSHIP DURING THE SUMMER

SENIOR Semester 7				SENIOR Semester 8			
_____	CHE 499	Individual Research and Senior Paper (F)	3	_____	CHE 452	Seminar (S)	1
_____	THE 103	Spirit-Empowered Living	3	_____	CHE ____	Concentration Elective	3
_____	BIO ____	Biology Field Course Lecture	3	_____	HUM ____	Humanities Elective	3
_____	BIO ____	Biology Field Course Laboratory	1	_____	____	General Elective	1
_____	HIS 101	American History	3	_____	PSY ____	Elective (301, 305, 338)*	3
_____	PSY 201	Principles of Psychology or Social Sciences Elective*	3	_____	GOV 101	Government	3
_____	HPE ____	HPE Activity	0.5	_____	HPE ____	HPE Activity	0.5
			16.5				14.5

*See pre-med advisor and recommendations on back page.

KEY

(F) Offered in Fall Only
(S) Offered in Spring Only

Biomedical Chemistry

Research Concentration

F=Fall Semester S=Spring Semester

*F=Alternating Fall Semesters *S=Alternating Spring Semesters

GENERAL EDUCATION REQUIREMENTS					MAJOR REQUIREMENTS					
57 Credit Hours Required					25 Credit Hours Required					
For the Spirit				Credit	Hours	Credit				Hours
_____	BLT	110	Survey of Old Testament Literature	3	_____	CHE 211	Organic Chemistry I Lecture (F)	3		
_____	BLT	120	Survey of New Testament Literature	3	_____	CHE 211	Organic Chemistry I Laboratory (F)	1		
_____	THE	103	Spirit-Empowered Living	3	_____	CHE 212	Organic Chemistry II Lecture (S)	3		
For the Mind					_____	CHE 212	Organic Chemistry II Laboratory (S)	1		
_____	GEN	099	Whole Person Assessment	0	_____	CHE 300	Quantitative Analysis Lecture (S)	2		
_____	CHE	111	General Chemistry I Lecture	3	_____	CHE 300	Quantitative Analysis Laboratory (S)	2		
_____	CHE	111	General Chemistry I laboratory	1	_____	CHE 303	Physical Chemistry I Lecture (F)	3		
_____	CHE	112	General Chemistry II Lecture	3	_____	CHE 303	Physical Chemistry I Laboratory (S)	1		
_____	CHE	112	General Chemistry II Laboratory	1	_____	CHE 400	Chemical Instrumentation Lecture (F)	2		
_____	CHE	112	General Chemistry II Honors Lab	1	_____	CHE 400	Chemical Instrumentation Laboratory (F)	2		
_____	COM	101	Oral Communication	3	_____	CHE 449	Chemistry Research (S)	1		
_____	COMP	102	Reading and Writing in the Liberal Arts	3	_____	CHE 452	Seminar (S)	1		
_____	COMP	303	Critical Reading and Writing (S Junior Year)	3	_____	CHE 499	Individual Research and Senior Paper (F)	3		
_____	GOV	101	American Government	3						
_____	HIS	101	American History	3	RESEARCH CONCENTRATION					9
_____	MAT	201	Calculus I	4	9 Credit Hours					
_____	HUM	301	Christian Worldview and Culture	3						
_____	_____	_____	Humanities Electives (3 required)	9	Choose one or two from the following courses:					
			HUM 222		_____	Organic				
			HUM 233		_____	CHE 454	Recombinant DNA (S)	3		
			HUM 244		_____	CHE 455	Oncological Chemistry (S)	3		
			HUM 233		_____	CHE 459	Biochemistry Lecture (F)*	3		
			HONR 102		_____	CHE 459	Biochemistry Laboratory (S)*	1		
_____	_____	_____	Social Sciences Elective (1 required)	3	_____	CHE 473	Synthesis (F)	3		
			BUS 101 Principles of Economics (F)		Choose one or two from the following courses:					
			FIN 244 Personal Financial Planning		_____	Analytical/Inorganic/Physical				
			MUS 208 Music in World Cultures		_____	CHE 304	Physical Chemistry II (S)	3		
			PSY 201 Introduction to Psychology		_____	CHE 456	Inorganic Chemistry (S)	3		
			SOC 101 Introduction to Sociology		_____	CHE 474	Environmental Analysis (F)	3		
			SOC 201 Marriage and the Family		*Highly recommended by medical schools					
			SOC 323 Child and Family in the Social Context		COGNATE REQUIREMENTS					
			SWK 202 Introduction to Social Work		12 Credit Hours Required					
					_____	MAT 202	Calculus II	4		
					_____	Choose one from the following pairs:				8
					_____	PHY 101	General Physics I Lec and Lab (F)	4		
					_____	PHY 102	General Physics II Lec and Lab (S)	4		
						or				
					_____	PHY 111	Physics I Lec and Lab (Calculus Based) (S)	4		
					_____	PHY 112	Physics II Lec and Lab (Calculus Based) (F)	4		
GENERAL ELECTIVES					BIOLOGY MINOR REQUIREMENTS					
5 Credit Hours Required					21 Credit Hours Required					
Choose two from the following courses:					_____	BIO 111	Introduction to Biology I Lec and Lab	4		
CSC	111	Introduction to Computing			_____	BIO 112	Introduction to Biology II Lec and Lab	4		
MAT	211	Differential Equations			_____	BIO 312	Ecology or Biology field course Lec and Lab	4		
MAT	312	Linear and Matrix Algebra			_____	BIO 370	Methods in Biotechnology	1		
MAT	332	Introduction to Biostatistics*			_____	Choose two from the following courses:				8
*Human Anatomy, Pre-Health Professions Seminar, Human Physiology, Bioethics, Biostatistics, Psychology (301, 305, 338), and/or Human Cadaver Dissection are recommended for medical school.					_____	BIO 310	Microbiology Lec and Lab	4		
					_____	BIO 311	Genetics Lec and Lab	4		
					_____	BIO 411	Molecular Cell Biology Lec and Lab	4		
					_____	BIO 421	General and Comparative Physiology Lec and Lab	4		
					_____	BIO 431	Developmental Biology Lec and Lab	4		
					_____	BIO 457	Principles of Immunology Lec and Lab	4		