Mathematics

MATH 413  Intro to Combinatorics  credit: 3 OR 4 hours.
(MATH 313) Permutations and combinations, generating functions, recurrence relations, inclusion and exclusion, Polya's theory of counting, and block designs. Same as CS 413. 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 347 or MATH 348 or equivalent experience.

This course satisfies the General Education Criteria for a:
Quantitative Reasoning II

<table>
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<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>37943</td>
<td>Lecture-Discussion</td>
<td>B13</td>
<td>09:00 AM - 09:50 AM</td>
<td>MWF</td>
<td>441 - Altgeld Hall</td>
<td>Kostochka, A</td>
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<tr>
<td>38722</td>
<td>Lecture-Discussion</td>
<td>B14</td>
<td>09:00 AM - 09:50 AM</td>
<td>MWF</td>
<td>441 - Altgeld Hall</td>
<td>Kostochka, A</td>
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Credit Hours: 3 hours
Quant Reasoning II course.
Open to both undergraduate and graduate students.

Credit Hours: 4 hours
Quant Reasoning II course.
Not intended for Undergrad - Urbana-Champaign.
Instructor approval forms available in 221 Altgeld Hall beginning January 13, 2005.