# Mathematics

**MATH 416  Abstract Linear Algebra  credit: 3 OR 4 hours.**

Rigorous proof-oriented course in linear algebra. Topics include determinants, vector spaces over fields, linear transformations, inner product spaces, eigenvectors and eigenvalues, Hermitian matrices, Jordan Normal Form. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 416 and either MATH 410 or MATH 415. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or consent of instructor; MATH 347 is recommended.

<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>54412</td>
<td>Lecture-Discussion</td>
<td>B13</td>
<td>09:00 AM - 09:50 AM</td>
<td>MWF</td>
<td>141 - Altgeld Hall</td>
<td>Albin, P</td>
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<td></td>
<td><strong>Credit Hours:</strong> 3 hours</td>
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<td>Early registration in this section is restricted to approved Math cohort students who were previously in Math 347 section C2M. Any remaining open seats will be made available to all math majors on Nov. 14, 2018, and to all students on Nov. 27, 2018.</td>
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<td><strong>Credit Hours:</strong> 4 hours</td>
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<tr>
<td>54410</td>
<td>Lecture-Discussion</td>
<td>C3H</td>
<td>10:00 AM - 10:50 AM</td>
<td>MWF</td>
<td>343 - Altgeld Hall</td>
<td>Lerman, E</td>
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<td></td>
<td>This is an honors section for undergraduates who are excellent in mathematics. Interested students with A's in previous math courses should e-mail <a href="mailto:mathadvising@illinois.edu">mathadvising@illinois.edu</a> with name, UIN, and reason for wanting the class.</td>
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<td>57719</td>
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<td>D13</td>
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<td>MWF</td>
<td>341 - Altgeld Hall</td>
<td>Albin, P</td>
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<td>49998</td>
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<td>E13</td>
<td>01:00 PM - 01:50 PM</td>
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<td>241 - Altgeld Hall</td>
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<tr>
<td>48281</td>
<td>P13</td>
<td>11:00 AM - 12:20 PM</td>
<td>TR</td>
<td>141 - Altgeld Hall</td>
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<td>X13</td>
<td>12:00 PM - 12:50 PM</td>
<td>MWF</td>
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