



# CSCI 597 (01B) Blockchain Technologies

COURSE SYLLABUS: SPRING 2025

(Revision date: Dec. 9, 2024)

## INSTRUCTOR INFORMATION

Instructor: Jinoh Kim, Ph.D.  
Office Location: CS/JOUR 217  
Office Hours: TBD (thru online course page)  
University Email Address: [Jinoh.Kim@tamuc.edu](mailto:Jinoh.Kim@tamuc.edu)

## COURSE INFORMATION

Textbook(s) Required: **[AN] Bitcoin and Cryptocurrency Technologies**, Arvind Narayanan, et. Al. free copy online:  
[https://d28rh4a8wq0iu5.cloudfront.net/bitcointech/readings/princeton\\_bitcoin\\_book.pdf](https://d28rh4a8wq0iu5.cloudfront.net/bitcointech/readings/princeton_bitcoin_book.pdf)  
Software Required: Python/Java  
Optional Texts and/or Materials: None

### Course Description

This course provides an introduction to the study of cryptocurrency and blockchain technologies with the focus of bitcoin. Topics included are: basic concepts of cryptography (hashing, digital signatures, public keys), decentralization (in bitcoin), mechanics and technical details of bitcoin, mining, and anonymity.

**Student Learning Outcomes** (Should be measurable; observable; use action verbs)

1. Understand the basic concepts in cryptography including hashing, digital signatures, and public encryption
2. State decentralized blockchain technologies and consensus mechanisms
3. Understand the mechanics of cryptocurrency and mining concepts
4. State the security and privacy topics in blockchain technologies including security threats and vulnerabilities and protecting against attacks

*The syllabus/schedule are subject to change.*

# COURSE REQUIREMENTS

## Minimal Technical Skills Needed

- Basic knowledge of computer systems and operating systems
- Basic knowledge of Python programming (Java alternatively)

## Instructional Methods

- In-class lecture and online lecture series

## Student Responsibilities or Tips for Success in the Course

- *Participation*: Class attendance (mandatory) with active participation of class activities.
- *Assignments*: Following the given instruction is important. On-time submission of assignments encouraged.
- *Exams*: Well prepared for exams (with an ability to answer questions within the given exam time); The exams will be paper-based, closed-book/note tests.

## GRADING (Tentative)

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89.999%

C = 70%-79.999%

D = 60%-69.999%

F = 59% or Below

Weights of the assessments in the calculation of the final letter grade:

Components	Weight	Remarks
Assignments	40%	
Exams	40%	
Class participation	20%	Class attendance and activities

### Attendance Policy:

This is an in-person section and attending the class is mandatorily required. More than three absences (for any reason) may result in a failing grade. Two tardies will be counted as one absence.

### Assignment Policy:

The deadline for the assignment can be extended with a 15% penalty per day, up to two days (48 hours). Any submission later than 48 hours after the deadline will not be accepted and graded. One lowest assignment score will be discarded from the final grade calculation.

**No extension/resubmission will be allowed.**

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**Exam Policy:**

If a student is unable to take the final exam for any emergency reason, the student may receive an 'X' (incomplete), which is defined as follows:

“When an "X" is given for a grade in a course, the credit hours and grade point averages are not included until a grade is received which can be up to one year.

If the "X" is not removed by that time, the grade becomes an F, and the hours are included in the number of hours attempted.”

## TECHNOLOGY REQUIREMENTS

### LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

## ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

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## **COMMUNICATION AND SUPPORT**

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

N/A

### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

### **University Specific Procedures**

N/A

### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

### **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

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## **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03 Undergraduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

## **Students with Disabilities-- ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

## **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

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## **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

## **A&M-Commerce Supports Students' Mental Health**

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel)

## **Artificial Intelligence and ChatBots**

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

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In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

13.99.99.R0.10 Graduate Student Academic Dishonesty

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/graduate/13.99.99.R0.10.pdf>

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## COURSE OUTLINE / CALENDAR

Course schedule: The schedule may be subject to change.

WEEK No.	CONTENT	READING
1	Course introduction History of cryptocurrencies and bitcoin	Syllabus
2	Crypto and cryptocurrencies (Part 1)	[AN] Ch1
3	Crypto and cryptocurrencies (Part 2)	[AN] Ch1
4	Decentralization (Part 1)	[AN] Ch2
5	Decentralization (Part 2)	[AN] Ch2
6	Mechanics of bitcoin (Part 1)	[AN] Ch3
7	Mechanics of bitcoin (Part 2)	[AN] Ch3
8	Midterm Exam	--
9	How to store and use of bitcoin (Part 1)	[AN] Ch4
10	How to store and use of bitcoin (Part 2)	[AN] Ch4
11	Bitcoin mining (Part 1)	[AN] Ch5
12	Bitcoin mining (Part 2)	[AN] Ch5
13	Bitcoin and anonymity (Part 1)	[AN] Ch6
14	Bitcoin and anonymity (Part 2)	[AN] Ch6
15	Course review	--
16	Final Exam	--

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