Syllabus for
MATH 445 and 545
Deterministic Models in Operations Research

Instructor: Dr. John Chrispell
Meeting: 5:05-6:20 TR (Stright Hall 220)
Office: 217 Stright Hall
Office Hours: Tue (3:00 PM - 4:30 PM ), Wed (8:30 AM - 10:30 AM) and Thur (1:30 PM - 3:00 PM) or by appointment.
Phone: (724) 357-4768
Email: John.Chrispell@iup.edu

http://www.math.iup.edu/~jchrispe/

Calculator: Students will be permitted to use a graphing calculator on all course assignments. A TI-Graphing calculator is strongly encouraged.

Homework / Tests / Final Project: There will be two in class test during the course of the semester. In addition to the tests, homework assignments will be given throughout the semester. There will also be a small class report on software used in operations research, and a final project. Students will work in small groups on the software report and final project. Students taking the class at the 545 level will be given additional homework and test questions.

Distribution

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
<th>Due Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>35%</td>
<td>Assigned Throughout the Semester</td>
</tr>
<tr>
<td>Test 1</td>
<td>18.5%</td>
<td>Thursday March 3rd, 2016</td>
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<tr>
<td>Test 2</td>
<td>18.5%</td>
<td>Thursday April 21st, 2016</td>
</tr>
<tr>
<td>Software Report</td>
<td>10%</td>
<td>Tuesday March 15th and Thursday March 17th, 2016</td>
</tr>
<tr>
<td>Final Project</td>
<td>18%</td>
<td>Tuesday, May 3rd (2:45 PM - 4:45 PM)</td>
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</tbody>
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Grades will be based on the pre-determined scale with

90%+ = A, 80%+ = B, 70%+ = C, 65%+ = D and below 64% = F

EXAMS: The semester exams for this class will be held on the dates listed above during class. If there is a conflict with taking the exam at the given time please make arrangements to take the exam at an alternate time prior to the scheduled exam.

Missed test/homework policy: I will not give make up tests. If you are unable to write a test, you must notify the instructor prior to the test or with an acceptable excuse and arrange a time to take it before the missed class. I will not accept late homework.

Attendance: Regular attendance is key to success in this or any course. Students are expected to attend class. It is your responsibility to make arrangements with another student to obtain missed class information.
Cell Phone/ I-Pod/Laptops Policy: No cell phones or ipods are allowed during class time. Please refrain from using your devices in the classroom.

Class Structure: Class will be interactive and you will be expected to participate by answering and asking questions and working problems during class.

Course Information: A personal course page with homework and keys is available at:

http://www.math.iup.edu/~jchrispe/Page_Teaching.html

Course Description and Outcomes: An introductory course on using the basic tools of solving deterministic models in operations research. Topics include optimization techniques and applications such as linear programming, non-linear and dynamic programming, transportation models, and network models. In addition, sensitivity analysis, duality, simplex methods, and integer programming are discussed. Students will use technology to solve problems and interpret the results.

- Developing an understanding of Operations Research and Linear Programming.
- Enhance mathematical problem solving skills.
- Enhance mathematical communication skills.

Prerequisites: MATH 122 or 124; MATH 171.