Mathematics

MATH 484  **Nonlinear Programming**  credit: 3 OR 4 hours.
Iterative and analytical solutions of constrained and unconstrained problems of optimization; gradient and conjugate gradient solution methods; Newton's method, Lagrange multipliers, duality and the Kuhn-Tucker theorem; and quadratic, convex, and geometric programming. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance.
Prerequisite: MATH 241; MATH 347 or MATH 348; or equivalent; MATH 415 or equivalent; or consent of instructor.

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>38092</td>
<td>Lecture-Discussion</td>
<td>E13</td>
<td>01:00 PM - 01:50 PM</td>
<td>MWF</td>
<td>140 - Henry Administration Bldg</td>
<td>Vijay, S</td>
</tr>
</tbody>
</table>

Credit Hours: 3 hours
Quant Reasoning II course.
Open to both undergraduate and graduate students.

| 38093 | Lecture-Discussion  | E14     | 01:00 PM - 01:50 PM | MWF  | 140 - Henry Administration Bldg | Vijay, S   |

Credit Hours: 4 hours
Quant Reasoning II course.
Instructor Approval Required
Not intended for Undergrad - Urbana-Champaign.
Instructor approval forms available in 313 Altgeld Hall.