

MGT 2255 Syllabus

Quantitative Analysis for Business, Section A, 3 credits, Fall 2026

Instructor Information

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General Course Information

Course Description: MGT 2255 is a course focused on the decision-making processes and strategies of businesses. In the course, we will look at how businesses may employ quantitative concepts and techniques in their decisions, to optimize outcomes. Software tools such as Microsoft Excel will be used extensively throughout the semester during the business cases, and assignments. We will apply quantitative-analytical skills to a wide range of areas such as Supply Chain and Operations Management, Information Technology Management, Finance, Marketing, Accounting, and Strategy. The material is approached from a managerial rather than technical perspective with a focus on how to apply decision technology and how to interpret the results for guiding management action. This is not a course in mathematics. The focus is on the basic structure and logic of the models, not on their mathematical details and proofs.

Course Learning Outcomes: Upon successful completion of this course, students will be able to:

1. Apply quantitative methods to business decision-making.
2. Build and solve business models using Excel.
3. Analyze decision, optimization, project, and queuing problems.
4. Interpret regression results and other analytical outputs.
5. Communicate data-driven recommendations in business contexts.
- 6.

Required Course Materials: ISBN 9780135319321; MyLab Operations Management with Pearson eText Access Code for Quantitative Analysis for Management. The e-book is embedded in MyLabOM, and registration instructions are available on Canvas. Students will complete all homework assignments and take all tests, including the final test, through MyLabOM.

Course Delivery: This class is designed to incorporate both online and face-to-face teaching modes. Students are required to attend class every Monday and Wednesday. Each Friday, the class will be conducted asynchronously online, where students will have the opportunity to enhance their learning experience and strengthen new skills using Canvas videos and other course materials.

Grading Policy

Your grade in the course will be based on:

- (1) Class Participation :**36 points**
- (2) the sum of the *two* highest test scores and the average of all *three* test scores :**300 points**
- (3) the highest 12 out of 13 homework assignments:**120 points**
- (4) Generative AI Essay:**17 points**
- (5) final Test **140 points**
- (6) Project Management Essay:**17 points**
- (7) two Practice Tests:**40 points**
- (8) the highest 12 out of 13 canvas video online quizzes:**30 points**

The points that can be earned from each of those components are given in the table below and yield a total of **700** points. The letter grade corresponding with your total points earned is as follows:

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- A:** 630 points and above
- B:** 560-629 points
- C:** 490-559 points
- D:** 420-489 points
- F:** 419 points and below

Incomplete Grade: If serious circumstances arise and appropriate documentation is provided, a student who misses more than one test or the final exam may receive an incomplete grade for the course.

Description of Graded Components

Homework Policy: Homework assignments should be completed through Pearson platform, MyLabOM. In addition to submitting your answers on MyLabOM, you must also upload your Excel solutions for some Homework assignments. Failure to submit the required Excel file to Canvas will result in a minimum 50% penalty and may result in a score of zero. Students are welcome to work on homework assignments in groups. Cooperation is not only allowed but encouraged. However, each student must make an individual submission. Emergencies and illness may occur. To account for this, I will drop the lowest homework score at the end of the semester.

Project Management Essay: The Project Management Essay must be submitted through Canvas and should be typed on standard 8½ × 11 paper. No late submissions will be accepted. This is an open-book, open-notes assignment, but it must be completed independently.

Generative AI Essay: The goal of the AI Essay is to learn how to use generative AI for Business. Please, make sure that the task for you is to examine the posted videos and materials on Canvas under ‘AI Essay Videos,’ and identify the main points and important takeaways of each video. Your essay should have subheadings for ‘Introduction,’ ‘Video 1,’ ‘Video 2,’ ‘Summary’ and your essay should explain what you learned from each video, and how its lessons relate to both analytics itself, and to business. Please, use a title for your essay.

Online Canvas/Kaltura Video Quizzes: Throughout the semester, students will complete online Canvas/Kaltura video quizzes for significant course topics. These quizzes are posted on Canvas under Assignments. In each quiz, students will watch a short instructional video designed to explain important ideas, difficult concepts, and problem-solving methods. After watching, students will answer embedded questions and, in some cases, write a short response about what they learned. These video quizzes are intended to help students review key material, strengthen conceptual understanding, and prepare for homework, tests, and the final test. Feedback from previous students has been very positive, and many students found these quizzes especially helpful as tutorials and study tools. Students are strongly encouraged to use them as their own guided practice and concept review before tests and the final exam.

Tests and Final Test: All tests and the final test will be administered in MyLabOM as closed-book, closed-notes, in-class tests. A formula sheet will be provided for each test and posted three weeks before the test date. Any additional instructions or requirements related to homework assignments,

quizzes, tests, the Project Management Essay, or the AI Essay will be communicated by email prior to the due date.

Course Policies

Email Communication: I will make every effort to respond to emails received on weekdays within 24-36 hours of receipt; emails received on weekends and holidays may result in a longer response time. Please include your first and last name as well as the course and section (e.g., MGT 2255, section A) in the title of your emails.

Honor Code Statement for Pearson In-Class Tests: A signed Honor Code Statement should be uploaded to Canvas during the first week of Fall 2026 term. A template will be provided to you on Canvas to fill out and upload.

Academic Integrity: Georgia Tech values trust, honor, and academic integrity. Students are expected to uphold the highest ethical standards, and any suspected violations of the Academic Honor Code will be reported and addressed according to Institute policy.

For information on Georgia Tech's Academic Honor Code, please see The Georgia Institute of Technology 2026-2027 Catalog at <http://www.catalog.gatech.edu>. Refer specifically to section 18b entitled "Academic Honor Code" at <http://www.catalog.gatech.edu/rules/18b.php> for the principles, policies, and procedures governing issues of academic integrity.

Special Accommodations: Please obtain a letter from the Office of Disability services and turn it in to me in the beginning of the semester. The Office of Disability services is located in the Smithgall Student Services Building, Suite 220. The phone number is 404-894-9786.

<http://disabilityservices.gatech.edu/>. *I want every student to feel supported in this course, and I will be glad to work with you to address your learning needs and help you succeed.*

Student-Faculty Expectations Agreement: At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

The primary pre-requisite for MGT 2255: Quantitative Analysis for Business at Georgia Tech is MGT 2250 (Management Statistics). Other acceptable substitutes for MGT 2250 include ECON 2250, ISYE 3030/3770, MATH 3215/3670, or BMED 2400

Class participation: Class participation is an important part of this course and is built through active learning activities completed during class and asynchronous Friday sessions. Students earn 1 participation point for each of the 36 non-testing class periods by being present for the full class and submitting required work on time; late work is not accepted. For most class meetings, students should submit an Excel file with their in-class work, called an in-class quiz, on Canvas by the posted deadline. If you are sick, you may review the class notes, slides, and recording, complete the Excel file independently, and submit it on Canvas within one week. Regular attendance, timely submissions, and active engagement with course activities will help you build confidence in quantitative analysis and strengthen your Excel skills throughout the semester.

GaTech Attendance Policy: Students who miss work because of participation in approved Institute activities (such as field trips and athletic events) will be permitted to make up the work missed during their absences. Approval of such activities will be granted by the Student Academic and Financial Affairs Committee of the Academic Senate, and statements of the approved absence may be obtained from the Office of the Registrar. Students who are absent because of participation in a particular

religious observance will be permitted to make up the work missed during their absence with no late penalty – provided the student informs the course instructor of the upcoming absence, in writing, *within the first two weeks of class*, and provided the student makes up the missed material within the timeframe established by the course instructor. Please, use this link to read GaTech’s class attendance policy <http://www.catalog.gatech.edu/rules/4/#>.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams: Late homework will be penalized accordingly. Make-up exams are given for illness, approved Institute activities or religious observances. Additional rules for tests 1, 2 and 3 and the final exam will be announced by email prior to every test and final exam.

MGT 2255 AI Learning Policy: This course introduces students to the use of AI tools, including Microsoft Copilot, as part of analytics and quantitative analysis for business. In selected assignments, students will use Copilot with Excel, reflect on Excel versus AI approaches, and evaluate how these tools can be used effectively in business settings. Students are encouraged to use Copilot or other approved AI tools for personalized learning, study support, and skill development. Students are encouraged to use AI as a tool for personal learning, practice, and tutoring. For example, AI may be used to review concepts, receive explanations, ask questions, and support independent study. At the same time, any assignment, quiz, homework, or exam not specifically designated for AI use must be completed without AI assistance and must reflect the student’s own independent work.

Core IMPACTS

This course supports the development of core competencies in quantitative reasoning, critical thinking, problem solving, and effective communication. Through business applications and Excel-based analysis, students learn to evaluate alternatives and make informed decisions. These skills prepare students for professional success in business and related fields.