### Mathematical Economics Requested Program Changes

<table>
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<tr>
<th>Current</th>
<th>Proposed</th>
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| 2 Mathematics Electives at the 3000 level or above<sup>2</sup>  
<sup>2</sup>Math 2111 can fulfill one of the Mathematics electives but must be take prior to MATH 3098 and MATH 3141 | MATH 2111  
And  
1 Mathematics Elective at the 3000 level or above |
| MATH 3043: Numerical Analysis I  
And  
A third Mathematics Elective at the 3000 level or above<sup>2</sup> | (MATH 3043: Numerical Analysis I AND MATH 3044: Numerical Analysis II)  
OR  
(MATH 3137: Real and Complex Analysis I AND MATH 3138: Real and Complex Analysis II)  
OR  
(MATH 3141: Advanced Calculus I AND MATH 3142: Advanced Calculus II) |

**Justification for requested changes:** All of our proof-based courses now require MATH 2111: Basic Math Concepts as a prerequisite. Although the current mathematics courses required by the Mathematical Economics program do not require MATH 2111, in order to get the required three elective courses students are forced to take some course which has MATH 2111 as a prerequisite. Since it is now an implicit requirement, we propose explicitly listing MATH 2111 as a required course replacing one of the three electives.

The current Mathematical Economics program requires one semester of mathematical analysis, MATH 3043: Numerical Analysis I. We feel that a year long sequence of analysis would better benefit these students and add to the rigor of the program. This requirement forces students to develop some expertise in analysis, an area of importance in economics, while still providing them the opportunity to choose a more applied course in MATH 3043/3044 or a pure mathematics option in MATH 3137/3138 or MATH 3141/3142. Requiring a second semester of analysis would replace one of the three electives.