



College of Business
Department of Economics
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October 10, 2012

To: College of Business Graduate Council

From: Charles Register, Chair, Economics Department
Eric Chiang, Graduate Director, Economics Department

Re: Proposed change to Graduate Catalog for Master of Science in Economics:
Addition of Certificate in Mathematics

Proposal: The Department of Economics proposes to establish a Certificate in Mathematics within its current Master of Science in Economics Program in order to provide an opportunity for students with Ph.D. ambitions to improve their chances of being accepted at prominent programs and to succeed in completing the Ph.D. program.

Program Description: The Certificate in Mathematics is an elective option for graduate economics students to enroll in specific undergraduate level courses in mathematics and statistics aimed at preparing students for Ph.D.-level studies. The required number of credits to complete the Math Certificate is 20, of which 8 may be exempted with prior mathematics coursework.

Program Prerequisites: Student pursuing the Certificate of Mathematics must be admitted and enrolled in the Master of Science program in Economics, and be in good academic standing.

Additional Requirements: Students pursuing the Certificate in Mathematics must achieve a minimum overall GPA of 3.00 in all math and statistics courses, and earn no grade lower than a B-.

Approval by Department of Mathematics: Attached to this proposal is an email from Dr. Lee Klingler, Chair of the Department of Mathematical Sciences, stating that the mathematics faculty has no objections to this proposal.

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Requirements: No new courses are being proposed for the certificate. Students interested in the certificate will be required to take the following courses:

MAC 2311: Calculus and Analytical Geometry 1 (4 credits)*

Prerequisites: College Algebra and Trigonometry

MAC 2312: Calculus and Analytical Geometry 2 (4 credits)*

Prerequisites: MAC 2311

MAP 2302: Differential Equations 1 (3 credits) or MAC 2313: Calculus and Analytical Geometry 3 (4 credits)

Prerequisites: MAC 2312

MAS 2103: Matrix Theory (3 credits)

Prerequisites: MAC 2311

STA 4234: Applied Statistics 1 + Lab (3 credits)

Prerequisites: STA 4442 (can be waived with previous coursework)

One additional 4000-level Mathematics or Statistics course (3 credits); recommended courses:

STA 4618: Linear Programming and Game Theory (3 credits)

Prerequisites: MAS 2103 (can be waived with previous coursework)

STA 4702: Applied Statistics 2

Prerequisites: STA 4234

STA 4852: Applied Time Series and Forecasting (3 credits)

Prerequisites: STA 4234

4000-level mathematics course with approval (3 credits)

Total Math Credits Required: 20 credits**

*requirement can be waived with prior equivalent coursework

**required credits may be lower if student has already completed required courses prior to starting the program. A minimum of 12 new credits must be taken to receive the certificate.

The Department of Economics faculty voted unanimously (11-0) in favor of the certificate program.

Approved by:

Date:

Department Chair: Chris Ratz

10/15/12

College Curriculum Chair: Allen E. Smith

10/16/12

College Dean: Paul Horvath

10.18.12

UGPC Chair: _____

Graduate Studies Dean: _____

UFS President: _____

Provost: _____

Attachment: Memo from Department of Mathematical Sciences Chair

From: Lee Klingler
Sent: Friday, August 31, 2012 1:49 PM
To: Eric Chiang
Cc: Oksana Weaver-Donnelly
Subject: RE: from Eric Chiang, regarding Math Component in Economics

Dear Eric,

Our department met to discuss your proposal, and we certainly have no opposition to the economics department creating a formal mathematics component within your masters degree program. We certainly want to encourage students to learn more mathematics!

Best regards,
Lee

From: Eric Chiang
Sent: Tuesday, July 31, 2012 4:10 PM
To: Lee Klingler
Cc: Oksana Weaver-Donnelly
Subject: from Eric Chiang, regarding Math Component in Economics

Dear Lee,

It's been a couple weeks since Oksana and I met with you to discuss the possibility of creating a formal math component within our Masters Program in Economics.

Since our meeting, we have given the idea some considerable thought, and drafted a proposal (attached) that we feel addresses many of the concerns you raised, but most importantly, achieves its primary objective of preparing our most ambitious students for Ph.D. studies.

In our proposal, we came up with a 20 credit program, combining essential lower-division coursework with upper-division courses that would complement Ph.D.-level courses in Economics (per your suggestion, I communicated with Dr. Qjan regarding prerequisites). 20 credits is slightly below your requirement for a math minor; however, our desire is to create some form of certificate that would be acknowledged on the student's transcript, thus providing a valuable signal to prospective Ph.D. programs.

We look forward to receiving feedback from you, and eventually to share it with your faculty. In time, we would need a letter or email from you acknowledging support by the math department in order for us to take the proposal through the channels (UPC, GPC, UFS, etc.).

If adopted, we feel both departments will benefit from placing bright students into your courses.

Thank you,

Eric