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>
</tr>
</thead>
<tbody>
<tr>
<td>33533</td>
<td>Lecture-Discussion</td>
<td>F13</td>
<td>02:00 PM - 02:50 PM</td>
<td>MWF</td>
<td>347 - Altgeld Hall</td>
<td>Yong, A</td>
</tr>
</tbody>
</table>

Credit Hours: 3 hours
Quant Reasoning II course.

| 39117| Lecture-Discussion    | F14     | 02:00 PM - 02:50 PM| MWF  | 347 - Altgeld Hall| Yong, A    |

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