



**Belk College of Business**  
**Department of Business Information Systems and Operations Management**

## **OPER 3203-001 | Decision Modeling & Analysis | 3 credits**

**Faculty: Dr. Joohyun Kim**

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**Office Hours:** Mon/Wed, 2:30 PM – 4:00 PM (or by appointment)

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*My preferred method of contact is by email. I will respond to all emailed questions within 24 hours Mon-Fri. I do not respond to emails over the weekend.*

### **Course Description:**

Analytical approach to understanding the management process and solving management problems with an emphasis on model formulation, solution techniques, and interpretation of results. Topics 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. Microsoft Excel is the main analytical tool.

### **Pre or Co-requisite:**

OPER 3100 with a grade of C or above

### **Meeting Times:**

Monday and Wednesdays, 4:00 PM-5:15 PM, Friday Building, Room 339, Fall 2022

### **Course 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 majors like OSCM, Business Analytics, and MIS. 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.

### Required Materials:

- 1) Textbook: *Spreadsheet Modeling & Decision Analysis: A Practical Introduction to Business Analytics*, Cliff T. Ragsdale, South-Western, 9th Edition, 2022 (8th Ed. will also work).
  - Cengage Unlimited eTEXTBOOKS \$69.99/semester gives access to an unlimited number of eBooks. <https://www.cengage.com/unlimited/>
  - Note: Do not need MindTap etc for this course but may want them for other courses. Essentially you simply need the book.
- 2) Software: Windows OS, Excel 2016/2013/2010 or Office 365 and Analytic Solver Platform for Education (ASPE)
  - Students are required to purchase a 140-day license copy of ASPE from Frontline systems for \$25. Instructions for this are posted in canvas.
- 3) Other course materials including copies of class presentations will be provided on the Course Canvas website at: <https://canvas.uncc.edu/>

### Grading Criteria:

Course Element	Point Value	Percentage
6 In-class Quizzes (the lowest two of the six in-class quizzes will be dropped)	10 X 4 = 40	40%
3 Exams	20 X 3 = 60	60%
Total	100	100%
Class Participation (e.g., Attendance) – Extra Points	3	3%

**Grading Scale:**

A 100 % to 90.0%

B <90.0 % to 80.0%

C <80.0 % to 70.0%

D <70.0 % to 60.0%

F <60.0 % to 0.0%

**Course Policies:****Syllabus Revision:**

The standards and requirements set forth in this syllabus may be modified at any time by the course instructor. Notice of such changes will be by Canvas announcement or email notice.

**Classroom Conduct:**

I will conduct this class in an atmosphere of mutual respect. I encourage your active participation in class discussions. Each of us may have strongly differing opinions on the various topics of class discussions. The conflict of ideas is encouraged and welcome. The orderly questioning of the ideas of others, including mine, is similarly welcome. However, I will exercise my responsibility to manage the discussions so that ideas and argument can proceed in an orderly fashion. You should expect that if your conduct during class discussions seriously disrupts the atmosphere of mutual respect I expect in this class, you will not be permitted to participate further.

**Late Work and Make-Ups:**

A student who misses an exam will receive a grade of zero. In the event that the excuse is approved (must provide proper documentation, e.g., doctor's note, accident report, and court documents) then the student will take the make-up within three school days. Students who miss more than one exam should drop the class otherwise will be given an F.

**Revisions:**

Revisions of all major writing assignments must be completed and submitted to the original assignment box in Canvas no later than 2 weeks after feedback has been returned.

**Feedback:**

Typically, feedback will be returned within one week for quizzes and exams.

**Academic Integrity:**

All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Students are expected to submit their own work, either as individuals or contributors to a group assignment. Definitions and examples of plagiarism and other violations are set forth in the Code. The Code is available from the Dean of Students Office or online at: <http://legal.uncc.edu/policies/up-407> Faculty 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.

**Course Credit Workload:**

This 3-credit course requires 9 hours of work a week. Class work may include but is not limited to: required readings, library research, written assignments, discussion posts, viewing of course videos, reviewing feedback from the instructor, and completing assessments.

**Non-Discrimination:**

All students and the instructor are expected to engage with each other respectfully. Unwelcome conduct directed toward another person based upon that person's actual or perceived race, actual or perceived gender, color, religion, age, national origin, ethnicity, disability, or veteran status, or for any other reason, may constitute a violation of University Policy 406, The Code of Student Responsibility. Any student suspected of engaging in such conduct will be referred to the Office of Student Conduct.

**Title IX:**

Title IX UNC Charlotte is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these incidents, know that you are not alone. UNC Charlotte has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more. Please be aware that many UNC Charlotte employees, including all faculty members, are considered Responsible Employees who are required to relay any information or reports of sexual misconduct they receive to the Title IX Coordinator. This means that if you tell me about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, I must

report the information to the Title IX Coordinator. Although I have to report the situation, you will still have options about how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need. If you wish to speak to someone confidentially, you can contact any of the following on-campus resources, who are not required to report the incident to the Title IX Coordinator: (1) University Counseling Center ([counselingcenter.uncc.edu](http://counselingcenter.uncc.edu), 7-0311); (2) Student Health Center ([studenthealth.uncc.edu](http://studenthealth.uncc.edu), 7-7400); or (3) Center for Wellness Promotion ([wellness.uncc.edu](http://wellness.uncc.edu), 7-7407). Additional information about your options is also available at [titleix.uncc.edu](http://titleix.uncc.edu) under the “Students” tab.

**Religious Accommodation:**

Students who, acting in accordance with this Policy, miss classes, examinations or other assignments because of a religious practice or belief must be provided with a reasonable alternative opportunity to complete such academic responsibilities. It is the obligation of students to provide faculty with reasonable notice of the dates of religious observances on which they will be absent by submitting a [Request for Religious Accommodation Form](#) to their instructor prior to the census date for enrollment for a given semester. The census date for each semester (typically the tenth day of instruction) can be found in [UNC Charlotte’s academic calendar](#).

**Student Grievances:**

Student Grievances Students enrolled in courses at the University of North Carolina at Charlotte who would like to file a complaint regarding their experience may do the following: 1. Refer to the UNC Charlotte Student Grievance Procedure. Students may also contact UNC Charlotte’s regional accrediting agency, the Southern Association of Colleges and Schools Commission on Colleges. 2. Students residing outside of North Carolina while attending UNC Charlotte may file a complaint in their state of residence. As required by federal regulations, students are directed to the list of resources here, compiled and updated by the State Higher Education Executive Officers.

**Withdrawals:**

Students are expected to complete all courses for which they are registered at the close of the add/drop period. If you are concerned about your ability to succeed in this course, it is important to make an appointment to speak with me as soon as possible. The University policy on withdrawal allows students only a limited number of opportunities available to withdraw from courses. It is important for you to understand the financial and academic consequences that may result from course withdrawal.

**Incompletes:**

The grade of I is assigned at the discretion of the instructor when a student who is otherwise passing has not, due to circumstances beyond his/her control, completed all

the work in the course. The missing work must be completed by the deadline specified by the instructor, and no later than 12 months. If the I is not removed during the specified time, a grade of F, U, or N, as appropriate is automatically assigned. The grade of I cannot be removed by enrolling again in the same course, and students should not re-enroll in a course in which they have been assigned the grade of I. University policy addressing Incompletes.

## Student Support:

### Disability Support Services:

Students in this course seeking accommodations to disabilities must first consult with the Office of Disability Services and follow the instructions of that office for obtaining accommodations.

The Office of Disability Services works with current undergraduate and graduate students along with prospective students to ensure equal access to UNC Charlotte's campus and educational programs.

All services are dependent upon verification of eligibility. Once approved for services, students receive accommodations which are based upon the nature of an individual's disability and documented needs. Students are strongly encouraged to register or check-in for their accommodations with a Disability Services counselor as soon as they have registered for classes. Accommodations are not retro-active and will not begin until the student notifies his or her faculty by providing the Letter of Accommodation. Please visit the Office of Disability Services at for additional resources, email questions to [disability@uncc.edu](mailto:disability@uncc.edu), or call 704-687-0040 (tty/v) for more information.

### Student Support Services:

Be sure to take advantage of the wealth of resources and support available at UNC Charlotte. Some of the resources available to you include the University Writing Resource Center, University Counseling Center, and the J. Murrey Atkins Library.

- [University Center for Academic Excellent \(UCAE\) | \(704\) 687 7837 | uncc-ucae@uncc.edu](#)
- [University Writing Resources Center \(WRC\) | 704-687-1899 | wrchelp@uncc.edu](#)
- [Veteran Student Services | 704-687-5488 | veteranservice@uncc.edu](#)
- [University Counseling Center | 704-687-0311](#)
- [Multicultural Resource Center | 704-687-7121 | mrc@uncc.edu](#)
- [List of computer labs on campus](#)
- [Atkins Library Laptop Lending program](#)