

MGT 6405 AO/EMO Syllabus

Fall 2026

Delivery: 100% Web-Based, Asynchronous

Dates: August 24 – December 15

Instructor Information

Instructor: Professor Bob Myers

bob.myers@scheller.gatech.edu

Office Hours: Weekly office hours via Zoom on Tuesdays at 8:30pm Eastern. Attendance is optional but highly encouraged.

General Course Information

Description

Because it is one thing to know *how* to analyze data and another thing to actually *use* it to solve problems, the purpose of this course is to show how mastery of data analysis can be applied to the real world. In doing so, we will explore the development of key performance indicators (KPIs) and how to use KPIs to drive improvement in an organization. We will also discuss the four methods of continuous improvement and how data analysis can be leveraged in each method. Because the course weaves examples from both industry and everyday life, what is learned can be directly applied to both your personal and professional lives.

In addition to the practical knowledge gained, students will also be shown tools that are outside of the typical analytics course and provided with the knowledge of how to use these tools on their own and in conjunction with the data analysis. Because one must know not only how to analyze data but also how to determine from where the actual data should come, the tools chosen will assist the student in coming up with *what* to analyze in the first place.

Course Goals and Learning Outcomes

Course Learning Outcomes

By the end of the course, students will be able to:

1. Use the DMAIC methodology to solve business problems.
2. Understand the importance of problem and goal statements.
3. Differentiate between continuous and discrete data and its impact of analysis tools.
4. Analyze Y as a function of X relationships.
5. Use Excel to analyze data with the data analysis tool pack.
6. Construct and interpret Pareto diagram and scatter plots.
7. Construct a linear regressions model.
8. Formulate improvement ideas.

Course Materials

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List all required, recommended or supplemental course materials:

- Required - Harvard Course Pack
 - <https://hbsp.harvard.edu/import/1405351>
 - Three case studies will be used to augment lectures and provide a framework for group discussions

Course Text

- Optional – Six Sigma: A Complete Step by Step Guide
 - Text Availability
 - [PDF](#)
 - [Physical Text](#)
 - Optional readings will be provided to supplement weekly lectures and assignments

Additional Materials/Software

Course Website

The course will run entirely on Canvas. Please see Canvas for detailed information on the course

Course Requirements, Assignments & Grading

Students are expected to devote 10-12 hours per week to complete the course requirements. This guideline encompasses all class activities, including reading the textbook and supplementary resources, watching lesson videos, participating in office hours and forum discussions, completing homework assignments, and studying for exams. Of course, students can spend as much time as necessary, but it is important to be careful not to fall behind.

Individual Assignments (23 Required)
Individual assignments account for 50% of the total course grade. Each assignment is weighted equally.
1. Normal Distribution Quiz
2. Identifying Waste
3. Best Buy Discussion
4. Best Buy Quiz
5. What Hurts Discussion
6. PDI Part 1: Defining Projects
7. SIPOC
8. CTQ
9. Operational Definition

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10. Academic Medical Discussion
11. Academic Medical Quiz
12. Fishbone
13. Live Data Collection Plan
14. Process Mapping
15. Process Mapping Discussion
16. PDI Part 2: Define, Measure, Analyze
17. Scatter Plot and Linear Regression Quiz
18. 5S
19. Ceasar's Casino Discussion
20. Ceasar's Casino Quiz
21. Poka Yoke
22. FMEA
23. PDI Part 3: Analyze and Recommend
Course Project Assignments (3 required, 1 optional)
The course project accounts for 50% of the total course grade. Grade weights noted below.
Project Problem and Goal statement <i>(5% of project grade; 2.5% of course grade)</i>
Project Data Collection Plan <i>(5% of project grade; 2.5% of course grade)</i>
Final Project TA feedback review (Optional) <i>(Not graded)</i>
Final Course Project <i>(90% of project grade; 45% of course grade)</i>

Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Description of Graded Components

This course consists of two categories of deliverables, **Assignments** and the **Final Project**, weighted evenly.

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Assignments - Assignments will be submitted weekly during weeks 1-10 and will consist of a variety of activities, including case studies, quizzes, discussions, and LSS tools

Final Project - The final project will apply what is learned in the first 10 weeks of the course to a real-world problem. This is a project you will work on throughout the semester and will be given Weeks 11-14 to focus on completing, however, waiting until then will be problematic. Detailed information about the project requirements and the due date will be provided on Canvas.

**There are no exams in this course*

Lean Six Sigma Green Belt Certification

If you complete the following, a LSS Green Belt Certificate will be awarded at the end of the term:

1. 85% average on the individual assignments.
2. 85% or better on the final project.

Assignments Submissions Submission Requirements

All assignments (homework, knowledge checks, exams etc.) must be completed and submitted within the Canvas. Sending assignments (homework, knowledge checks, exams etc.), whether early, on time, or late to the professor or TAs is not permitted and will not be accepted. If there are technical issues, please notify the help desk, as well as the TAs, immediately.

No handwritten assignments are allowed. For any required charts or diagrams, please use software to generate the content.

Deadlines and Late Submissions

For each given assignment detailed explanations and an assignment rubric will be posted on Canvas. Each assignment should be **submitted on Canvas by 11:59 pm EASTERN on the Sunday it is due**. Each assignment must be submitted **no later than the deadline**. Any submission after this time (regardless of whether it is by minutes, hours, or days) will be given a 10% reduction in grade if within 1 day. Assignments submitted more than 1 day late will be given a zero. There is **NO GRACE PERIOD** for the submission of assignments beyond 1 day (subject to a 10% penalty). **Students** are responsible for making sure that their individual assignments are submitted in a timely manner according to the course guidelines.

Total Assignment Grade

All assignment scores will be considered for the Assignment category, with no assignments being dropped

Discussion Assignments

Discussion assignments will require an initial post to a provided prompt on either a case study or a lecture topic as well as 3 responses to classmate's posts (either an initial or response post). These responses must consist of sufficient substance (at least a paragraph in length and

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commentary on the content not the quality of the post). Each missing response will see the grade reduced by 20 points.

Grading and Feedback Assignments

TAs will grade assignments and provide feedback typically within 1-2 weeks.

Project Feedback

You will be able to submit the course project early to receive feedback from the TAs and make changes prior to the final grading. This deadline will be earlier than the final project deadline, and will be outlined in Canvas.

Technology Requirements

Software requirements

- Microsoft Excel
- Diagramming Tool – such as Visio, Lucid Chart, etc.
 - This does not need to be purchased specifically for this course, a free version should suffice

Onboarding Quiz and Proctoring Information

All Georgia Tech online degree and certificate students are required to complete the Onboarding Quiz with Honorlock in the first week of the course. Honorlock is utilized for student identity verification and to ensure academic integrity. Honorlock provides student identity verification via facial and ID photos. You may also be asked to scan the room around you. The Onboarding Quiz is needed to help make sure that your identity is verified and that your system is set up to work with Honorlock online proctoring tool. You are required to complete this quiz early in the semester to avoid problems when taking proctored exams.

Technology Help Guidelines

30-Minute Rule: When you encounter struggles with technology, give yourself 30 minutes to 'figure it out.' If you cannot, then post a message to the discussion board; your peers may have suggestions to assist you. You are also directed to contact the Helpdesk 24/7.

When posting or sending email requesting help with technology issues, whether to the Helpdesk, message board, or me use the following guidelines:

- Include a descriptive title for the subject field that includes 1) the name of course 2) the issue. Do NOT just simply type "Help" into the subject field or leave it blank.
- List the steps or describe the circumstance that preceded the technical issue or error. Include the exact wording of the error message.
- When possible, always include a screenshot(s) demonstrating the technical issue or error message.
- Also include what you have already tried to remedy the issue (rebooting, trying a different browser, etc.).

Course Policies, Expectations & Guidelines

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Communication Policy

- We will use Ed Discussions as our primary means of communication for the course.
- Do NOT submit posts of a personal nature to the discussion board unless it is a private post on Ed Discussions to the instructor team (such as inquiries related to grading of your individual assignment submissions and project).
- Student Ed Discussion board will generally be checked daily Monday through Friday.
- Virtual office hours will be held using Zoom. I will hold Virtual Office Hours every Thursdays at 8:00pm, as well as special office hours for dedicated topics, such as the course project. Special topic hours will be announced in advance.
- For questions related to technology, the Digital Learning Support team at <https://b.gatech.edu/digitallearningsupport> for assistance. You can also reach the Canvas Hotline by phone at 1(877) 259-8498 or by email at support@instructure.com.

Online Student Conduct and (N)etiquette

Although it is not expected to be a problem in a graduate-level class, students are asked to behave in the discussions and other class interactions professionally and civilly. If you are in doubt, do not post it! Instructors reserve the right to remove any postings deemed inappropriate, unprofessional, or otherwise distracting from the course.

University Use of Electronic Email

A university-assigned student e-mail account is the official university means of communication with all students at Georgia Institute of Technology. Students are responsible for all information sent to them via their university-assigned e-mail account. If a student chooses to forward information to their university e-mail account, he or she is responsible for all information, including attachments, sent to any other e-mail account. To stay current with university information, students are expected to check their official university e-mail account and other electronic communications on a frequent and consistent basis. Recognizing that some communications may be time-critical, the university recommends that electronic communications be checked minimally twice a week.

Plagiarism & Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. All students enrolled at Georgia Tech, and all its campuses, are to perform their academic work according to standards set by faculty members, departments, schools, and colleges of the university; and cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which appropriate sanctions are warranted and will be applied. For information on Georgia Tech's Academic Honor Code, please visit <http://www.catalog.gatech.edu/policies/honor-code/>.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, which will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible to set up a time to discuss your learning needs.

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Copyright

Among the materials that may be protected by copyright law are the lectures, notes, and other material presented in class or as part of the course. Always assume the materials presented by an instructor are protected by copyright unless the instructor has stated otherwise.

Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgment, and responsibility between faculty members and the student body. See <https://catalog.gatech.edu/rules/21/> for an articulation of 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.

Subject to Change Statement

The syllabus and course schedule may be subject to change. Changes will be communicated via Canvas. It is the responsibility of students to check email messages and course announcements to stay current in their online courses.