MGT 6059 Syllabus

Analysis of Emerging Technologies, sections OAN and MMO, 3 credits

Fall 2026, 1st half of semester

Instructor Information

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General Course Information

Description

Emerging technologies can change the business environment rapidly and dramatically. The Analysis of Emerging Technologies course helps you identify the implications of emerging technologies via a "timeless" and a "timely" component.

- The "timeless" component is a step-by-step, structured approach for analyzing an emerging technology, including how to seize the opportunities and mitigate the threats that it creates. This includes identifying the problem/opportunity that the technology can address, describing the challenges/uncertainties that may prevent the technology from addressing the identified problem/opportunity, and exploring how those challenges/uncertainties might be overcome. The approach encapsulates forecasting principles and tools as well as theory about whether a new technology is adopted or not.
- The "timely" component is a survey of emerging technologies, including those related to artificial intelligence, blockchain technology, energy, transportation, biotechnology, and other topics. We will study emerging technologies for their own sake as well as to illustrate how to implement the structured approach (i.e., the "timeless" component).

In this way, the course provides you with an approach for analyzing emerging technologies that you can use throughout your career. The course is also a survey of emerging technologies.

Analysis of Emerging Technologies is an excellent fit for students interested in the intersection of business and technology. It teaches skills that are important for a broad range of contexts, including:

- General managers considering the impact of an emerging technology on their organizations,
- Analysts predicting the impact of an emerging technology on an industry,
- Entrepreneurs developing a new technology, and
- Policy makers charged with helping society benefit from emerging technologies.

Course Learning Outcomes

Upon successful completion of this course, you should be able to:

- Conduct a structured analysis of an emerging technology.
- Use this analysis to craft strategy.
- Describe the current state and future prospects of the emerging technologies covered in the course.

Required Course Materials

We will use a combination of articles (available online and in the GT library) and videos. You will need to be able to use the desktop version of Microsoft Excel (not the online version). You will need online access to Canvas and the Georgia Tech library (www.library.gatech.edu).

Grading Policy:

The graded course components sum to 100 points. Your final grade will be assigned as a letter grade according to the following scale:

- A: 90-100 points.
- B: 80-89.999 points.
- C: 70-79.999 points.
- D: 60-69.999 points.
- F: 0-59.999 points.

The graded course components are as follows:

Assignments

- Lesson quizzes: 35%.
- Application Exercises: 30%.
- Exam: 21%.
- Online Participation: 14% (individual).

Description of Graded Components

Lesson Quizzes

You will take quizzes (open book, open notes) to demonstrate your completion of the material covered in the course.

Application Exercises

The application exercises prompt you to apply course concepts in a hands-on way. You will complete these via Canvas.

Exam

The final exam is open book/open notes. The final exam will prompt you to conduct an analysis of a specific technology by applying course concepts.

Online Participation

You will participate in online discussion forums throughout the semester. These will allow you to discuss course material with fellow students.

Course Policies

Attendance and/or Participation

This is a 100% online, asynchronous course. The course modules will open on a rolling basis, and assignments will be due periodically. You are invited to attend office hours via Zoom on Tuesday mornings from 10am to 11am.

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. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who 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 (404-894-2563) 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 in order to set up a time to discuss your learning needs.

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.

Collaboration, Group Work, and Use of Generative AI

You must complete lesson quizzes, online participation activities, and the final exam individually. You may complete the application exercises with up to four other students enrolled in the course.

Generative AI tools are helpful at tasks such as brainstorming ideas and refining your writing. However, they should not be used in place of your own analysis. You may not use generative AI tools to complete the assignments, except to polish your writing.

Submitting Assignments, Extensions, and Late Assignments

All assignments must be completed and submitted in Canvas. Sending assignments whether early, on time, or late to me is not permitted and will not be accepted. If there are technical issues with Canvas, please contact the help desk.

All assignments will be due at the times listed in Canvas. These times are subject to change so please check back often. Please convert from Eastern Time to your local time zone using a Time Zone Converter.

If an assignment is turned in no more than a week after the due date, you may still be able to receive ½ credit for that assignment. No credit will be awarded for assignments turned in more than a week after the due date. The final exam is an exception. It must be turned in on or before the due date; otherwise, no credit will be awarded.

Grading and Feedback

Lesson quizzes will be automatically graded. Application exercises will have graded components that are automatically graded and some that are graded by teaching assistants. Online participation points will be awarded within two weeks of the discussion being posted. The final exam will be graded within two weeks days of the due date.

Computer Hardware and Software Requirements

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) 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 in order to set up a time to discuss your learning needs.

- High-speed Internet connection.
- Laptop or desktop computer with a minimum of a 2 GHz processor and 2 GB of RAM.
- Windows for PC computers OR Mac iOS for Apple computers.
- Complete Microsoft Office Suite or comparable and ability to use Adobe PDF software (install, download, open and convert). You must download and install Excel; the online version will not work for the exercises in the course. As an online student, you have access to Microsoft Excel 365 and can download it.
- Latest versions of Zoom, Mozilla Firefox, Chrome and/or Safari browsers.

Technology Skills

You will need to be able to use a web browser and Microsoft Excel. You will also need to be able to download files from Canvas and to change file properties in your operating system (e.g., to allow macros to run in Microsoft Excel).

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.).

Communication Policy

- Post general questions about the course via Ed Discussions. If you email me a general question that others might benefit from, I may move it to Ed Discussions and answer it there.
- Email personal concerns, including grading questions, to me privately. Do NOT submit posts of a personal nature to the discussion board.
- During the week, I will respond to emails within 48 hours, as long as the subject is appropriate for email. As noted above, I may move some email correspondence to Ed Discussions and respond there. If you email me on weekends or holidays, I may not respond until the following workday.
- Virtual office hours will be held using Zoom. I will hold Virtual Office Hours every Tuesday from 10:00am to 11:00am.
- 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.

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.

Campus Resources for Students

Graduate Student Academic and Professional Success Resources:

A list of resources for graduate students is given on the Office of Graduate and Postdoctoral Education website. Specific information for current graduate students includes:

- Academic Resources such as the Communications Center, Language Institute, Library, Catalog, Registrar, resources for conducting research, Advocacy and Conflict Resolution resources, and how to manage unexpected situations that may impact your academic performance;
- Student Resources such as Campus Services, Child Care/Family programs, Health & Wellness, Career Services, and the Student Resource Guide; and
- Professional Development such as the programming from the Career Center and other professional development resources and events.

Student Well-Being:

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being (student-resource-guide (gatech.edu)

High-Level Course Schedule (Tentative)

Week 1: Overall analysis framework and sample emerging technologies.

- Example technologies analyzed: Space-based data centers, aerial internet infrastructure, 3-D printed houses, cultivated meat.

Week 2: Analysis tools: Innovation diffusion theory and technology platforms theory.

- Example technologies analyzed: Companion robots, edible containers, AR/VR.

Week 3: Analysis tools: Stakeholder influence, Technology standards, Technology infrastructure and ecosystems.

- Example technologies analyzed: Modular phones, electric vehicles, hydrogen vehicles.

Week 4: Analysis tools: Ethics and forecasting methods and principles.

- Example technologies analyzed: Humanoid robots, CRISPR-Cas9, employee monitoring software.

Week 5: Deep dive: Artificial intelligence: Fundamentals, business uses, and implications.

- Example technologies analyzed: Large language models, AI agents, autonomous vehicles.

Week 6: Deep dive: Artificial intelligence: Macro impacts. Deep dive: Blockchain and cryptocurrency.

- Example technologies analyzed: Cryptocurrencies, utility tokens, NFTs.

Week 7: Deep dive: Energy technologies and policy

- Example technologies analyzed: Nuclear fusion, space-based solar power, next-generation biofuels.