Mathematics

MATH 417  Intro to Abstract Algebra  credit: 3 OR 4 hours.
Fundamental theorem of arithmetic, congruences. Permutations. Groups and subgroups, homomorphisms. Group actions with applications. Polynomials. Rings, subrings, and ideals. Integral domains and fields. Roots of polynomials. Maximal ideals, construction of fields. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: Either MATH 416 or one of MATH 410, MATH 415 together with one of MATH 347, MATH 348, CS 373; or consent of instructor.

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<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>32112</td>
<td>Lecture-Discussion</td>
<td>B13</td>
<td>09:00 AM - 09:50 AM</td>
<td>MWF</td>
<td>206 - David Kinley Hall</td>
<td>Wyser, B</td>
</tr>
</tbody>
</table>

Credit Hours: 3 hours
This course is restricted to Mathematics and Math&CS majors initially, but the restriction will be removed during business hours on April 21, 2016.

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</tbody>
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Credit Hours: 4 hours
Instructor Approval Required
Restricted to Chemical Engineering major(s). Restricted to Graduate - Urbana-Champaign.

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<tr>
<td>65075</td>
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<td>01:00 PM - 01:50 PM</td>
<td>MWF</td>
<td>145 - Altgeld Hall</td>
<td>Tramel, R</td>
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<td>MWF</td>
<td>145 - Altgeld Hall</td>
<td>Tramel, R</td>
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</table>

Credit Hours: 4 hours
Restricted to Graduate - Urbana-Champaign.
Instructor approval forms available in 313 Altgeld Hall beginning on the first day of Fall semester.

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<tr>
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<tbody>
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<td>Lecture-Discussion</td>
<td>F13</td>
<td>02:00 PM - 02:50 PM</td>
<td>MWF</td>
<td>149 - Henry Administration Bldg</td>
<td>Tramel, R</td>
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<td>TR</td>
<td>141 - Altgeld Hall</td>
<td>Dutta, S</td>
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<td>TR</td>
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