

MGT 6500: Foundations of Data Analysis Fall 2026 (Evening MBA)

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How to reach me?

Email me at ravi.subramanian@scheller.gatech.edu. You may address me as “Ravi.” My office location is Suite #472, Scheller Building.

Class meeting times and locations

(First half of Fall 2026; This draft syllabus assumes in-person classes on Wednesday evenings)

In-Person	Wednesdays	6:30-9:15 PM	TBD
Online	<i>No scheduled time or location</i>		

Office Hours

My scheduled office hours are as listed below. You **need not email me beforehand** if you plan to stop by during these times.

First week of class (before schedule change deadline of 11:59 pm on Fri, Aug 28):

Fri, Aug 28 4:30 PM-5:30 PM via Zoom

Mon, Aug 31 – Tue, Oct 6:

Mondays 4:30-5:45 PM via Zoom (Priority for online section)

Tuesdays 4:30-5:45 PM via Zoom

- Zoom meeting link for office hours: <https://bit.ly/RSZoom2026>
- For privacy reasons, I will meet with one student at a time. You will join the Zoom waiting room if I am already speaking with another student. For fairness, I may rotate through student questions if multiple students are in the waiting room.
- Students in the online section will receive waiting room priority on Mondays.
- When you join the online office hours, please ensure your name shows up correctly. Please also indicate your section in brackets (i.e., whether In-Person/Online).
- If none of the times listed above work for you, please email me, suggesting a few alternative time windows.

Course Description and Objectives

To introduce participants to a problem-driven approach to assembling, analyzing, and taking action on data. With the Problem-Plan-Data-Analysis-Conclusions (PPDAC) Cycle and Gartner's Analytics Maturity Model (Descriptive → Diagnostic → Predictive → Prescriptive Analytics) as frameworks, fundamental concepts for the analysis of data will be covered, including descriptive statistics, visualizations, probability and distributions, confidence intervals, hypothesis testing, and regression analysis/predictive analytics. Knowledge of the “whys” behind these tools facilitates rigorous data-driven decision-making. The learning objectives of this course are:

1. To understand and execute the process of decision-making based on data;
2. To assemble, summarize, visualize, and analyze data arising in decision making; and,
3. To conceptualize and interpret models for diagnostic, predictive, and prescriptive analytics.

The instructional approach will combine theory and application. **A computer with administrative rights to install software will be needed in each class (a smartphone/tablet will typically not suffice).** Please note that necessary theoretical foundations will need to be covered to ensure appropriate application of concepts in practice.

Required Materials/Software to be Installed

- Course material, organized by session, on Canvas → Modules (<https://canvas.gatech.edu>).
- R, RStudio, and Radiant (open source). Please carefully follow the **text and video instructions** for installation at: <https://radiant-rstats.github.io/docs/install.html>
 - **You must have administrative rights (or request an administrator) to install this software on your computer.**
 - Installation often fails if any of the installation folders redirect to a cloud drive (e.g., OneDrive, Dropbox, etc.). Please ensure that you are installing the program locally on your computer's hard drive.
 - If you face an installation issue, please research Radiant's “Issues” page on GitHub: <https://github.com/radiant-rstats/radiant/issues?q=>
 - **As a temporary workaround, if installation continues to be unsuccessful, you may use the online version of Radiant** at: <https://vnijs.shinyapps.io/radiant>. This online version times out after brief inactivity (have to refresh and reload data) and dataset file sizes are limited to 10 MB (i.e., unsuitable for the Final Exam).

Book

The Art of Statistics: How to Learn from Data by Sir David Spiegelhalter (ISBN-13: 978-1541675704; ISBN-10: 1541675703). <https://www.amazon.com/dp/1541675703>

Grading

Final grades will be based on the following **individual** evaluation components. Extensive flexibility is already incorporated in the evaluation components and deadlines. For extenuating circumstances, requests for late/make-up submissions should be made through the Dean of Students to preserve privacy (visit <https://studentlife.gatech.edu/request-assistance>).

Important: It is the student’s responsibility to ensure successful submission of assignments. If a Canvas submission is unsuccessful, please email me your submission **before the deadline**. Note that **all assignment deadlines for this course are 2:00 PM**.

Evaluation Components (assuming in-person classes on Wed evenings)

Components (Individual)	Weight	Notes
6 Quizzes (see schedule below)	40%	Online, via Canvas; Best 5 Quizzes count (each 8% weight; Open book, Open notes, Internet resources allowed) Collaboration allowed but no pasting questions into LLMs or copying/giving away answers.
Personal Reflection	20%	500-750 words Due by 2:00 pm on Wed, Oct 14 via Canvas
Final Exam (Online)	40%	Open book, Open notes, New internet resources not allowed (previously downloaded/bookmarked resources allowed) Opens 2:00 pm on Sat, Oct 10 via Canvas Due by 2:00 pm on Sun, Oct 18 via Canvas Strictly Individual; No collaboration allowed

Quiz Schedule (assuming in-person classes on Wed evenings)

Quiz #	Quiz opens at 2:00 pm on	Quiz due by 2:00 pm on	Answers/Scores released by 2:00 pm on
1	Fri, Aug 28	Wed, Sep 2	Sun, Sep 6
2	Fri, Sep 4	Wed, Sep 9	Sun, Sep 13
3	Fri, Sep 11	Wed, Sep 16	Sun, Sep 20
4	Fri, Sep 18	Wed, Sep 23	Sun, Sep 27
5	Fri, Sep 25	Wed, Sep 30	Sun, Oct 4
6	Fri, Oct 2	Wed, Oct 7	Sun, Oct 11

Tentative Session Plan

Week #	Topic(s)	Recommended Follow-Up with Chapters in <i>The Art of Statistics</i>
1, 2	<i>Introduction; Descriptive Analytics</i>	Introduction, 1, 2, 3
2, 3	<i>Probability and Distributions</i>	8, 9, 11
4, 5	<i>Confidence Intervals</i>	7
5, 6	<i>Hypothesis Testing</i>	10
6, 7	<i>Regression Analysis/Predictive Analytics & Wrap-Up</i>	4, 5 <i>(Optional: 12, 13, 14)</i>

Guidelines for Class Sessions

- **Canvas is the one place** where you will find everything needed to keep up with this course. Since my course offering is identical for the in-person and online sections, I have combined the Canvas sites for the sections.
- I plan to **record each in-person session (Wednesdays)** and post a link to the recording on Canvas by 11:59 pm each Thursday. **Video recordings will be accessible by both the in-person and online sections.** In case a recording fails, I may substitute with a previous semester’s one. Please note that recordings may not fully capture the classroom experience.
- **Specific information for those students registered for the online section:**
 - o The online section does not have a specific meeting time. Please watch the class recordings each week at your earliest convenience after the recordings are posted.
 - o You will receive waiting room priority for my online office hours on Mondays.
 - o You may also attend the in-person section – you need not let me know beforehand.
- **Class attendance will not be monitored or graded.** I understand that you might have to miss class for valid reasons. You need not inform me beforehand. Please ensure that you review the recordings/materials posted on Canvas for any missed sessions and catch up on notes with your classmates.
- You will **need a computer (with administrative rights to install software) for every session.** We will simultaneously access Canvas, Radiant, and Microsoft Excel, making smartphones/tablets a typically infeasible way of participating.
- Please always place your name card/tent in front of you and ensure that your name and section (i.e., whether In-Person/Online) shows up correctly when you join the online (Zoom) office hours. I would like to address you and get to know you by name.

i. Quizzes

There will be six online Quizzes (8% weight each) over the duration of the course to track and assess your understanding of the material covered. The **lowest Quiz score will be dropped**. Important notes regarding the Quizzes:

- Please refer to the table on page 3 for the Quiz schedule. The Quizzes will be administered online via Canvas.
 - o There is **no time limit** once you start a Quiz (other than the deadline).
 - o **Multiple attempts** are allowed. Reattempting a Quiz erases your answers and resets your score to zero, so please do not abandon a Quiz after restarting.
 - o **Before submitting your answers, please save a copy of your answers** (e.g., copy and paste into a Word/Text document) just in case you would like to reattempt a Quiz. **You will have to enter all your answers again if you reattempt a Quiz.**
 - o Please pay close attention to the instructions in the Quiz questions, including **number of decimal places (i.e., precision) to include in your answers.**
- **Collaboration is allowed** but each student must submit their answers individually. **Simply pasting questions into LLMs or copying/giving away answers is not allowed.**
- The Quizzes will be open book, and open notes. The use of Internet resources is allowed for the Quizzes. Please download/bookmark these resources for future reference.
- Discussing the contents of a Quiz with anyone outside of the current semester's sections (at Georgia Tech or elsewhere) will violate the Georgia Tech honor code and is not allowed.

ii. Personal Reflection

For this assignment, please submit **via Canvas** a two-page personal reflection (**500-750 words**), describing how one or more of the concepts learned in this course is something you encountered/are encountering in your previous/current job, or you believe may help you in an aspirational job/career. You may also choose to focus your personal reflection on significant personal experiences outside of work. Please feel free to offer examples of businesses/organizations or reference articles from the media to provide context for your discussion. **Please cite/hyperlink all sources.**

- As a guideline, I have included two samples (linked within the assignment on Canvas).
- **You can start working on your personal reflection at any time during the course – you do not have to leave this for just before the deadline.**

iii. Final Exam

The Final Exam will be **individual (i.e., no discussion with anyone once the Final Exam is open)**, open book and open notes, covering content across all sessions. Important notes regarding the Final Exam:

- **Accessing the internet or LLMs for new resources is not allowed for the Final Exam** (previously downloaded/bookmarked resources are allowed). All Canvas resources (including class recordings) will remain accessible for the Final Exam.

- In the interest of fairness to all, once the Final Exam is open, **I will only be able to clarify the exam questions for you rather than cover concepts**. It is important that you stay on top of the material and resolve any questions or concerns before the Final Exam opens.
- Sharing of course notes, computers, etc. is not allowed once the Final Exam is open.
- Discussing the contents of an exam with anyone (at Georgia Tech or elsewhere) will violate the Georgia Tech honor code and is not allowed.

Georgia Tech Honor Code

Students are expected to act and **must also expect their peers to act** according to the highest ethical standards, as outlined in the honor code at <http://www.policylibrary.gatech.edu/student-affairs/academic-honor-code>.

- **You are not allowed to seek or receive previous class material** (including class notes, readings, quizzes, exams, class recordings, etc.).
- While collaboration is allowed for the Quizzes (submissions are individual), **simply pasting questions into LLMs or copying/giving away answers is not allowed**.
- Note that **collaboration is not allowed for the Personal Reflection and the Final Exam**.
- **Sharing/posting or offering to share/post any course material or recordings** (except sharing your class notes with your classmates) – whether during or after the end of the course – will violate the honor code and is not allowed.

Statement regarding sharing class material/recordings

Class recordings and materials posted on Canvas are copyrighted and are solely for this instance of the course. Participants must not share/screen-capture any class material/recordings.

Classroom Expectations

We should all commit to creating a mutually respectful learning environment. I am open to your feedback as we all build an environment in which every individual is respected and valued and can therefore engage actively in our learning community.

Special Considerations/Needs

Please send me an email by **Sunday, August 30** if you require accommodations due to a special need. Please visit: <https://disabilityservices.gatech.edu/students/getting-started>. I will work with you and the Office of Disability Services to make the necessary accommodations.

Georgia Tech Resources for Students

During your stint at Georgia Tech, you, or an individual you know of, might need academic or personal support. Helpful resources are listed here: <https://www.sga.gatech.edu/resources/>