

Georgia Institute of Technology
Scheller College of Business
MGT 4074 - Fintech & Crypto Tokens
Fall 2025 (Aug 18th - Dec 1st)

Syllabus

All details are subject to alteration as the course proceeds.

Instructor: Joseph P. Hall, PhD ([academic website](#))
Email: jhall390@gatech.edu (Please include “MGT4074” in the subject)
Class Times: M W 9:30am - 10:45am
Classroom: Scheller College of Business | 4F Trading Floor
Office Hours: Fr 2pm–3pm, Location TBD.
Or by email appointment (include “MGT4074” in the subject)

1 Course Description and Objectives

Digital innovation is disrupting financial functions such as lending, payments, asset management, and retail banking. The market capitalization of cryptocurrencies such as Bitcoin and Ether is cumulatively in the trillions of dollars and rising. In MGT4074, we will strip down the modern financial services industry into its simplest moving parts using the tools of economic theory and by reading relevant history, demonstrating how both the regulation of and technologies underlying modern finance came to be. Then, we will show how recent innovations in cryptography and information technology have enabled new ways to solve old problems in financial services. This class will take a first principles approach wherever possible to not just teach the nature of financial technology and crypto, but the primitive concepts that govern the demand for financial services and the pain points presented by existing financial technologies.

This class will cover the history of financial technology, the development of financial regulation and the traditional financial system (“tradfi”), cryptocurrency, smart contracts, and the decentralized financial system (“defi”), as well as selected topics in Fintech. The bulk of your grade will be earned in two handwritten midterm exams and one final project. A choice of formats will be offered for the final project – you may either research and present an analytical mini-thesis or program and present a smart contract. You will leave this class with a foundational understanding of what technological facts have shaped the development of the traditional financial system and its regulation, the low-level details of how cryptocurrencies work and what problems they have (and have not) solved in finance, and where the cutting edge of financial technology is located in the year 2025.

2 Enrollment Requirement

Prerequisite(s): Management 3062 (Financial Management) or Management 3078 (Finance & Investments) with D or better. The skills necessary to succeed in this course are legible handwriting¹, note-taking, reading comprehension, economic reasoning, and basic computer programming skills.

3 Instruction Method

The course is taught in person only at the scheduled time and place. **No smartphones or laptops are allowed in class.** The temptation of social media distraction is simply too great. Uninterrupted focus for 75 minutes is critical to succeeding in this class. Attendance is mandatory and will be taken at the start of class time. Frequent pop quizzes will be given without advance warning at the start of class time, and no make-up opportunities will be given. I will cold-call students by asking questions without warning to ensure everyone is paying constant attention. Please also silence your ringers before class.

This section is taught in the 4F “Trading Floor” of the Scheller CoB. Desktop computers are present in the classroom, but I have no plans at this time to utilize them. I recommend handwritten note-taking to all students. Pop quizzes and midterm exams will be taken **by hand and in person.**

3.1 Study Groups

I have observed a strong past correlation between the use of study groups and student success in this class. I therefore **strongly encourage all students to form a study group** to regularly review the class materials and quiz each other in preparation for pop quizzes and exams. I will distribute a poll early in the semester where students may indicate their scheduling availability for study group meetings; I will then assign such students to study groups with overlapping schedules when possible. If at any time the study group that I have assigned you does not meet your needs for any reason, please inform me and I will try to assign you to a different group. I strongly recommend that all students form a study group to ensure proper preparation for quizzes and exams.

4 Course Materials

4.1 Required Readings

All required readings will be posted on Canvas. They will include news articles, short essays, and academic papers. Short readings will be made available at least 2 days before I will quiz you on them. Longer readings will be made available at least 5 days before I will quiz you on them. I will make clear the due date for each reading when it is posted.

¹Disability-related accommodations to my handwriting policy may go through the Office of Disability Services. This disclaimer applies throughout this document to all mentions of handwriting.

4.2 Lecture Slides

Lecture slides will be posted on Canvas. The slides are your best resource for studying for exams. The answers to the exams and pop quizzes will come directly from the lecture slides and from the required readings. The exams and pop quizzes are closed-book, so you will need to commit the information from the slides and readings to memory.

4.3 Canvas

All course announcements will be posted on Canvas: please check Canvas regularly. On a regular basis, I will also send emails to the entire class about logistical matters, such as reminders of deadlines. Please check your email regularly.

4.4 Suggested Textbooks

There is no required textbook for this class, but some students prefer to have an extensive source for reference and background reading. There are two excellent textbooks that will enhance your understanding of this subject:

- Narayanan, Arvind, Joseph Bonneau, Edward Felten, Andrew Miller, and Steven Goldfeder (2016), *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction*. Princeton University Press.
- Di Maggio, Marco (2025), *Blockchain, Crypto, and DeFi: Bridging Finance and Technology*. Wiley.

5 Communicating with Me

5.1 Office Hours

The best way to communicate with me is in person during office hours. Office hours are set on Friday 2pm – 3pm in a location To Be Determined. Please make use of this opportunity. Office hours are the best time to clarify any confusion about the subject matter of this course, or on any other question you may have. There are no stupid questions, only stupid people – and stupid people ask no questions. I greatly enjoy helping students in person on all matters, not solely the class material.

5.2 Email

Send me an email (jhall390@gatech.edu, please include “MGT4074” in the subject) if you think an email is a convenient way to communicate simple issues or arrange additional office hours. Zoom office hours may be arranged this way as necessary on an ad hoc basis.

6 Grading Policy

There is no curve by default. You are collaborators, not competitors, in my classroom. There is **one** situation in which I may adjust the grading scale ex-post, which is if **both** of the following occur: (1) the class, in aggregate, proves to me that you do understand the material through class participation, but (2) the performance on an exam, despite that, proves that the exam was significantly more difficult than intended. In such a case I may introduce a curve to your benefit. Remember: all of this is easy to me. I have no way to know how hard you will find it. Your numerical grade is the sum of the points earned in each category of evaluation:

Category	Points
Homework	20
Quizzes	10
Midterms ($\times 2$)	40
Final Project	30
Class Participation	5
Total	105

Your numerical grade (rounded to the nearest whole number up to 105) will then be converted to a letter grade according to the following schedule:

Letter Grade	Percent Grade
<i>A</i>	$90 \leq \text{grade}$
<i>B</i>	$80 \leq \text{grade} < 90$
<i>C</i>	$70 \leq \text{grade} < 80$
<i>D</i>	$60 \leq \text{grade} < 70$
<i>F</i>	$\text{grade} < 60$

Canvas may automatically calculate some kind of weighted grade for you – please ignore it. Your grade in this class is calculated by this rubric alone.

6.1 Homework

Homework assignments will be posted on Canvas periodically and discussed in class. All assignments will be available for at least 7 days before they are due. All completed assignments must be submitted through Canvas.

6.2 Quizzes

Quizzes will be given at the beginning of class at my discretion without pre-announcement or warning. They will cover slides from past classes and any readings that I may from time to time announce in class and on Canvas as “required”. Quizzes will be closed-book and handwritten in person. Your lowest quiz score of the semester will be dropped.

6.3 Exams

Two midterm exams will be given according to the class schedule contained in this document. Exams will be closed-book and handwritten in person. The format of the exams will be a combination of multiple-choice and short response. A practice exam will be given at least 7 days before each scheduled exam. The exams are designed to be completed in fewer than 60 minutes, but all 75 minutes of class time are available for you to complete the exams. The first exam is given very early in the semester so that you may accurately diagnose the effectiveness of your study habits and respond accordingly. Exams are not cumulative – the second exam will include only that material which is covered after the first exam.

There is no final exam. All graded materials will be submitted by November 19th.

6.4 Class Participation

The university attendance policies are detailed here: <http://catalog.gatech.edu/rules/4/> and here: <https://registrar.gatech.edu/faculty-and-staff/institute-approved-absences>. You may not request an institute-approved absence retroactively. If you have an institute-approved absence, you may make up a missed assignment. I will not exercise my discretion to excuse an absence outside of the university policy. It is your responsibility to be present and earn your grade. Attendance will be tracked starting on August 25. Up to 5 out of 105 points of your final grade can be earned through attendance and class participation (see rubric).

Please be on time for class. **Quizzes and Exams will start at the beginning of class time.** I will **cold call** students at my discretion. Fair topics for cold calls include required readings, current events, slide comprehension, opinions, discussion starters, or anything else I deem appropriate. Please raise your hand to ask clarifying questions at any time. If you raise your hand and I do not see it, please loudly call “excuse me” to get my attention. There are no stupid questions, only stupid people – and stupid people ask no questions.

7 Final Project

More details about the final project will be revealed after the second midterm. You may choose to defend a mini-thesis or to create a smart contract. There will be an option of working in groups of up to 3, with escalating expectations depending on the number of group members. If you avail the group option, a contract of division of labor will be submitted to me upon formation of the group. Peer review statements will be submitted along with the final project. I will question groups jointly and individually to ensure these statements are accurate. **A group member who I deem not to have contributed will receive a 0 on the final project. If you are the type to be tempted by the opportunity to free-ride, you will be much better off choosing the individual project option.**

8 Academic Rules and Policies

8.1 Academic Honor Code

It is your responsibility to familiarize yourself with the Georgia Tech Academic Honor Code ([link](#)). I am **required** to report **any** possible honor code violation to the Office of Student Integrity.

8.2 Accommodations for Disabilities

If you have established accommodations with the Offices of Disability Services, please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course. Any accommodations granted will begin after you present the documentation. Accommodations for a specific event will be considered after the request but before the event. No retroactive accommodations will be made. If you have a need but have not yet established accommodations through Disability Services, you should contact Disability Services at 404.894.2563 or dsinfo@gatech.edu or <http://disabilityservices.gatech.edu>. Disability Services offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Disability Services. Should a new disability be identified during the term, the instructor will work with Disability Services to accommodate your needs from that time forward.

9 Support Services and Resources:

In your time at Georgia Tech, you may find yourself in need of support. Below, you will find some resources to support you both as a student and as a person.

9.1 Academic Support

Center for Academic Success

- 1-to-1 tutoring: <http://success.gatech.edu/1-1-tutoring>
- Peer-Led Undergraduate Study (PLUS): <http://success.gatech.edu/tutoring/plus>
- Academic coaching: <http://success.gatech.edu/coaching>
- More: <http://success.gatech.edu>

Residence Life's Learning Assistance Program

- Drop-in tutoring for many 1000 level courses
- More: <https://housing.gatech.edu/learning-assistance-program>

Office of Minority Educational Development: Educational Services

- Group study sessions and tutoring programs
- More: <http://omed.gatech.edu/programs/academic-support>

Communication Center

- Individualized help with writing and multimedia projects
- More: <http://www.communicationcenter.gatech.edu>

Undergraduate Advising and Transition

- Academic Coaching
- More: <https://advising.gatech.edu/>

9.2 Personal Support

The Office of the Dean of Students

- link: <http://studentlife.gatech.edu/content/services>
- Phone: 404-894-6367
- Location: Smithgall Student Services Building 2nd floor
- More: <http://success.gatech.edu>

Counseling Center

- link: <http://counseling.gatech.edu>
- Phone: 404-894-2575
- Location: Smithgall Student Services Building 2nd floor
- Services include short-term individual counseling, group counseling, couples counseling, testing and assessment, referral services, and crisis intervention. Their website also includes links to state and national resources.
- Students in crisis may walk in during business hours (8am-5pm, Monday through Friday) or contact the counselor on call after hours at 404-894-2204.

Students' Temporary Assistance and Resources (STAR)

- link: <http://studentlife.gatech.edu/content/need-help>
- Can assist with interview, clothing, food, and housing needs

Stamps Health Services

- link: <https://health.gatech.edu>

- Phone: 404-894-1420
- Primary care, pharmacy, women's health, psychiatry, immunization and allergy, health promotion, and nutrition

Undergraduate Advising and Transition

- Academic Coaching
- More: <https://advising.gatech.edu/>

More Resource and Help Centers

- Women's Resource Center: <http://www.womenscenter.gatech.edu>
- LGBTQIA Resource Center: <http://lgbtqia.gatech.edu/>
- Veteran's Resource Center: <http://veterans.gatech.edu/>
- Georgia Tech Police: 404-894-2500

9.3 National Resources

The National Suicide Prevention Lifeline

- Provides free and confidential support 24/7 to those in suicidal or emotional distress
- Phone: 1-800-273-8255

The Trevor Project

- Provides crisis intervention and suicide prevention support to members of the LGBTQ+ community and their friends.
- Phone: 404-894-2575
- Phone: 1-866-488-7386; available 24/7
- Chat: <http://www.thetrevorproject.org>; 3-10pm Eastern, 7 days a week
- Text: Text "Trevor" to 1-202-304-1200; available 3-10pm, M-F.

10 Acknowledgments

Some materials originally created by Bo Li, Sudheer Chava, Darrell Duffie, and Anthony Lee Zhang have been used in this class with permission.

11 Tentative Course Outline

All details are subject to alteration at my discretion as the course proceeds.

Date	Topic
Part I History of Fintech and Tradfi	
M Aug 18th	The History of Fintech I
W Aug 20th	The History of Fintech II
M Aug 25th	The History of Fintech III
W Aug 27th	The Traditional Finance Industry I
<i>M Sep 1st</i>	<i>Labor Day - No Class</i>
W Sep 3rd	The Traditional Finance Industry II
M Sep 8th	Midterm Exam I
Part II Cryptocurrency and Defi	
W Sep 10th	Bitcoin, Blockchain, and Cryptocurrencies I
M Sep 15th	Bitcoin, Blockchain, and Cryptocurrencies II
W Sep 17th	Bitcoin, Blockchain, and Cryptocurrencies III
M Sep 22nd	Smart Contracts and Ethereum I
W Sep 24th	Smart Contracts and Ethereum II
M Sep 29th	Fungible and Non-Fungible Tokens I
W Oct 1st	Fungible and Non-Fungible Tokens II
<i>M Oct 6th</i>	<i>Fall Break - No Class</i>
W Oct 8th	Decentralized Finance I
M Oct 13th	Decentralized Finance II
W Oct 15th	Midterm Exam II
Part III Selected Topics in Fintech	
M Oct 20th	Risks, Frauds, and Government Regulation I
W Oct 22nd	Risks, Frauds, and Government Regulation II
M Oct 27th	Payment Systems I
W Oct 29th	Payment Systems II
M Nov 3rd	Large Language Models in Finance I
W Nov 5th	Large Language Models In Finance II
M Nov 10th	Final Project Presentations I
W Nov 12th	Final Project Presentations II
M Nov 17th	Final Project Presentations III
W Nov 19th	Final Project Presentations IV
There is no Final Exam.	

All scheduling details are tentative and subject to change.