

ORAL ROBERTS UNIVERSITY  
 DEGREE: **Bachelor of Science**  
 MAJOR: **Mathematical Finance (MFN)**

**DEGREE PLAN SHEET 2014-2015**  
**Mathematical Finance Major**  
 Computing and Mathematics Department

TOTAL HOURS REQUIRED 128  
 Hours in general education 55  
 Hours in major 39  
 Hours in cognate 27  
 Hours in electives 7

Name \_\_\_\_\_  
 ID \_\_\_\_\_ Date \_\_\_\_\_  
 Telephone \_\_\_\_\_ Email \_\_\_\_\_  
 Advisor \_\_\_\_\_

SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS	SEMESTER TAKEN	COURSE CODE	COURSE TITLE	CREDIT HOURS
<b>FRESHMAN Semester 1</b>				<b>FRESHMAN Semester 2</b>			
_____	COMP 102	Reading/Writing in Liberal Arts	3	_____	111	Laboratory Science <sup>1</sup>	4
_____	ACT 215	Principles of Financial Accounting I	3	_____	ACT 216	Principles of Financial Accounting II	3
_____	MAT 201	Calculus I	4	_____	MAT 202	Calculus II	4
_____	CSC 111	Introduction to Computing	3	_____	CSC 255	Data Structures	3
_____	THE 103	Spirit-Empowered Living	3	_____	FIN 244	Personal Financial Planning	3
_____	GEN 099	Whole Person Assessment	0	_____	HPE 002	Health Fitness II	1
_____	HPE 001	Health Fitness I	1				18
			17				

<sup>1</sup>PHY 111 recommended (followed by PHY 112). If science sequence other than Physics 111 and 112 is selected, take Oral Communication in semester 2 and second science class in semester 4.

<b>SOPHOMORE Semester 3</b>				<b>SOPHOMORE Semester 4</b>			
_____	HUM 103	Christian Worldview & Culture	3	_____	COM 101	Oral Communication	3
_____	BUS 201	Principles of Economics I	3	_____	HUM _____	Humanities Options <sup>5</sup>	3
_____	MAT 232	Elementary Statistics (Gen Ed)	3	_____	BUS 202	Principles of Economics II	3
_____	112	Laboratory Science	4	_____	MAT 312	Linear and Matrix Algebra	3
_____	BLIT 110	Survey of Old Testament Literature	3	_____	BLIT 120	Survey of New Testament Literature	3
_____	HPE 026	Beginning Swimming <sup>3</sup> OR	0.5	_____	HPE _____	^ HPE Activity	0.5
_____	HPE _____	^ HPE Activity	0.5				15.5
			16.5				

<sup>3</sup>If swimming proficiency (PRF 070) NOT yet passed.

<sup>5</sup>See list of Humanities (HUM) options on the back.

<b>JUNIOR Semester 5</b>				<b>JUNIOR Semester 6</b>			
_____	MAT 321	Calculus of Functions of Several Variables	4	_____	COMP 303	Critical Reading & Writing	3
_____	HUM _____	Humanities Options <sup>5</sup>	3	_____	MAT 211	Differential Equations	3
_____	HIS 101	American History	3	_____	HUM _____	Humanities Options <sup>5</sup>	3
_____	MKT 130	Principles of Marketing	3	_____	GOV 101	American Government	3
_____	FIN 418	Investments	3	_____	MGT 130	Principles of Management	3
_____	HPE _____	^ HPE Activity	0.5	_____	MAT 300	Senior Paper/Project Preparation <sup>2</sup>	1
			16.5	_____	HPE _____	^ HPE Activity	0.5
							16.5

<b>SENIOR Semester 7</b>				<b>SENIOR Semester 8</b>			
_____	MAT 499	Senior Paper/Project	2	_____	MGT 431	Strategic Management	3
_____	ACT 320	Quantitative Analysis	3	_____	FIN 438	Advanced Financial Management	3
_____	FIN 338	Financial Management	3	_____	MAT _____	Elective	3
_____	BUS 325	Business Law I	3	_____	_____	Elective	3
_____	MAT _____	Mathematical Finance Elective	3	_____	_____	Elective	1
_____	HPE _____	^ HPE Activity	0.5	_____	HPE _____	^ HPE Activity	0.5
			14.5				13.5

**Recommended Laboratory Science General Education Requirement:**

BIO 111, 112 (Biology--No prerequisite)

PHY 111, 112 (Physics--Strongly recommended. Calculus prerequisite/corequisite)

CHE 111, 112 (Chemistry--High School Chemistry prerequisite)

Courses above calculus are offered according to the following schedule (S - Spring, F - Fall, \* Even years only, \*\* Odd years only):

Differential Equations (MAT 211)<sup>S</sup>

Discrete Mathematics (MAT 207)<sup>F</sup>

Linear and Matrix Algebra (MAT 312)<sup>S</sup>

Senior Paper/Project Prep. (MAT 300)<sup>S</sup>

College Geometry (MAT 313)<sup>F\*\*</sup>

Higher Algebra (MAT 401)<sup>S\*</sup>

Elementary Number Theory (MAT 318)<sup>F\*</sup>

Advanced Calculus I (MAT 421)<sup>S\*\*</sup>

Probability and Statistics (MAT 325)<sup>F</sup>

Senior Paper/Project (MAT 499)<sup>F</sup>

^ Each HPE course is 1 credit hour, but students can petition to take it for .5 credits. Course work remains the same.

**2014-2015**  
**B. S. in Mathematical Finance (MFN)**

<b>General Education</b>	<b>Credit Hours</b>	<b>Semester to be taken</b>
Whole Person Assessment (GEN 099)	0	1
English (COMP 102, 303)	6	1,6
Oral Communication (COM 101)	3	2,4
<sup>5</sup> Humanities (HUM 103 plus three of the following: HUM 222*, 233*, 244*, 333*, 250, 255, 260, 270, COMP 101, MAT 315) *At least one course must be chosen from courses marked with asterisks.	12	3,4,5,6
Elementary Statistics (MAT 232)	3	3
Bible Literature (BLIT 110, 120)	6	1,3,4
Theology (THE 103)	3	1,3,4
Laboratory Science	8	
Choice of one of the following sequences:		
BIO 111, 112 (lecture & lab) <b>OR</b>		3, 4
CHE 111, 112 (lecture & lab) <b>OR</b>		3, 4
PHY 111, 112 (lecture & lab)		2, 3
American History (HIS 101)	3	3
American Government (GOV 101)	3	4
Social Sciences (FIN 244)	3	2
Health, Physical Education and Recreation (one course per full-time semester at ORU, including HPE 001 and 002, swimming course or proficiency, and electives)**	5	Each
<b>General Education Total</b>	<b>55</b>	
<b>Major</b>		
Introduction to Computing (CSC 111)	3	1
Data Structures (CSC 255)	3	2
Calculus I (MAT 201)	4	1
Calculus II (MAT 202)	4	2
Linear and Matrix Algebra (MAT 312)	3	4
Calculus of Functions of Several Variables (MAT 321)	4	5
Investments (FIN 418)	3	5
Differential Equations (MAT 211)	3	6
Senior Paper/Project Preparation (MAT 300)	1	6
Senior Paper/Project (MAT 499)	2	7
Financial Management (FIN 338)	3	7
Advanced Financial Management (FIN 438)	3	8
Mathematical Finance Elective: Choose one of the following courses <sup>2</sup>	3	
Probability and Statistics (MAT 325) F		5 or 7
Advanced Calculus (MAT 421) S**		6 or 8
Mathematical Methods in Physics (PHY 455) F**		5 or 7
Money and Banking Finance (FIN 303) F		5 or 7
Capital Markets (FIN 461) S		6 or 8
<b>Major Total</b>	<b>39</b>	
<b>Cognate</b>		
Principles of Financial Accounting I (ACT 215)	3	1
Principles of Financial Accounting II (ACT 216)	3	2
Quantitative Analysis (ACT 320)	3	7
Principles of Economics I (BUS 201)	3	3
Principles of Economics II (BUS 202)	3	4
Business Law I (BUS 325)	3	7
Principles of Management (MGT 130)	3	6
Strategic Management (MGT 431)	3	8
Principles of Marketing (MKT 130)	3	5
<b>Cognate Total</b>	<b>27</b>	
<b>Electives</b>	<b>7</b>	<b>8</b>
<b>Degree Total</b>	<b>128</b>	

<sup>2</sup>For students double majoring in Mathematical Finance and Quantitative Business Administration, an additional upper-division, three-credit-hour course must be taken, either from this list or with the approval of the department chair.

\*\*Each HPE course is 1 credit hour, but students can petition to take it for .5 credits. Course work remains the same.