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 374; or consent of instructor.

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<thead>
<tr>
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<tbody>
<tr>
<td>37997</td>
<td>Lecture-Discussion</td>
<td>B13</td>
<td>09:00 AM - 09:50 AM</td>
<td>MWF</td>
<td>447 - Altgeld Hall</td>
<td>Heller, J</td>
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Credit Hours: 3 hours
The math major restriction will be removed during the day of November 13, 2017. Other students are welcome to add the course once the restrictions are removed.

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Instructor Approval Required
Not intended for Undergrad - Urbana-Champaign.
Graduate students requesting the 4 credit hour section must first register for the 3 hour section. If the instructor is willing to offer extra work to graduate students for the 4-hour section, students can get an approval form from 313 Altgeld Hall between the first day of the semester and the 8th week of the semester.

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