



School of Business Administration
SCM 3301: Introduction to Management Science – Section 02
Spring 2025

COURSE SYLLABUS

Course Title	Introduction to Management Science	Pre-requisites	GBU 2301
Course Code	SCM 3301	Credit	3 hours
Class Hours	TR 14:30 - 15:50	Textbook	<i>An Introduction to Management Science: Quantitative Approaches to Decision Making</i> , 15 th Edition, by Anderson et al.
Professor	Dr. Jawad Abrache	Office	Building 8B, Room 313
Office Hours	W 14:00 - 15:00 TR 11:00 - 12:00	Contact Details	Email: J.Abrache@au.ma Phone: Ext 2335

1. Course Description

This course gives an introduction to mathematical modeling and optimization techniques, including linear programming, integer programming, basic network flow problems (including transportation and transshipment problems), queuing models, simulation, and decision making under uncertainty.

2. Learning Goals/Objectives

BBA Program Learning Goals (Competency)	Course Competency Definition (Criteria/Trait) (What)	Course Assessment Metrics (How)
C2. Display competence in communication for professional purposes		
LO2A – Students will apply advanced written communication skills.	Criteria 1 (Clarity in Written Communication): The ability to convey ideas, information, and messages clearly and effectively through written documents. Criteria 2 (Use of Proper Grammar and Mechanics): The skill in using proper grammar, punctuation, spelling, and overall language mechanics in written communications.	Assessed through the written reports of case studies. Assessed through the written reports of case studies.
C3. Demonstrate technological proficiency		
LO3B – Students will effectively use IT tools and platforms.	Criteria 1 (Technological Tool: Utilization): The ability of students to proficiently navigate and utilize various software	Assessed through specific questions in case studies and/or exams.

	applications to accomplish tasks and enhance productivity. Criteria 2 (Effective Data Reporting): The ability of the student to effectively generate comprehensive reports within a software application.	Assessed through the written reports of case studies.
C4. Analyze business strategies that consider local and global perspectives		
LO4A – Students will be able to identify, analyze, and develop local effective business strategies.	Criteria 1 (Recognition of Local Business Strategies): Proficiency in identifying and acknowledging potential local business strategies aligned with specific business goals and objectives.	Assessed through specific questions in case study reports.
LO4B – Students will be able to identify, analyze, and develop global effective business strategies.	Criteria 1 (Recognition of Global Business Strategies): Proficiency in identifying and acknowledging potential global business strategies aligned with specific business goals and objectives.	Assessed through specific questions in case study reports.
C5. Display competencies of successful business decision-makers		
LO5A – Students will be able to recognize and use general BA concepts	Criteria 1 (Understanding of Specific Business Concepts): Proficiency in identifying and acknowledging the business concepts, methods and models used in the discipline.	Assessed through exams.
	Criteria 2 (Apply Business Concepts): Proficiency in applying the business concepts, methods and models used in the discipline.	Assessed through exams.

3. Course Resources

Required Text

Anderson et al. (2021). *An Introduction to Management Science: Quantitative Approaches to Decision Making*, 15th Edition, Cengage Learning.

4. Tentative Class Schedule

Week No.	Week of	Topic(s) Covered	Reading Assignments
1	Jan 20	Syllabus presentation Introduction to Management Science	Chapter 1 of required textbook
2	Jan 27	Introduction to Linear Programming	Chapter 2 of required textbook
3	Sept 16	Introduction to Linear Programming, cont'd	Chapter 2 of required textbook
4	Feb 3	Linear Programming: Computer Solution and Sensitivity Analysis	Chapter 3 of required textbook
5	Feb 10	Linear Programming: Computer Solution and Sensitivity Analysis, cont'd	Chapter 3 of required textbook
6	Feb 17	Linear Programming Applications	Chapter 4 of required textbook
7	Feb 24	Linear Programming Applications, cont'd	Chapter 4 of required textbook

		Midterm Exam 1 (see details below)	
8	Mar 3	Linear Programming Applications, cont'd Distribution and Network Models	Chapter 4 of required textbook Chapter 6 of required textbook
9	Mar 10	Distribution and Network Models, cont'd	Chapter 6 of required textbook
10	Mar 17	Distribution and Network Models, cont'd Integer Linear Programming	Chapter 6 of required textbook Chapter 7 of required textbook
Spring Break & Eid El Fitr (March 24 – April 2)			
11	Apr 3	Integer Linear Programming, cont'd	Chapter 7 of required textbook
12	Apr 7	Midterm Exam 2 (see details below) Integer Linear Programming, cont'd	Chapter 7 of required textbook
13	Apr 14	Queuing Models	Chapter 11 of required textbook
14	Apr 21	Queuing Models, cont'd	Chapter 11 of required textbook
15	Apr 28	Introduction to Monte-Carlo Simulation with a Queuing Example	Material distributed by the instructor
16	May 5	Introduction to Monte-Carlo Simulation with a Queuing Example, cont'd <u>May 8</u> : Availability to answer student questions	Material distributed by the instructor -
Final Exams (May 11-19)			

Please note that exams are tentatively scheduled as follows:

Midterm Exam 1: Thursday February 27, 2025 (class time)

Midterm Exam 2: Tuesday April 8, 2025 (class time)

Final Exam: scheduled by Enrollment Services.

5. Teaching Method

The course will be a combination of lectures, problem solving, discussions, case studies, and assignments (homework, readings, etc.). The instructor will make lecture notes (slides and other material) available on the course's CANVAS portal. The purpose of these lecture notes is to help the students summarize the material presented in class only, and cannot by any means substitute for regular attendance, active participation, and in-class note taking by the students. The assessment comprises two midterm exams, one final exam, cases studies, as well as the student's attendance and participation.

Students will have assignments that consist of a series of review problems with the purpose of practicing and assessing the understanding of the topics taught in class. They will also be involved in several case studies throughout the semester. The case studies are team-oriented tasks and should be done by teams of preferably four students.

Learning is supported by a variety of academic resources made available to students. These include the following: tutoring services (the Center for Learning Excellence), counseling services, and other forms of student support.

6. Assessment

The grading of the students' performance is based on two midterm exams, one final exam, case studies, and the quality of the student's participation. The grading percentages are as follows:

Midterm Exam 1	20%
Midterm Exam 2	20%
Final Exam	25%
Case Studies	30%
Participation	5%

Letter grades are awarded based on the following grading system:

A+ 97%-100%	B+ 87%-89%	C+ 77%-79%	D+ 67%-69%
A 93%-96%	B 83%-86%	C 73%-76%	D 60%-66%
A- 90%-92%	B- 80%-82%	C- 70%-72%	F < 60%

To pass the course, students need to earn a grade of C- or better.

7. Student Conduct and Course Policies

Upon joining AUI, students automatically become members of the University community and, as such, assume full responsibility for proper conduct until they leave the University. All University students are expected to be familiar with the common conventions of adult society that govern behavior. In addition, it is the responsibility of the student to become familiar with the University's overall policies, rules, and regulations covering student conduct. These rules and regulations consist of official policy statements on important issues that concern students. Student Conduct is published online and in the Student Handbook. The University reserves the right, through due process, to suspend, expel, or place on probation any student for improper conduct.

The University's Attendance Policy listed below (sections 2 to 9; section 1 covering introductory and background material) will be enforced.

2. Attendance Policy

Regular attendance and active participation in all class meetings are expected from every enrolled student. Students are responsible for managing their absences effectively within the allowed limit. While attendance is important, it does not reflect the achievement of learning outcomes, and it will not directly impact the student's grade as long as they are enrolled in the course. However, excessive absences may result in administrative withdrawal from the class.

3. Absence Allowance

Each student is granted a maximum number of absences for the semester/session, based on the frequency of class meetings, course credits, and student's seniority as follows:

Class Frequency	Course Level	Absence Ceiling
4/5 times a week	English Language Courses at the LC	8
3 times per week	Freshmen Level Courses	6
	Sophomore/ Junior Level Courses	7
	Senior Level Courses	8
Twice per week	Freshmen Level Courses	4
	Sophomore/ Junior Level Courses	5
	Senior Level Courses	6

4. University-Sponsored or Authorized Events

Students may request to attend/participate in university-led or authorized events without it affecting their attendance record in class. However, even in these cases, students cannot exceed a maximum number of 10 absences for the semester/class (all types of absences combined).

5. Responsibility and Accountability

Students are trusted to manage their absences responsibly and should recognize the impact of their absences on their learning and academic progress. All absences shall be considered within the absence allowance. Extreme cases that require a prolonged absence, such as hospitalization, approved by the Health Center Director, remain the only exception. Students with chronic diseases must self-identify with the health center as soon as they join AUI. Given that attendance does not justify reaching ILOs, faculty members must not impose penalties for absences.

6. Administrative Withdrawals

As soon as a student exceeds the maximum number of allowed absences for the course, faculty members may file a "WF Form" with the Office of the Registrar and the student will be withdrawn from the class by the Registrar. This withdrawal will be indicated on the student's academic record. Once withdrawn, the student will not be allowed to re-enroll in the course for that semester/session.

7. Make-Up Work

It is the student's responsibility to catch up on missed work due to absences. Faculty members may provide guidelines for making up missed assignments or exams, but it is ultimately the student's responsibility to ensure they are up to date with all course materials and requirements.

8. Missed Exams and Quizzes

In cases where a student has not exceeded the number of allowed absences in a class misses an exam or pop quiz, the following rules apply. If the exam or quiz was listed on the syllabus for a specific date and the student missed that class session, then they must provide evidence to the DSA that they were hospitalized or that an equivalent medical emergency necessitated that absence, or they will not be eligible for a make-up exam or quiz. In the case of unannounced pop quizzes, if a student misses class on a date when an unannounced pop quiz is administered, then it will be exclusively at the discretion of the instructor whether to allow a make-up pop quiz.

9. Absence Records

Faculty members are expected to keep track of student absences on a weekly basis using the university LMS, Canvas, and may send reminders to students who approach the absence limit. This is critical

because only when faculty enter absences in the Canvas system is the Office of Academic Support and Progress (OASP) alerted of potential problems, allowing it to intervene directly with students at risk. Nevertheless, it remains the student's responsibility to monitor their own attendance and manage their absences accordingly.

10. Appeals Process

Students who believe their withdrawal from the course due to excessive absences was unjustified may appeal the decision through the office of the Dean of Student Affairs, copying the Dean or Director of the academic unit that the student majors in, no more than one week after the administration of the withdrawal.

Specific additional course policies are listed below.

- You are responsible for knowing the course policy, summarized in the following points. “I did not know” is not a valid excuse.
- Courteous and respectful behavior is a must. Any student showing any kind of disrespectful attitude (towards classmates or the instructor) will be asked to leave the classroom and will be referred to a disciplinary committee at the level of the School and/or the University.
- In order not to disturb the lecture, the students should always arrive on time and avoid leaving the class early. Furthermore, everybody is asked to keep cell phones off during class sessions and abstain from unnecessary and unauthorized conversation.
- I will be rigorously following the University’s policy on plagiarism, cheating, and other forms of academic dishonesty. Though healthy collaboration and constructive exchange of ideas is encouraged for homework, an assignment done by way of copy/past will be identified and the authors held responsible. All forms of collaboration and cheating during quizzes and exams will not be tolerated. I will adopt a zero-tolerance policy: any form of cheating and plagiarism will result in a failing grade (F) for the course.
- I do not curve or negotiate my grades, and I do not give remedial work.
- I reserve the right not to evaluate any assignment returned late. If such assignment is ever graded, a penalty will be applied to the grade.
- A student who misses an exam is eligible to a makeup examination only if I get notified in written from the DSA office before or immediately after the exam, and documentation about the reason for missing the exam as scheduled (serious illness, etc.) is provided and approved. Missing an exam without valid excuse and/or proper notification will result in a grade of zero for the exam.