Mathematics

MATH 447  **Real Variables**  credit: 3 OR 4 hours.

(MATH 347) Careful development of elementary real analysis including such topics as completeness property of the real number system; basic topological properties of n-dimensional space; convergence of numerical sequences and series of functions; properties of continuous functions; and basic theorems concerning differentiation and Riemann integration. 3 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Credit is not given for both MATH 447 and MATH 444. Prerequisite: MATH 242 or MATH 243 or equivalent, and junior standing; MATH 347 or MATH 348 or equivalent experience; or consent of instructor.

This course satisfies the General Education Criteria for a:
Quantitative Reasoning II

<table>
<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>32136</td>
<td>Lecture-Discussion</td>
<td>E13</td>
<td>01:00 PM - 01:50 PM</td>
<td>MWF</td>
<td>143 - Altgeld Hall</td>
<td>Erdogan, M</td>
</tr>
</tbody>
</table>

Credit Hours: 3 hours
Quant Reasoning II course.

| 32137 | Lecture-Discussion  | E14     | 01:00 PM - 01:50 PM | MWF  | 143 - Altgeld Hall | Erdogan, M |

Credit Hours: 4 hours
Quant Reasoning II course.
Instructor Approval Required

| 32138 | Lecture-Discussion  | X13     | 12:00 PM - 12:50 PM | MWF  | 441 - Altgeld Hall | Tumanov, A |

Credit Hours: 3 hours
Quant Reasoning II course.

| 32139 | Lecture-Discussion  | X14     | 12:00 PM - 12:50 PM | MWF  | 441 - Altgeld Hall | Tumanov, A |

Credit Hours: 4 hours
Quant Reasoning II course.
Instructor Approval Required
Restricted to Graduate - Urbana-Champaign.