Mathematics

MATH 415  **Applied Linear Algebra**  credit: 0 TO 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, MATH 410, or MATH 416. Prerequisite: MATH 241 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>37957</td>
<td>Lecture-Discussion</td>
<td>A13</td>
<td>08:00 AM - 08:50 AM</td>
<td>MWF</td>
<td>245 - Altgeld Hall</td>
<td>Modami, B</td>
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<td>37960</td>
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<td>08:00 AM - 08:50 AM</td>
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<td>245 - Altgeld Hall</td>
<td>Modami, B</td>
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<td>Credit Hours: 3 hours</td>
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<tr>
<td></td>
<td>This is a combined lecture-discussion section. Do not register separately for a discussion section. During early registration, Math 415 is restricted to majors specifically requiring the course. Restrictions will be removed during the work day on December 2, 2013. Students not already in those majors are welcome to register as soon as the restrictions have been removed.</td>
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<tr>
<td>60541</td>
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<td>10:00 AM - 10:50 AM</td>
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<td>143 - Altgeld Hall</td>
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<tr>
<td>60547</td>
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<td>241 - Altgeld Hall</td>
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</table>

Credit Hours: 4 hours
Instructor Approval Required
Not intended for Undergrad - Urbana-Champaign.
Instructor approval forms available in 313 Altgeld Hall beginning on the first day of spring semester.
<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
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<td>Discussion/Recitation</td>
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<td>145 - Altgeld Hall</td>
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<tr>
<td>60540</td>
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<td>AL1</td>
<td>Hieronymi, P</td>
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<td>12:00 PM-12:50 PM</td>
<td>MW</td>
<td>100 - Materials Science &amp; Eng Bid</td>
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</tbody>
</table>

Credit Hours: 3 hours
Students wishing to register for this lecture-only section must also register for an AD discussion section. During early registration, Math 415 is restricted to majors specifically requiring the course. Restrictions will be removed during the work day on December 2, 2013. Students not already in those majors are welcome to register as soon as the restrictions have been removed.

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<tbody>
<tr>
<td>37967</td>
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<td>C13</td>
<td>Bergvelt, M</td>
<td>3</td>
<td>10:00 AM-10:50 AM</td>
<td>MWF</td>
<td>245 - Altgeld Hall</td>
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<td>Bergvelt, M</td>
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<td>10:00 AM-10:50 AM</td>
<td>MWF</td>
<td>245 - Altgeld Hall</td>
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Credit Hours: 4 hours
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<td>53682</td>
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<td>Arana, R</td>
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<td>11:00 AM-11:50 AM</td>
<td>MWF</td>
<td>245 - Altgeld Hall</td>
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</tbody>
</table>

Credit Hours: 3 hours
Math 415 is restricted to majors specifically requiring this course until November 28, 2012. Other majors are welcome to add the course on this date.

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<tr>
<td>53683</td>
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<td>Arana, R</td>
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<td>11:00 AM-11:50 AM</td>
<td>MWF</td>
<td>245 - Altgeld Hall</td>
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<tbody>
<tr>
<td>40670</td>
<td>Online</td>
<td>EGR</td>
<td>Carpenter, B</td>
<td>-</td>
<td>ARRANGED -</td>
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Restricted to MS: Civil Engr - Online - UIUC, MCS:Computer Sci Online -UIUC, or MS:Mechanical Engineering -UIUC.
Restricted to online MCS, online MSME, and online MSCEE students. For more details on this course section, please see http://online.engineering.illinois.edu/current-students/course-information/spring-2014-credit-course-offerings. Campus undergraduates are not eligible to register for this section. Center for Innovation in Teaching & Learning (CITL) restrictions and assessments apply, see http://www.citl.illinois.edu.
OCE Tuition $1017.00 per Bill Hour, and OCE Fees $50.00 per Bill Hour.

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<td>Modami, B</td>
<td>3</td>
<td>02:00 PM-02:50 PM</td>
<td>MWF</td>
<td>1002 - Lincoln Hall</td>
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<td>03:00 PM - 03:50 PM</td>
<td>MWF</td>
<td>1002 - Lincoln Hall</td>
<td>Duursma, I</td>
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<td>Duursma, I</td>
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<tbody>
<tr>
<td>37972</td>
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<td>P13</td>
<td>11:00 AM - 12:20 PM</td>
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<td>Kavruk, A</td>
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<tbody>
<tr>
<td>37974</td>
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<td>11:00 AM - 12:20 PM</td>
<td>TR</td>
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<td>37976</td>
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<td>12:30 PM - 01:50 PM</td>
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<tbody>
<tr>
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<td>S13</td>
<td>02:00 PM - 03:20 PM</td>
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<td>156 - Henry Administration Bldg</td>
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| 37965 | Lecture-Discussion | S14 | 02:00 PM - 03:20 PM | TR | 156 - Henry Administration Bldg | Kavruk, A |

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