Mathematics

MATH 447  **Real Variables**  credit: 3 OR 4 hours.
Careful development of elementary real analysis for those who intend to take graduate courses in Mathematics. Topics include 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. Credit is not given for both MATH 447 and either Math 424 or MATH 444. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 241 or equivalent; junior standing; MATH 347 or MATH 348, or equivalent experience; or consent of instructor.

<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>38030</td>
<td>Lecture-Discussion</td>
<td>P13</td>
<td>12:00 PM - 12:50 PM</td>
<td>MWF</td>
<td>141 - Altgeld Hall</td>
<td>Junge, M</td>
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</tbody>
</table>

Credit Hours: 3 hours
Open to both undergraduate and graduate students.

| 38031| Lecture-Discussion | P14     | 12:00 PM - 12:50 PM | MWF  | 141 - Altgeld Hall | Junge, M   |

Credit Hours: 4 hours
Instructor Approval Required
Not intended for Undergrad - Urbana-Champaign.
Graduate students requesting the 4 credit hour section must first register for the 3 hour section. If the instructor is willing to offer extra work to graduate students for the 4-hour section, students can get an approval form from 313 Altgeld Hall between the first day of the semester and the 8th week of the semester.