1. Please describe and provide a rationale for the proposed change to the existing degree:

Proposed here by the Departments of Economics and Mathematics & Statistics is a slight modification to the undergraduate major they jointly offer in Economics & Mathematics (and to the corresponding BA in Economics & Mathematics/MA in Economics). This modification follows, with particularly strong benefits for students in the joint EC/MA Major, from substantive changes being proposed concurrently to strengthen the Major in Economics by requiring a two-course sequence in empirical analysis (statistics and econometrics).

Relevant to the EC/MA Major is that current courses EC 305 (Economic Statistics) and EC 414 (Introduction to Econometrics), both currently required for the EC/MA Major, will no longer be offered. They will be replaced in the EC Major by a required two-course (8 credit) sequence in statistics and econometrics: either EC 203/204 (Empirical Economics 1&2) or, for more mathematically sophisticated students, EC 303/304 (Empirical Economic Analysis 1&2). For students in the EC/MA major, all of whom have the requisite mathematics background, the higher-level, EC 303/4 sequence will be required. It will be better integrated than the current requirement of EC 305 plus EC 414, and better suited to students in the EC/MA program. Students in the EC Major who choose the 300-level over the 200-level sequence will be a self-selecting group with abilities and aspirations that are well matched to those of EC/MA students.

Finally, since the dual degree program leading to a BA in Economics & Mathematics/MA in Economics entails fulfillment of all specific requirements for the BA, CAS EC 303/4 will also replace EC 305 and EC 414 in that BA/MA context.

2. Please describe how the proposed change(s) advances the Strategic Plan of the school/college and of the University plan:

As affirmed in the College of Arts & Sciences Strategic Plan, "CAS is aware that numerical, quantitative, and computational competency are increasingly considered essential skills for educated adults. CAS therefore is committed to ensuring that all of its students acquire these
skills.” The introduction of an advanced sequence in empirical analysis is fully consistent with this goal of “Quantitative Literacy at Boston University” and will put the undergraduate Major In Economics & Mathematics fully in line with the College’s commitment to educate our students to thrive in our increasingly data-driven world.

3. Please list the program requirements for the current and revised programs: (expand the table as needed and denote new courses in bold print)

<table>
<thead>
<tr>
<th>Current program: BA in Economics &amp; Mathematics</th>
<th>Revised program: BA in Economics &amp; Mathematics (CAS 21 and CAS 31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Econometrics: CASEC 414</td>
<td></td>
</tr>
</tbody>
</table>

4. Please list learning outcomes for the revised program:

_Students graduating with a Major in Economics & Mathematics should be able to:_

1. Understand economic theory, both microeconomic and macroeconomic, with a higher level of mathematical sophistication than would be true for a general economics major; and apply these models to evaluate policies and events
2. Demonstrate a mature understanding of single and multivariable Calculus and of Linear Algebra, with a higher level of sophistication in economics than would be true for a general mathematics major; and apply these methods to practical economics and financial problems
3. Demonstrate focused expertise in one or more areas of economics
4. Demonstrate focused expertise in one or more areas of mathematics
5. Locate the necessary data to analyze policy and evaluate world events, and analyze data using appropriate econometric and mathematical methods (with a more theoretically sophisticated command of the underlying mathematical and statistical theory than would be the case for the general economic major and with a more theoretically-sophisticated command of the underlying econometric theory than would be the case for the general mathematics major)

5. How does the change place your program in the context of programs at peer institutions?

It is standard practice at peer and peer plus institutions with formal undergraduate degree programs in “Economics & Mathematics” or “Mathematical Economics” to require both statistics and econometrics, as BU already does. The new advanced two-course sequence strengthens that requirement for EC/MA students and keeps BU competitive.
6. How does the change affect other academic units?

No direct effects.

7. How will you notify current students of the proposed changes and implement the requirements?

Emails, EC and MA advising, official department documents specifying requirements, and postings on the departments’ site, CAS Bulletin (2014/2015) and CAS Advising.

8. Please document any implications that the change has on professional accreditation or licensure at the program or school/college level:

None

9. Please list the resources needed including IT, new faculty, new staff, reassignment of faculty from existing courses to new ones (especially if the existing course(s) is not being removed from the bulletin), technology enhanced classrooms, office space, and other facilities:

This modification to the BA in Economics & Mathematics and to the dual BA in Economics & Mathematics/MA in Economics has no resource implications beyond those already detailed in the proposal to modify requirements for the BA in Economics. Please see that proposal and corresponding budget template.
Cognate Comment Request

TO:  Name: Prof. Todd Idson
Department: CAS Economics

FROM: Name: Prof. Tasso Kaper
Department: CAS Mathematics & Statistics
Telephone: 353-9552 E-mail: tasso@math.bu.edu

Course Number: ____________
Course or Program Title: Economics Major & Joint Concentration in Economics & Mathematics

Our Department would like to request cognate comments on this course (or program). A complete proposal is attached for your review. If you need further information, please do not hesitate to contact me.

Kindly return the signed original to me by ____________ so that I may include your comments when submitting our proposal for review and approval. Please do not send any cognate letters directly to the dean's office. Thank you.

COMMENTS: Thank you for asking in for a cognate comment.
We fully understand your need to change the EC305 + EC 414 to a required sequence EC203 + 304 (or EC 203 + 304), and concern it will be an improvement for econ. majors & it. concentrators in econ. & math. We are glad to see the option of a statistics course as a subst. for EC203. Similarly, talented it. econ. & math. majors should have the same option.
Please explain fully any objections.

Signature: Tasso Kaper Date: 11/22/13
Title: Professor & Chair