OPER 3203 Decision Modeling & Analysis

Instructor: Dr. Cem Saydam
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Office hours: To be determined
Last Revised: 08-21-2012

Textbook:
Spreadsheet Modeling & Decision Analysis: A Practical Introduction to Management Science, Cliff T. Ragsdale
ISBN: 0-538-74631-9

Computer requirements: Windows OS and Office 2010 (or 2007). Recorded lectures and some of the add-ins for Excel run only on Windows machines. Students with Apple computers must utilize labs in the Friday building.

Catalog Course Description: Prerequisite: OPER 3100 with a grade of C or above. Analytical approach to understanding the management process and solving management problems with emphasis on model formulation, solution techniques, and interpretation of results. Specific topics covered in this course include: techniques such as linear, integer, goal and multi objective programming; queuing theory and applications; decision support via Monte Carlo simulation; decision making under uncertainty and risk; decision trees; and multi-criteria decision making. Excel is the main analytical tool.

Learning Objectives: To provide students, primarily in the fields of business and economics, with a sound conceptual understanding of the role management science plays in the decision making process. Emphasis is placed on quantitative approaches to decision making as well as how they can be applied and interpreted. Specific topics covered in this course include fundamental techniques such as linear programming, integer programming, queuing theory, and simulation.

In summary, the ability to develop models to support decision making is one of the critical areas of competency that should be demonstrated by students who have successfully mastered the OSCM major. These skills will be measured by the following learning outcomes:
- Students develop decision models to determine the best allocation of limited resources.
- Students develop Monte Carlo based simulation models to support decision making under uncertainty.

Preparing for the class: I expect every student to watch and study the recorded lectures, read the textbook and supplemental notes prior to each class session. Students must be prepared to answer questions on current topics.
Attendance Policy: Everyone must attend all exams and post-exam reviews. Also, I recommend that you attend all lectures. If you do decide not to attend on a regular basis, it is your responsibility to keep up with the class via the recorded lectures and the textbook. I will not go over the material that was covered in class or in a recorded lecture.

Grading:
Four mid-term exams and a cumulative final. The lowest of the five exams will be dropped. A 100-90, B 89-80, C 79-70, D 69-60, F 59-0. Should a student miss an exam, that student will receive a grade of zero. In the event that the excuse is approved (e.g.; prolonged or serious illness, court appearances, death of an immediate family member or grandparents – please let the grandma and pa live, call to active military duty or jury duty) then the student will take the make-up during the final’s week. However, in all cases students must support their claim with proper documentation. Students who miss more than one exam should drop the class otherwise will be given an F.

Exams are open book and notes and may be in a computer lab. Students can use their laptops during the exams. Final letter grades will be based on the following percentages: A 100-90, B 89-80, C 79-70, D 69-60, F 59-0.

I will review the exam only once and in class. Absent students forfeit their chance to review their exam. Therefore, it is very important that all students are present during these reviews.

Posting grades: Students will access to their grades via Moodle.

Assignments & Group work: I expect each student enrolled in this class to do the suggested problems on their own. At the same time you are encouraged to study in groups, solve the suggested problems together, and simply help each other learn the material. However, for all the take-home work that will be graded, unless mentioned explicitly, everyone must work alone without getting any kind of help from anyone.

Student workload: This 3-credit course requires three hours of classroom or computer lab instruction and about six hours of out-of-class student work each week for approximately 15 weeks. Out-of-class work include but is not limited to: required reading, reviewing, studying recorded lectures, working suggested problems and more, practicing Excel based decision modeling tools, and studying for exams.

Class Cancellation: In the event that I am unable to attend class or the University is closed unexpectedly, assume the material will be moved forward to the next meeting.

Academic honesty/integrity: THE UNC CHARLOTTE CODE OF STUDENT ACADEMIC INTEGRITY governs the responsibility of students to maintain integrity in academic work, defines violations of the standards, describes procedures for handling alleged violations of the standards, and lists the applicable penalties. The following is a list of prohibited conduct in that Code as violating these standards: A) Cheating; B) Fabrication and Falsification; C) Multiple Submission; D) Plagiarism; E) Abuse of Academic Materials; and F) Complicity in Academic Dishonesty. For more detail and
clarification on these items and on academic integrity, students are strongly advised to read the current "UNCC undergraduate catalog."
The instructor may ask students to produce **identification** at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.

**Philosophy of teaching:** I demand meaningful learning which can be interpreted by being able to translate the ideas, free of errors, into your own words and solve problems that are **structurally different** from those presented in class and textbook(s). Hence, always try to learn the materials by concentrating on the underlying principles. I will try to make you think by asking you questions and problems which may not be directly covered during the class lectures.

**Statement on Diversity:**
The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

**Miscellaneous:**
- The instructor reserves the right to change the course outline, and the course contents.
- There will be **no** extra credit offered for any individual student during the semester.
- The instructor will keep all exams. Students may keep copies.
- All electronic & telecom equipment such as **cell phones, beepers**, etc. must be kept **silent** during the lecture.

**Important Dates:**
First day of classes: Aug 20
Fall break: Oct 8-9
Last day to drop a course with a "W": Oct 29
Last day of classes: Dec 5
Final Exam date & time: Dec 11, 2-4:30pm

**Academic Calendar:** [http://registrar.uncc.edu/calendar](http://registrar.uncc.edu/calendar)

Detailed class schedule is on the course web page which can be accessed via Moodle.