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.

<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>62937</td>
<td>Lecture-Discussion</td>
<td>D13</td>
<td>11:00 AM - 11:50 AM</td>
<td>MWF</td>
<td>241 - Everitt Laboratory</td>
<td>Yong, A</td>
</tr>
<tr>
<td></td>
<td>Credit Hours: 3 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Math 413 is restricted to Mathematics until approximately April 29, 2014.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>62938</td>
<td>Lecture-Discussion</td>
<td>D14</td>
<td>11:00 AM - 11:50 AM</td>
<td>MWF</td>
<td>241 - Everitt Laboratory</td>
<td>Yong, A</td>
</tr>
<tr>
<td></td>
<td>Credit Hours: 4 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Departmental Approval Required</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restricted to Graduate - Urbana-Champaign.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33533</td>
<td>Lecture-Discussion</td>
<td>E13</td>
<td>01:00 PM - 01:50 PM</td>
<td>MWF</td>
<td>345 - Altgeld Hall</td>
<td>Yong, A</td>
</tr>
<tr>
<td></td>
<td>Credit Hours: 3 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Math 413 is restricted to Mathematics until approximately April 29, 2014.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39117</td>
<td>Lecture-Discussion</td>
<td>E14</td>
<td>01:00 PM - 01:50 PM</td>
<td>MWF</td>
<td>345 - Altgeld Hall</td>
<td>Yong, A</td>
</tr>
<tr>
<td></td>
<td>Credit Hours: 4 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor Approval Required</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restricted to Graduate - Urbana-Champaign.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor approval forms available in 313 Altgeld Hall beginning on the first day of Fall semester.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>