Mathematics

MATH 413  Intro to Combinatorics  credit: 3 OR 4 hours.
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>
<thead>
<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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</thead>
<tbody>
<tr>
<td>33533</td>
<td>Lecture-Discussion</td>
<td>D13</td>
<td>11:00 AM - 11:50 AM</td>
<td>MWF</td>
<td>147 - Altgeld Hall</td>
<td>Vijay, S</td>
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</tbody>
</table>

Credit Hours: 3 hours
Quant Reasoning II course.

| 39117| Lecture-Discussion | D14     | 11:00 AM - 11:50 AM | MWF  | 147 - Altgeld Hall | Vijay, S   |

Credit Hours: 4 hours
Quant Reasoning II course.
Instructor Approval Required
Restricted to Graduate - Urbana-Champaign.