Mathematics

MATH 417  **Intro to Abstract Algebra**  credit: 3 OR 4 hours.
Fundamental theorem of arithmetic. Congruencies, groups and group actions, Polya counting, rings, fields, and roots of polynomials. Emphasizes proofs. 3 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 415 and either MATH 347 or MATH 348; 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>32108</td>
<td>Lecture-Discussion</td>
<td>C13</td>
<td>10:00 AM - 10:50 AM</td>
<td>MWF</td>
<td>2 - Illini Hall</td>
<td>Ullom, S</td>
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</tbody>
</table>
| Credit Hours: 3 hours  
Quant Reasoning II course. |

| 32110   | Lecture-Discussion    | C14     | 10:00 AM - 10:50 AM| MWF  | 2 - Illini Hall   | Ullom, S   |
| Credit Hours: 4 hours  
Quant Reasoning II course.  
Instructor Approval Required |

| 32112   | Lecture-Discussion    | F13     | 02:00 PM - 02:50 PM| MWF  | 345 - Altgeld Hall| Duursma, I |
| Credit Hours: 3 hours  
Quant Reasoning II course. |

| 32114   | Lecture-Discussion    | F14     | 02:00 PM - 02:50 PM| MWF  | 345 - Altgeld Hall| Duursma, I |
| Credit Hours: 4 hours  
Quant Reasoning II course.  
Instructor Approval Required |

| 32103   | Lecture-Discussion    | M13     | 09:00 AM - 10:20 AM| TR   | 341 - Altgeld Hall| Griffith, P|
| Credit Hours: 3 hours  
Quant Reasoning II course. |

| 32106   | Lecture-Discussion    | M14     | 09:00 AM - 10:20 AM| TR   | 341 - Altgeld Hall| Griffith, P|
| Credit Hours: 4 hours  
Quant Reasoning II course.  
Instructor Approval Required |