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>
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<tbody>
<tr>
<td>34447</td>
<td>Lecture-Discussion</td>
<td>B13</td>
<td>09:00 AM - 09:50 AM</td>
<td>MWF</td>
<td>156 - Henry Administration Bldg</td>
<td>Bergvelt, M</td>
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</table>

Credit Hours: 3 hours
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<th>Day</th>
<th>Location</th>
<th>Instructor</th>
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<td>Zhang, Y</td>
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<tr>
<td>41587</td>
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<td>EGR</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. Online & Continuing Education (OCE) restrictions and assessments apply, see http://www.oce.illinois.edu. For more details on this course section, please see http://online.dev.engr.illinois.edu/current-students/course-information/fall-2013-credit-course-offerings. Campus undergraduates are not eligible to register for this section.

OCE Tuition $1017.00 per Bill Hour, and OCE Fees $50.00 per Bill Hour.

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<tbody>
<tr>
<td>34393</td>
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<td></td>
<td>Discussion</td>
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**Credit Hours: 3 hours**

This section incorporates the use of technology through Mathematica assignments. See http://www.math.uiuc.edu/timetable/ for details. In the Fall semester, enrollment is restricted to majors requiring this course. For questions contact mathadvising@illinois.edu. Remaining seats may be made available after the first day of class.

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<tr>
<td>34411</td>
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<td>09:30 AM - 10:50 AM</td>
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</table>

**Credit Hours: 4 hours**

Instructor Approval Required

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<tbody>
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<tbody>
<tr>
<td>56458</td>
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<td>Discussion</td>
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<td>Lincoln Hall</td>
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