OPER3203 Decision Modeling & Analysis

Instructor: Dr. Cem Saydam
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Office hours: To be determined

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

Hardware and Software requirements:

- Windows OS, Excel 2010 (or 2007) and Analytic Solver Platform for Education (ASPE)
- Available via PCs in lab 339 and in the open labs in the Belk COB
  - Recorded lectures also only run on Windows OS; need earphones in labs.
- Students who have a Windows PC/laptop with Excel 2010/2007 will be able to download and install the 140 day license of ASPE. Instructions will be distributed during the first week.

VERY Important Note:
ASPE and recorded lectures do not run on Apple OS (iOS) therefore students with Apple computers must utilize labs in the Friday building.

Class Format: HYBRID
Hybrid courses have been described as "the most prominent instructional delivery solution" since they provide the ever-growing and increasingly diverse academic world with the flexibility of fully online learning along with valuable collaboration achieved through face-to-face student-student and student-instructor interaction.

This course will meet face-to-face during the first day of class (Aug. 20, 2013), and thereafter only on Thursdays, and the very last day of class (Dec. 3, 2013). On the course webpage the face-to-face meeting dates are highlighted in green, the exams dates are highlighted in yellow, and self-study dates are marked as SELF STUDY.

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 along with ASPE are the main analytical tools.
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.

Attendance Policy: Everyone must attend all in lab quizzes, exams and post-exam reviews. Since the entire course content is available via the recorded lectures lab sessions will focus on framing and solving problems, working additional examples.

Grading:
Seven mini-quizzes (~15min); four mid-terms (1h15m) and a cumulative final (2.5h); The lowest of the five exams and the two lowest of the seven mini-quizzes will be dropped.
- Exams are open book, notes and personal files.
- Quizzes are generally closed book. Specific instructions will be given for each quiz.

Exams: 100 points ea. x 4 (best) = 400
Mini-quizzes: 20 points ea. x 5 (best) = 100

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.

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.

No make ups for missing mini-quizzes (note: 2 out of 7 are automatically dropped).

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.

Student workload: This 3-credit hybrid course requires 1h 15m of classroom or lab instruction and about seven 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 and quizzes.

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 or made available via online (course webpage).

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" and specifically policy no. 407 http://legal.uncc.edu/policies/up-407. 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 7-8
Last day to drop a course with a "W": Oct 28
Last day of class for this section: Dec 3
Final Exam date & time: Dec 10, 8-10:30am

**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.