

Gregory Lanese

Interdisciplinary Major Proposal: *Mathematical Economics*

Committee:

Dr. Tom Stanley, Professor of Economics, Student's Faculty Advisor

Dr. Duff Campbell, Department Chair, Professor of Mathematics

Rationale

I am currently declared as an economics major with mathematics minor, but after continually looking at the major requirements, I have realized that they do not entirely fit with my future goals. My plan is to enter a graduate economics program after graduating from Hendrix. Although majoring in economics is the best fit for me now, graduate study is much more math-intensive than the Hendrix major. Especially with my interest in econometrics, I need as much math and statistics training as I can get. The business requirement in the form of accounting courses at Hendrix is great, but it will not give me the tools necessary to reach my future goals. Instead, to prepare myself for my future studies, I will need to take multiple additional math classes. After consulting many websites on the topic of graduate economics admissions, I have determined the necessary courses to adequately prepare myself for graduate programs.

My interdisciplinary major proposal makes only a slight adjustment to the current economics major requirements. I simply replace the business classes with the intermediate and upper-level mathematics courses that I will need in preparation for graduate study. The number of courses I add is the same as the number of courses I subtract. I replace the business classes with *Linear Algebra*, *Multivariable Calculus*, and *Differential Equations*. In addition, I replace *Functions and Models* with *Calculus I*, and add *Calculus II* because it is a prerequisite for the intermediate courses.

The senior capstone requirement can be completed in one of two ways, both of which are already options for the economics major capstone. I kept these the same because I feel that the economic research component will fit perfectly with my graduate school intentions.

- Completion of the course ECON 497 *Economic Research* with a grade of "C" or above;
- Successful completion of an economic research project in conjunction with the Baker Prize in Economics.

The Mathematical Economics major will consist of 13 courses distributed as follows:

Foundational economics and mathematics courses (5):

- ECON 200 *Principles of Microeconomics*
- ECON 210 *Principles of Macroeconomics*
- BUSI 250 *Principles of Statistics*
- MATH 130 *Calculus I*
- MATH 140 *Calculus II*