OPER 3203 090 Decision Modeling & Analysis
Spring 2014 TR 5:00pm – 6:15pm Friday 339

Course content: Accessible via http://moodle2.uncc.edu/
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Office: Friday 341A
Office hours: By Appointment (email to schedule)

Text and Materials:
(1) Spreadsheet Modeling & Decision Analysis:
A Practical Introduction to Management Science,

(2) Lecture presentations, recorded lectures, assignments and additional course materials will be posted and managed in the course section on Moodle.

Hardware and Software Requirements:
• Windows OS, Excel 2010 (or 2007) and Analytic Solver Platform for Education (ASPE)
• Available via PC’s in lab 339 and in the open labs in Belk College of Business
  o ASPE and recorded lectures do not run on Apple OS X, therefore students with Apple computers must utilize labs in the Friday building or run a Windows virtual machine.
• Students with access to windows machines with Excel 2010/2007 will be able to download and install the 140-day license of ASPE. Instructions will be provided during the first week of class.

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 self-study learning along with valuable collaboration achieved through face-to-face student-to-student and student-to-instructor interaction.

As such, the format of this course will be hybrid. Face-to-face class sessions will be held during the regular time blocks each week, unless otherwise specified. Self-study days will be marked on the course schedule as SELF STUDY and will be identified throughout the semester based on the nature and pace of the current material.

Catalog 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 will be the primary analytical toolset.

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 allocations 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, and working additional examples. Class attendance is highly correlated with learning the material and performing well on the course examinations.

**Grading:** Seven mini-quizzes, four midterms and a cumulative final will be administered. 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.

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Exams (4 @ 20 %)</td>
<td>80%</td>
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<tr>
<td>Mini-quizzes (5 @ 4%)</td>
<td>20%</td>
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<td><strong>Total</strong></td>
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Final letter grades will be calculated based on the following 10-point scale:
A: 100-90% and above; B: 89.9-80%; C: 79.9-70%; D: 69.9-60%; F: Below 60%.

Should a student miss an exam as a result of missing a class, that student will receive a grade of zero. In the event that the excuse is approved before the date of the examination (proper documentation required) then the student will take the make-up exam within three school days (M-F). Students who miss more than one exam should drop the class otherwise they will be given an F.

No make-ups for missing mini-quizzes will be granted. (Note: 2 out of the 7 are automatically dropped)

Exams are a form of intellectual property belonging to those who create them. Therefore, the exam materials must remain in the instructor's possession or control at all times. Exams may not be taken outside of the lecture hall or copied for any reason. Failure to return an exam after taking or reviewing it or removing an exam from my presence at any time or copying an exam will be considered theft of intellectual property. Such action will result in an exam grade of zero and may warrant further disciplinary action.

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 have access to their exam grades via Moodle. The course grades posted on Moodle are for informational purposes only. The official overall grade is computed and kept in the instructor's grade book.

**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 includes but is not limited to: required reading, reviewing, studying recorded lectures, working suggested problems, practicing the 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 online.

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.

Religious Accommodation for Students: The University of North Carolina at Charlotte is committed to diversity, nondiscrimination and inclusiveness, and to supporting its students, regardless of religious affiliation or non-affiliation, in accordance with state and federal laws and regulations. As part of this commitment, the University makes good faith efforts to accommodate a student’s religious practice or belief, unless such accommodation would create undue hardship. Details associated with this policy can be found by visiting https://legal.uncc.edu/policies/up-409.

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.
- All electronic & mobile devices such as cell phones, laptops, tablets, etc. must be kept silent during the lecture.

Important Dates:
First Day of Classes: January 8th
Dr. Martin Luther King Jr. Day: January 20th
Spring Recess: March 3rd – 8th
Last day to withdraw from a course with a "W" grade: March 26th
Spring Weekend: April 18th – 19th
Last Day of Classes: April 29th
Final: TBD