

NEW YORK UNIVERSITY
Stern School of Business
Accounting and the Blockchain
Fall 2022

Professor: Amal Shehata, CPA
Gender pronouns: She, Her, Hers
E-mail: ashehata@stern.nyu.edu
Class Time: Mondays
My Office Hours: Wednesdays from 1-2pm via Zoom
<https://nyu.zoom.us/j/6338208015>
and by appointment

Teaching Fellow: Zachary Brown
E-mail: zachary.brown@stern.nyu.edu
Office Hours: Tuesdays from 12:30-1:30pm via Zoom
<https://nyu.zoom.us/j/98084406220>

Course Description

A few predictions in the news:

Deloitte whitepaper: *“The blockchain technology has the potential to shapeshift the nature of today’s accounting. It may constitute a way to vastly automate accounting processes in compliance with the regulatory requirements...A cascade of new applications will likely follow that are built on top of each other, leading way for new, unprecedented services.”*

PwC Time for Trust report: *“PwC’s economists expect the majority of businesses to be using blockchain technology by 2025 ... The analysis suggests that the technology could add \$1.76 trillion to the global economy by 2030.”*

This course will explore the many dimensions of the accounting industry that will be impacted by blockchain technology. We will begin with the history of the existing financial reporting framework and an overview of how blockchain functions, exploring why and how Accounting processes are open to disruption and improvement from blockchain. We will then spend subsequent class periods examining specific areas, including financial reporting, auditing, tax services, the regulatory framework (or lack thereof to date), the criticisms and limitations of blockchain and more.

Learning Objectives

1. Examine the history of the double-ledger accounting system, identifying weaknesses and opportunities for improvement that blockchain could provide;
2. Analyze the obstacles involved with adopting blockchain and the weaknesses of the technology with a critical mindset;
3. Understand how blockchain will transform business and peer-to-peer activity and the related implications;
4. Research the status of the regulations across different dimensions, such as GAAP and IFRS, and determine how to apply existing rules to blockchain activity;
5. Deliberate on issues including trust, privacy concerns and threats to traditional accounting;
6. Reflect on the proliferation of tokenization of assets and the impact on our lives in the future;
7. Analyze real-world use cases of blockchain in business, with a particular focus on the accounting improvements, risks and implications;
8. Develop a library of student content to explore, predict and analyse blockchain impact on accounting in real-time as it evolves;
9. This course will not explore the technical coding of blockchain (I will recommend several FinTech courses at Stern for this type of curriculum).

Required Material

All of the assignments for the course will be posted as links and they will consist of my slides, readings, podcast listenings or video viewings. Given that this is a half semester class, I am making every effort to make it affordable and use only free resources. I will post a student version of my slides on Brightspace by 10am the morning of our class. Please bring a digital or printed copy of the slides so you can take notes.

Brightspace Learning Management System

I will use Brightspace extensively to lay out our class schedules with pre and post assignments, email you, post PDFs of our slides, relevant articles and other course material so please make sure you are correctly registered and checking our site on a regular basis. It is your responsibility to check the assignment schedule on Brightspace. Please note that due to the evolving nature of the subject matter, material may be updated as we go through the course.

Guest Speakers

We are very fortunate that this course will feature a number of guest speakers from the industry. I have worked closely with each speaker over the past few months to develop the custom curriculum for our class. Many of the speakers are prominent in the blockchain space and have limited availability so we may have to deviate from the syllabus based upon their schedules.

Course Schedule

We will have 6 class meetings in-person over 7 weeks, beginning Monday, September 12, 2022. We will not have class the week of October 10th.

Grading

Participation & Attendance	15%
Final Quiz	15%
Weekly Class Assignments	40%
Research Assignment	15%
Blockchain Team Interview Assignment	10%
Team Presentation	5%

Instructions for each component of the grade is below:

Attendance and Participation

Attendance is expected for this class and it will help us achieve our learning objectives as we will have small group discussions, guest speakers and the chance to discuss and analyze topics as a group. Given that we only have 6 sessions, students are expected to attend every class, engage in the discussions and stay for the duration.

I hope you will be an active participant in class. I will be prepared for class and make every effort to create a hospitable and inclusive environment where you feel comfortable expressing your ideas. By participating in this course, I expect you to make the same effort in return. If ever you feel this is not an inclusive environment, please reach out to me and I am happy to discuss this together. I reserve the right to adjust your final grade based on your level of participation and professionalism in class. I do have our class sessions recorded but they are not posted on Brightspace. If you must miss class for exceptional reasons, please notify me and I can provide the class recording.

After-Class Reflection Memo:

After each class session, I will provide a memo for you to reflect on your key take-aways and share any areas of confusion. The research on adult learning indicates that students who immediately reflect on curriculum have a higher rate of retention. In addition to this benefit, the memos provide me with insight into any topics that need further clarification. Completing these memos within 24 hours of our class session will count towards a portion of your participation grade.

Weekly Class Assignments

Assignments will be given regularly and will be posted on Brightspace. These assignments will provide the opportunity for deeper reading and reflection. Most students will not find the topics overly difficult, but the workload is steady and condensed over a short period of time. Please consider this course as a career investment rather than just another step towards graduation or GPA goals. With this perspective, you will be able to put learning first and foremost.

Blockchain Team Interview Assignment

Please see full details here.

Quiz

We will have 1 quiz in our final class of the semester. The quiz will be multiple-choice/short answer and the questions will be based on class lectures, assignments and exercises we have completed in class.

Course Schedule

Please note that the schedule is subject to change.

Date	Topic	Deliverables by 11:59pm on the date listed
Classes 1: September 12	Blockchain Technology, the History of Accounting & Challenges and Criticisms of Blockchain Technology <ul style="list-style-type: none"> ● The origin of the double-entry ledger system with a focus on why this became the basis for our capital markets system and why it is ripe for the change that blockchain represents. ● Introduction of blockchain technology, the difference between bitcoin and blockchain, what benefits and challenges are inherent in the technology. ● How do we separate the benefits of blockchain from benefits from other (related) tools (ie, smart contracts)? ● A demonstration of an EY ESG blockchain use-case that is currently in the development stage. ● Contrast between 2 use-cases. 	Assignment 1: Individual Use-Case Discussion Board Due Date: Sun, September 18
Class 2: September 19	Interpreting and applying the accounting rules to crypto-assets <ul style="list-style-type: none"> ● Pre-Class Reading Requirement ● How to interpret and apply existing GAAP and IFRS rules to blockchain. ● Contrast different accounting treatments for public companies. ● Accounting Research Spotlight, presented by NYU Stern Accounting PhD student, Stephanie Dong: How do investors react to public company acquisitions of cryptocurrency? 	Assignment 2: Accounting Research Assignment Due Date: Sun, September 25

<p>Classes 3: September 26</p>	<p>Tokenization of Assets:</p> <ul style="list-style-type: none"> • The definition, types of, challenges and benefits of tokenization. • NFTs, Stablecoins, CBDCs, Security Tokens, Utility Tokens. • Contrast the political “friendliness” of various countries. 	<p>Assignment 3: CBDC Reflection</p> <p>Due Date: Sun, October 2</p>
<p>Classes 4: October 3</p>	<p>Tax Today & Blockchain Implications for the Future of Tax</p> <ul style="list-style-type: none"> • We will welcome Subject Matter Expert, Luiza Romero, to demonstrate Tax use-cases. • A brief history and review of the current income tax process • Analysis of how blockchain technology could improve the existing tax process • Trust, governments and the potential for blockchain; use-case examples of governments that are using blockchain for tax purposes. • A detailed look at the concept of Country of Origin and how blockchain technology could impact this complex, global tax structure 	<p>Assignment 4: Tax Grid</p> <p>Due Date: Sun, October 10</p>
<p>Classes 5: October 17</p> <p>(No class on October 10 or 11 - our class follows the Stern Graduate Calendar)</p>	<p>Blockchain Implications for the Future Audit</p> <ul style="list-style-type: none"> • How will blockchain technology change the audit and how are the auditors preparing? • Will it change how quickly they provide the audit? Will it improve the quality of the audit? • How do you audit cryptoassets? • We will welcome the auditors of Grayscale to demonstrate the audit of cryptoassets. 	<p>Assignment 5: Auditing Crypto-Assets</p> <p>Due Date: Sun, October 16</p> <p>And</p> <p>Team Interview Assignment</p>

		Due Date: Fri, October 21
Class 6: October 24	<ul style="list-style-type: none"> ● Quiz ● Tax Grid Assignment Debrief ● Team Presentations 	

After this class: Recommended Stern FinTech courses related to blockchain:

- [Digital Currency, Blockchains and the Future of Financial Services](#) (offered each semester by Professor David Yermack)
- Foundations of FinTech (offered each semester by several faculty),
- Applications in Entrepreneurial Finance: Fintech (offered Spring 2023 by Professor Sabrina Howell)
- Blockchain and Cryptocurrencies: Technical and Strategy Perspective (offered Spring 2023 by Professor Hanna Halaburda)
- Topics in Blockchain & Cryptocurrency Investing by Professor Ian D'Souza.
- More technical courses are also available at Courant and Tandon.

ACADEMIC INTEGRITY

Our [Academics Pillar](#) states that *we take pride in our well-rounded education and approach our academics with honesty and integrity*. Indeed, integrity is critical to all that we do here at NYU Stern. As members of our community, all students agree to abide by the NYU Stern Student Code of Conduct, which includes a commitment to:

Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.

Clearly acknowledge the work and efforts of others when submitting written work as one's own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.

Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person to engage in any violation of the Code of Conduct. Our support also includes reporting any observed violations of this Code of Conduct or other School and University policies that are deemed to adversely affect the NYU Stern community.

The entire Stern Student Code of Conduct applies to all students enrolled in Stern courses and can be found here: www.stern.nyu.edu/uc/codeofconduct

To help ensure the integrity of our learning community, prose assignments submitted to Brightspace will be submitted to Turnitin. Turnitin will compare your submission to a database of prior submissions to Turnitin, current and archived Web pages, periodicals, journals, and publications. Additionally, your document will become part of the Turnitin database.

General Conduct & Behavior

Students are also expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with Stern's Policy in Regard to In-Class Behavior & Expectations

(<http://www.stern.nyu.edu/portal-partners/current-students/undergraduate/resources-policies/academic-policies/index.htm>) and the NYU Student Conduct Policy (<https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-student-conduct-policy.html>).

STUDENT ACCESSIBILITY

If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu) verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website:

<https://www.nyu.edu/students/communities-and-groups/student-accessibility.html>