East Central University

Mathematics- B.S.

Applied/Pre-Actuary Concentration

0294/UG22

Student Name: _____ Student ID # _____

Advisor: _____

_____ 30 hours at ECU completed

_____ 60 hours at Sr college completed

_____ 40 hours upper level completed

_____ OSRHE Computer Proficiency Requirement met

Requirements			Hours
Courses highlighted in blue are general education courses.			
I. General Education			**40**
A maximum of twelve hours may be counted in both the major/related work and general education.			
II. Major in Applied/Pre-Actuary Mathematics			**46-52**
A. Required Mathematics Core			22-28
MATH	1513	College Algebra †	
MATH	1223	Intro to Probability and Statistics	
MATH	1713	Trigonometry †	
MATH	2825	Calculus and Analytic Geometry I	
MATH	3025	Calculus and Analytic Geometry II	
MATH	3033	Calculus and Analytic Geometry III	
MATH	3713	Linear Algebra	
MATH	4923	Perspectives in Mathematics	
B. Required for Concentration in Applied/Pre-Actuary Mathematics			9
MATH	3513	Mathematical Statistics	
MATH	3583	Applied Statistics	
MATH	4113	Differential Equations	
C. Required Mathematics Electives			15
Two of the following:			
CPSMA	3913	Discrete Mathematics	
CPSMA	3933	Operations Research	
CPSMA	4413	Numerical Methods	
Nine hours approved courses from MATH, CMPSC, MIS, MGMT, MKTG, BUSLW, or FIN (3000-4000)			

Requirements			Hours
III. Related Work			**30**
ACCT	2103	Financial Accounting	
CMPSC	1113	Computer Programming I **OR**	
other computer programming course in a high level language (logical, functional, or procedural, including Mathematica)			
COMM	1113	Fundamentals of Human Comm	
ECON	2003	Principles of Macroeconomics	
ECON	2013	Principles of Microeconomics	
ENG	3183	Technical and Professional Writing	
FIN	3113	Financial Management	
FIN	3913	Insurance Planning and Risk Mgmt	
MIS	1903	Computer Business Applications	
MIS	3433	Management Information Systems	
IV. Minor			
Not Required			
V. Electives			**10-16**
An elective course is any college-level course not required by the degree that is utilized to reach the 120 credit hours required for degree completion. Elective courses are chosen according to the interest of the student and can be used in completion of a minor, certificate, or additional major.			
VI. Total Hours Required			**120**
VII. Special Requirements			
Math 1413 "teachers" or "methods" courses will not be counted in the major.			

† With departmental approval, students may omit MATH 1513 and MATH 1713 and begin with MATH 2825.

Actuaries must pass a series of exams administered by the Society of Actuaries (SOA) in order to achieve professional status as an actuary. The first exam, Exam P, covers probability and supporting calculus topics. Pre-actuary students should take this exam after completing MATH 3513 Mathematical Statistics. The second exam, Exam FM, covers interest theory and financial economics. This exam should be taken after FIN 3113 Financial Management. Other SOA exams cover subjects such as risk and risk management.