

MA458/MA567: Operations Research

Fall SEMESTER 2008

Mon-Wed 6:00 - 7:15 p.m., ILB 430

- Instructor:** Dr. Madhuri Mulekar,
http://www.southalabama.edu/mathstat/personal_pages/mulekar/
- Office:** ILB 301 (Inside ILB 325)
- Contact:** Phone: 460-6264 Ext 62625; e-mail: mmulekar@jaguar1.usouthal.edu
- Office Hours:** Mon-Wed 4:00-6:00 pm or by appointment
- Textbook:** *Operations Research, Applications and Algorithms*,
by Wayne L. Winston, Thomson Publications, 4th edition
- Software:** A copy of LINDO/LINGO is available with new books. Each student is expected to have his/her own copy of LINDO/LINGO to use, either at home or at the university. It is illegal to copy the software for use by anyone but the purchaser.
- Final Exam:** Monday, December 8, 6:00 – 8:00 pm.
- Description:** An introduction to linear programming. The course will include a study of the simplex method as well as using computers to solve linear and nonlinear problems. As time permits, topics covered will include sensitivity analysis, duality, integer programming, transportation, assignment, transshipment, network, game theory, Markov processes, queuing theory, simulation, and forecasting. Credit for both MA 567 and MA 458 is not allowed.
Prerequisites: MA 237.
- Objective:** To equip students to be able to solve real world problems in operations research. The course will emphasize the various ways that exist to solve these problems, and how to communicate the solutions to non-technical people.
- Calculator:** A scientific/programmable calculator with statistical capabilities (such as TI-83, TI-83 plus, or TI-89) is recommended but not required.
- MA458/567 WebPage:** Supplemental course materials, announcements, and assignments will be provided at a MA458 web page. The students are responsible for any

materials given on this page. Hence, the student is encouraged to check the page daily. The address for this page is http://www.southalabama.edu/mathstat/personal_pages/mulekar/ma458

Attendance: Students are expected to attend all classes. The student will be responsible for getting materials from the instructor for any missed classes and catching up with the rest of the class.

Assignments: Few homework assignments, quizzes, or computer assignments will be given. No make-up assignments will be given. MA567 students will be given extra assignments in addition to the assignments given to MA458 students.

Final Grade: The grade will be determined by work on assignments (individual and group), participation in class (or group) discussions and presentations, and scores on examinations whereby the student demonstrates an ability to communicate statistical ideas and uses problem solving skills to investigate and solve statistical problems.

Assignments	Project	Exam 1	Exam 2	Final Exam	Total
20%	20%	20%	20%	20%	100%

A final letter grade of A, B, C, D, or F will be assigned based on the 90, 80, 70, or 60 percent of the total points.

Make-ups: No make-up exam will be given. However, if the student gives prior notification and has a valid doctor's excuse, he/she will be allowed to use the final exam grade for the missed exam grade.

Disabilities: Any student with a qualified disability requiring special accommodations should talk with the instructor immediately so that proper arrangements can be made. Note that, before any arrangements can be made the student must have verification documentation from the *Special Student Services Office (460-7212)*.

Reading: The student is expected to read appropriate sections of the textbook every day before coming to the class.