
An introduction to the theory for finding extreme values of linear functions subject to linear constraints. Topics include: recognition, formulation, and solution of real problems via the simplex algorithm; development of the simplex algorithm; artificial variables; the dual problem and the duality theorem; complementary slackness; sensitivity analysis; and selected applications of linear programming to integer programming, cutting plane algorithm, the distribution problem, the transportation problem, and the assignment problem. Students will use a computer to study the numerical performance of these algorithms. Prerequisite: 221.

We will cover most of the chapters 1-6. If time permits Chap. 7 will be covered.

Important Dates:

Holiday-----------------Sep. 1, Labor Day; Fall break, Oct. 10-13;
                        Nov. 11, Veterans Day; Thanksgiving, Nov. 25—Nov.29.
Midterm Exams---------- The dates are posted on my course website (tentative)
Final Exam---------------- Dec 16, Wed. 8:00-10:00am, EGRA 322

Last day to drop----- (with refund) Sep. 6----(without refund) Nov. 1

Grading Scale

| 90 |   A | 80 |   B | 70 |   C | 60 |   D | 59 |   F |

Grades

<table>
<thead>
<tr>
<th>Two mid-term exams (each 20%)</th>
<th>40%</th>
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<tbody>
<tr>
<td>Homework</td>
<td>18%</td>
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<tr>
<td>Final</td>
<td>40%</td>
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<tr>
<td>Attendance</td>
<td>2%</td>
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Instructor: D. Xu(dashunxu@siu.edu)  MATHEMATICS 472  Fall 2015
OFFICE: Neckers A 273  PHONE: 453-6512
OFFICE HOURS: MWF 9-11:00am, or by appointment
Attendance will be taken daily (no credit for 4 absences or more). Homework will be collected on Fridays. No Late homework! Due Dates will be indicated in class or updated periodically. If you miss class it is your responsibility to know which homework is due and when. Make-up exams are not allowed unless you have documented excuses. Make up exams are generally harder than regular exams.

Emergency Procedures. Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu, Department of Safety’s website at www.dps.siu.edu (disaster drop down) and the Emergency Response Guideline pamphlet. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.