Mathematics

MATH 418  **Intro to Abstract Algebra II**  credit: 3 OR 4 hours.
Rings of quotients of an integral domain. Euclidean domains, principal ideal domains. Unique factorization in polynomial rings.
Fields extensions, ruler and compass constructions. Finite fields with applications. Modules. Structure theorem for finitely generated
modules over principal ideal domains. Application to finitely generated abelian groups and canonical forms of matrices. Introduction
to error-correcting codes. 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: MATH 417 or consent of instructor.

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<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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<td>38013</td>
<td>Lecture-Discussion</td>
<td>M13</td>
<td>11:00 AM - 12:20 PM</td>
<td>TR</td>
<td>203 - Transportation Building</td>
<td>Ivanov, S</td>
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Instructor Approval Required
Restricted to Graduate - 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.