

Cassie Xinyu Zhang

Class of 2013

Actuarial Science

Interdisciplinary Major Proposal

Interdisciplinary Major Committee:

Dr. Ralph Scott, Business and Economics

Dr. David Sutherland, Mathematics

Dr. Duff Campbell, Mathematics

While studying at Hendrix, I have come to realize that I want to pursue a career as an actuary. The field of actuarial science spans Mathematics and Economics. To become an actuary, one must pass a series of difficult licensing exams on the subjects of Probability, Financial Mathematics, Models for Life Contingencies, and others. To prepare myself for these exams and for my career as an actuary, I selected the most applicable Mathematics and Economics courses. I researched the major requirements for a bachelor's degree in actuarial science at other universities and used the information I found to select courses for my major.

The courses I selected could be grouped into four categories: Mathematical Foundation, Actuarial Science Core, and the Capstone. For Mathematical Foundation, I will take a sequence of three Calculus courses (*Calculus I & II*, *Multivariable Calculus*) as well as *Differential Equations* and *Linear Algebra* to practice using differentiation, integration and linear systems.

In the Actuarial Science Core cluster, my goal is to take courses directly relevant to Actuarial exams or satisfying VEE (Validation by Educational Experience) requirements. Seven courses in this cluster are: *Probability and Statistics* (which is directly relevant to Actuarial Exam P), *Principles of Accounting I* and *Corporate Finance* (which together satisfies the VEE requirement of Corporate Finance), *Principles of Macroeconomics*, *Principles of Microeconomics* and *Intermediate Macroeconomics* (which together satisfy the VEE

requirement of Economics), and *Econometrics and Forecasting* (which satisfies the VEE requirement of Applied Statistical Methods)

Capstone: For an aspiring actuary, internship experience cannot be overemphasized, which logically leads me to choose to pursue an internship at Arkansas Blue Cross BlueShield as my Capstone experience. During this internship process, I will work at least 360 hours directly under the supervision of an actuary or senior actuary on site. I will keep a journal of my reflections and give an oral report on my internship experience.

The Courses included for my proposed major are as follows:

Actuarial Science Core Courses:

ECON 200 *Principle of Microeconomics*
ECON 210 *Principle of Macroeconomics*
ECON 310 *Intermediate Macroeconomics*
ECON 410 *Corporate Finance*
ECON 400 *Econometrics and Forecasting*
BUSI 200 *Principles of Accounting I*
MATH 310 *Probability and Statistics*

Mathematics Foundation:

MATH 130 *Calculus I*
MATH 140 *Calculus II*
MATH 230 *Multivariable Calculus*
MATH 260 *Differential Equations*
MATH 270 *Linear Algebra*

Senior Capstone:

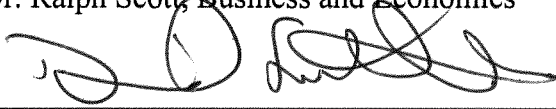
ECON 498 *Internship: Actuarial Analyst*

Ralph O. Scott, Jr.

9/7/12

Dr. Ralph Scott, Business and Economics

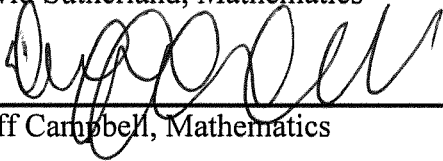
Date



9/7/12

Dr. David Sutherland, Mathematics

Date



9/7/12

Dr. Duff Campbell, Mathematics

Date