# Mathematics

**MATH 415  Applied Linear Algebra**  credit: 3 OR 4 hours.

Introductory course emphasizing techniques of linear algebra with applications to engineering; topics include matrix operations, determinants, linear equations, vector spaces, linear transformations, eigenvalues, and eigenvectors, inner products and norms, orthogonality, equilibrium, and linear dynamical systems. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Credit is not given for both MATH 415 and any of MATH 125, MATH 225, or MATH 410. Prerequisite: MATH 241 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>30979</td>
<td>Lecture-Discussion</td>
<td>B3</td>
<td>09:00 AM - 09:50 AM</td>
<td>MTWRF</td>
<td>341 - Altgeld Hall</td>
<td>Bergvelt, M</td>
</tr>
<tr>
<td></td>
<td>Lecture-Discussion</td>
<td>B3</td>
<td>03:00 PM - 03:50 PM</td>
<td>W</td>
<td>341 - Altgeld Hall</td>
<td>Bergvelt, M</td>
</tr>
</tbody>
</table>

Credit Hours: 3 hours
Quant Reasoning II course.
Meets 14-Jun-10 - 05-Aug-10.

| 30978 | Lecture-Discussion | B4     | 09:00 AM - 09:50 AM | MTWRF | 341 - Altgeld Hall | Bergvelt, M |
|       | Lecture-Discussion | B4     | 03:00 PM - 03:50 PM | W     | 341 - Altgeld Hall | Bergvelt, M |

Credit Hours: 4 hours
Quant Reasoning II course.
Departmental Approval Required
Meets 14-Jun-10 - 05-Aug-10.

| 31122 | Lecture-Discussion | D3     | 11:00 AM - 11:50 AM | MTWRF | 245 - Altgeld Hall | Bergvelt, M |
|       | Lecture-Discussion | D3     | 03:00 PM - 03:50 PM | R     | 245 - Altgeld Hall | Bergvelt, M |

Credit Hours: 3 hours
Quant Reasoning II course.
Meets 14-Jun-10 - 05-Aug-10.

| 31123 | Lecture-Discussion | D4     | 11:00 AM - 11:50 AM | MTWRF | 245 - Altgeld Hall | Bergvelt, M |
|       | Lecture-Discussion | D4     | 03:00 PM - 03:50 PM | R     | 245 - Altgeld Hall | Bergvelt, M |

Credit Hours: 4 hours
Quant Reasoning II course.
Departmental Approval Required
Meets 14-Jun-10 - 05-Aug-10.

| 31858 | Online    | EGR    | ARRANGED -   | -     |              | Carpenter, B |

page 1 - Mathematics, Summer 2010
Online
Quant Reasoning II course.
Restricted to MCS:Computer Sci Online -UIUC, MS:Mechanical Engineering -UIUC, or NDEG:Grad Nondegree-CE-UIUC.
Meets 01-Jun-10 - 05-Aug-10.
Restricted to online non-degree, online MCS, and online MSME students. Academic Outreach restrictions and assessments apply, see [http://www.continuinged.illinois.edu/outreach/](http://www.continuinged.illinois.edu/outreach/).
OCE Tuition $844.00 per Bill Hour, and OCE Fees $45.00 per Bill Hour.