Hoa Dam

Class of 2015

Interdisciplinary major proposal

Mathematical Finance

I intend to double major in Accounting and this interdisciplinary major: Mathematical Finance. My proposed major is concerned with the integration of advanced mathematical methods and modeling with financial concepts and problems. To a contemporary financial analyst, the uses of mathematical modeling, economics and accounting are inextricably linked. For example, a financial analyst may take the share price as a given and attempt to use stochastic calculus to obtain the corresponding value of derivatives of the stock.

Moreover, after college, I want to go to graduate school to study Financial Engineering or Mathematical Finance which requires students to have a good background in Mathematics. Therefore, with this interdisciplinary major, I will be adequately prepared to apply for these programs. I have divided the course requirements for this major into two parts: Economics and Accounting; and supporting Mathematics and Statistics courses.

For Economics and Accounting, my major will require Corporate Finance as well as 3 courses from the following: Intermediate Microeconomics, Intermediate Macroeconomics, Money, Banking and Credit, Intermediate Accounting I, and Intermediate Accounting II. This cluster of Economics and Accounting courses will provide me sufficient knowledge to enrol in any Finance-related program in graduate school.

For supporting Mathematics and Statistics courses, my courses will be the sequence of Calculus I and II, Differential Equations, Linear Algebra, Principles of Statistics, Introduction to Advanced Mathematics, and Game Theory. I believe this collection of course will not only provide me sufficient tools to model financial problems but also improve my mathematical abstract thinking and intuition.

Finally, the capstone experience of this interdisciplinary major will be achieved by fulfilling BUSI 497 – Corporate Strategy which I believe logically fits the proposed major.

Foundation courses:

- MATH 130: Calculus I
- MATH 140: Calculus II
- ECON 200: Principles of Microeconomics
- ECON 210: Principles of Macroeconomics

Intermediate courses:

- MATH 260: Differential Equations
- MATH 270: Linear Algebra
- MATH 290: Introduction to Advanced Mathematics
- BUSI 250: Principles of Statistics

Advanced courses:

3 courses from the following:

- ECON 300: Intermediate Microeconomics
- ECON 310: Intermediate Macroeconomics
- ECON 320: Money, Banking and Credit
- BUSI 300: Intermediate Accounting I
- BUSI 310: Intermediate Accounting II

Required higher- level courses:

- ECON 410: Corporate Finance
- MATH 497: Game Theory

Senior Capstone: BUSI 497: Corporate Strategy

Proposer's Signature: _____Hoa Ngoc Dam_____ 04/24/12 ___

Interdisciplinary major Committee:

_Karen Oxner_____

Dr. Karen Oxner, Associate Professor of Economics and Business

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Dr. Duff Campbell, Chair & Associate Professor of Mathematics