

UNIVERSITY OF ALABAMA
COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION
OPERATIONS SCHEDULING PROBLEMS
OM 522 (3 cr)
Fall 2007

Instructor:	Dr. John Mittenthal	Office:	350 Alston
Phone:	348-6087	Office Hours:	TBA
E-mail:	jmittent@cba.ua.edu		or by appointment

CLASS MEETINGS: (A) Section 990: TR 5:00-6:15PM, Bidgood 17
(B) Section 901: Lectures are posted in **eLearning** for on-line viewing

PREREQUISITES

OM 500 or OM 506.

REQUIRED TEXT

Planning and Scheduling in Manufacturing and Services, by Michael L. Pinedo, Springer, 2005.

COURSE DESCRIPTION

The course provides a broad investigation into a variety of scheduling activities in a variety of environments. Topics include project scheduling, job-shop scheduling, routing-related problems, and manpower scheduling.

COURSE OBJECTIVES

- Upon completion of this course, students will be able to
1. identify and distinguish between various scheduling environments,
 2. understand and apply various solution procedures to problems arising in these environments, and
 3. use a number of software packages to model, solve, and analyze these problems.

COURSE OUTLINE (tentative and subject to change)

Topic	Chapter	Sections	Days on topic
Introduction	1	1 – 2	0.5
Manufacturing / Service Models	2 and 3	1 – 4 & 1 – 4	1.5
Optimization and Heuristic Methods	App. B and C	4 & 1 – 4	3.0
Project Planning and Scheduling	4	1 – 2, 4, 6	4.0
Job Shop Scheduling	5	1, 3, 4	4.0
Routing-related Problems	Not in text		4.0
Workforce Scheduling	12	1 – 5	4.0

ACADEMIC CONDUCT and HONOR CODE

The Code of Academic Conduct and the Academic Honor Code for The University of Alabama can be found in the online *Student Handbook* linked from the Dean of Students Web site at www.sa.ua.edu/DoS/. Every student must read and be familiar with these policies. Speak to the instructor if you have any questions about these policies.

ATTENDANCE

- (A) Attendance is expected and required. Class participation is a factor that contributes toward your grade. In addition, while attendance will not be taken, periodically you will be asked to turn in write-ups at the end of class.
- (B) You are expected to watch each lecture and take notes. Occasionally, you will be required to post a private discussion (with a deadline) to ensure your timely participation in the course.

EXAMS and ASSIGNMENTS

Course evaluation will include one midterm exam, a final exam, and problem assignments. Group consultation is strongly encouraged and recommended for problem assignments; however, each student is to submit his/her own work.

Exams

Material for exams will come from the lectures, the text, and problem assignments. Do not neglect any of these in your preparation for exams. During an in-class exam, it is permissible to use a calculator and one 8.5"x11", double-sided page of **hand-written crib notes (no photo reductions are allowed)**. During a take-home exam, you should restrict yourself to the textbook, notes, and - if explicitly permitted - a computer. The **proposed** exam schedule is given below:

Mid-term:	tentatively October 18.
Final:	scheduled for Thursday, December 13 (7:00 - 9:30 PM)

The final will be comprehensive.

Homework Assignments

There are two types of homework assignments: practice problems, and problem assignments (perhaps to be solved with available software). Practice problems will NOT be graded, but (A) students will be expected to present their solutions in class as part of the class participation grade and (B) students will be required to present their solution on a discussion board as part of the class participation grade. Problem assignments will be graded. All assignment submissions will be evaluated on their correctness; i.e., simply attempting to complete the work, while relevant, is not the primary measurement of performance.

- While students are encouraged to work in groups to discuss, brainstorm ideas for, or double-check their work on these assignments, all students must perform and submit their own papers.
- Photocopied work will be given a 0.
- **Assignments are due at the beginning of class and will not be accepted at any other time – there are NO EXCEPTIONS.**

GRADING

Your final average for the course will be determined by the following equation:

$$\text{Final Average} = 0.25 * \text{Midterm} + 0.35 * \text{Final Exam} + 0.20 * \text{Homework Percentage} + 0.10 * (\text{class attendance/participation}) + 0.10 * (\text{best exam performance})$$

where Homework Percentage is $100 \times$ [the total of your graded problem assignments divided by the total possible points]. In other words, exams represent 60% of your grade, homework

represents 20% of your grade, 10% of your grade is based on class participation and attendance, and 10% of your grade arises from the source of your highest exam score.

MAKE-UP POLICY

Missed course work (homework assignments and exams) may be made up, or dropped, at the instructor's discretion, and only when a student has a documented, excused absence that would prevent the student from completing the course work on time. It is the student's responsibility to contact the instructor within 24 hours of the assignment deadline (or as soon as is physically possible) to request the make-up or drop. The instructor will decide at his own discretion whether the grade for the assignment will be dropped from the calculation of the course grade (drop) or whether the student shall make-up the assignment. If the instructor chooses to allow a make-up, then he will coordinate a reasonable time or deadline for the make-up with the student.

DISABILITY ACCESS STATEMENT

To request disability accommodations, please contact the Office of Disability Services at 348-4285. After consultation with that office, contact your professor. However, it is the student's responsibility to make arrangements for the accommodations on a timely basis. Special arrangements for exams must be made at least one week prior to the exam date or your instructor is not required to provide requested accommodations. Any request for special arrangements made less than one week prior to an exam date may not be able to be honored.

SAFETY POLICY

In the event of an emergency, we will adhere to the following actions in accordance with University policies.

FIRE/FIRE ALARM: Evacuate the building and stay out of the building at a safe distance until authorized to return.

TORNADO WARNING: Move to the Lower Level, inside classrooms, offices or corridors. Remain until the warning has expired. Classes are cancelled until the warning expires.

EXPECTATIONS:

1. Be in class on time, if not early. Be alert and attentive in class. Ask questions.
2. Complete the reading assignments. Unless you are informed otherwise, you are responsible for the material in the reading assignments even if it is not discussed in class.
3. Do the homework and in-class assignments and learn from them. You should especially learn from your mistakes. Take advantage of office hours to ask questions about your mistakes.
4. Exhibit professionalism and discipline in your work. Homework assignments should be neat, legible, and clearly organized. Answer all questions fully and in detail. Always put your name in the upper right corner of the first page even if you fold the paper.