MBAD 6122 Decision Modeling and Analysis via Spreadsheets

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Course Web Page: Access via Moodle (Jan7+)


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It can be purchased from Cengage (publisher), UNC Charlotte bookstore (Barnes&Noble), Gray's bookstores, www.bestbookbuys.com, www.amazon.com and various other sources.

Additional Readings: Select articles and cases will be posted or emailed as attachments to the students.

Course Description: This course is designed 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. This is an important course in developing decision models and their application to management problems. The emphasis is on models that are widely used in all industries and functional areas, including operations, supply chain management, finance, accounting, and marketing.

The rapid and phenomenal advances in computing have propelled the use of decision models in recent years. Today’s inexpensive and fast computing capabilities coupled with friendly and intuitive user interfaces, such as spreadsheets, have been complemented by the availability of large volumes of previously unavailable data, such as the automatic capture of point-of-sale information, and easy access to large databases (e.g., Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems.) Personal computers and friendly interfaces have become effective “delivery vehicles” for powerful decision models that were once the exclusive province of experts. Information has come to be recognized as a critical resource, and models play an increasingly critical role in deploying this resource, in organizing and structuring information so that it can be used more productively. Specific topics covered in this course include fundamental 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.

Typical class format will include brief discussion on background theory by initially simpler and smaller business problems, followed by in-class group exercises (moderated by the instructor) that are more realistic and larger in size and scope. The emphasis will
be on both formulating an appropriate model for a given business problem and developing an Excel based solution approach by utilizing various built-in and add-in software tools (e.g., RiskSolver, standard solver, data analysis, Crystal Ball, TreePlan, etc.)

**Prerequisites:** MBAD 5141/5142. A keen interest in problem solving (logic, math, and statistics) and a desire to practice information technology skills (Excel, MS Office, web usage skills: search, download documents).

**Catalog Description:** MBAD 6122. Decision Modeling and Analysis via Spreadsheets. (3G) Prerequisite: MBAD 5141/2 or equivalent. An analytical approach to the management process. Generalized models for decision making with major emphasis on application of the scientific method to management problems. (Yearly)

**Assignments:** Students are expected to do all the suggested assignments; generally, solutions to those will be posted on the course web page. Specific homework assignments may be announced, collected, and be graded as part of your overall grade. Homework or any other material delivered electronically must be free of viruses. A virus infected work will receive a grade of zero. All homework is due at the specific date and time, which will be indicated on the assignments. Late work will not be accepted.

**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 “University Regulation of Student Conduct” section of the current "UNC Charlotte catalog."

**Philosophy of teaching:** I demand meaningful learning, which can be interpreted as 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 material 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.
Grading and exam format:
Four exams (100 pts. ea.); total 400 points.

UNCC Grading scale, percentiles: 100-90 A, 89-80 B, 79-70 C, 69-0 U

All exams are open book and notes. 10-30% of each exam can be done in groups up to three persons. Please carefully follow the instructions on the exams.

Individual vs. group work: I expect each student enrolled in this class to do their own homework and exams. At the same time you are encouraged to study in groups, solve the suggested problems together, and simply help each other learn the material. During the exams for both group and individual parts you should not get help from any outside source or person. When permitted, solve the group part in your group, otherwise work alone.

Class Format:
Online – asynchronous. This course will rely on pre-recorded lectures compiled using Centra. For each topic there will be pre-recorded lectures posted on the course web page along with presentation notes, excel files, and reading materials.

The detailed course outline and materials will be available via the course web-page on or before Jan 7.

Course website will be emailed to all registered students. Although the course website can be accessed via a link in Moodle normally students do not need to login to Moodle to the access course website.

Important Dates for Spring 2012:
First day of classes for MBAD 6122: The week of Jan 9
Spring recess: Mar 5-10
Last day to drop a course with a "W": Mar 19
Last day for MBAD 6122: The week of April 30
The last exam for MBAD 6122: Due May 7, 12noon.
Click here for complete current Academic Calendar