

RUTGERS UNIVERSITY
School of Business – Camden

FinTech and Financial Innovations

53:390:580 online Summer 2024

Tuesday to Monday

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COURSE DESCRIPTION:

This course delves into the latest advancements in Financial and related Technologies (FinTech). It offers a comprehensive overview of groundbreaking financial technologies poised to transform not only the finance sector but also the broader business landscape. These technologies merge conventional business methods with the computational prowess of contemporary processors, enabling the realization of highly tailored business goals. The curriculum includes the emergence of big data analytics, such as Artificial Intelligence and Machine Learning, along with the advent of automated investment advisors and algorithmic trading. Additionally, we examine the function of Blockchain in cryptocurrencies like Bitcoin and Ethereum, and their potential impact on investment strategies and general management practices.

REQUIRED TEXTBOOK:

1. NONE. Since the topic is so new, there are no appropriate textbooks on the market as of 2023. We will instead rely on weekly readings assembled from various sources. All materials will be provided free of charge.

RECOMMENDED MATERIALS:

Please note that the following materials are not mandatory, but highly recommended.

It is advisable to read The Wall Street Journal, a leading source of business and finance news. Significant at Rutgers can access WSJ for free here: [WSJ for Students | Activate Your WSJ Subscription](#). I will occasionally refer to various WSJ content. Although not mandatory, a subscription to The Wall Street Journal is strongly recommended. Your future boss and colleagues are likely reading it now!

Additionally, consider reading publications with a broader and more global focus. I highly recommend The Economist, which also provides significant student subscriptions. The Financial Times is another excellent source of finance news. Visit the Financial Times Education contact page to inquire about a student subscription for the semester, or even for the year.

TEACHING METHODS:

The weekly reading material forms the fundamental structure of the course. However, a significant portion of your time will be dedicated to activities that expand on the handouts content. For this teaching method to be effective, it is crucial that you read all material assigned before starting the first assignment. Prioritizing reading all assigned material, completing all other assigned homework

punctually, seeking help from the professor promptly when needed, and participating in class discussions are strongly recommended for excelling in this course.

Syllabus updates and other course communication:

All updates and announcements will be posted on the course website on Canvas. If you do not use your rutgers.edu email domain, please ensure that you forward messages to your preferred email address. Handouts will occasionally be posted on Canvas. It is your responsibility to stay updated with this course. Please check the course website daily.

COURSE GOALS AND OBJECTIVES:

The finance area at the School of Business – Camden has adopted the following Learning Goals and Objectives for Finance 580.

By the completion of this course, you will be able to:

- Identify and explain the reasons for disrupting the traditional investment practice.
- Identify and explain the rise of Big Data and its analytical tools: Artificial Intelligence and Machine Learning.
- Identify and explain the practice of Data Science and its role in modern finance.
- Identify, explain and apply the techniques of Natural Language Processing (NLP) and text mining.
- Identify and explain the phenomenon of RoboAdvisors.
- Identify and explain how algorithmic trading is different from traditional trading.
- Identify and explain how a Blockchain works
- Identify and explain the rise of cryptocurrencies such as Bitcoin.
- Identify and explain the rise of Decentralized Finance (DeFi)

STUDENTS WITH LEARNING DISABILITIES

Students who are seeking an accommodation because of a disability are directed to the website <http://learn.camden.rutgers.edu/disability/disabilities.html> or they can contact the Camden campus Disability Coordinator, Mr. Tim Pure at 856-225-6442, Armitage Hall Room 362. The email address is disabilityservices@camden.rutgers.edu. All contact will be considered confidential.

COURSE REQUIREMENTS:

1. EXAMS:

There will be only one exam- the Final. It will consist of questions designed to test understanding of the facts and concepts of the course and how they can be applied to practical investment problems. All problems will be based on the assigned required weekly readings.

Academic Integrity:

“Academic integrity requires that all academic work be wholly the product of an identified individual or individuals. Joint efforts are only legitimate when the assistance of others is explicitly acknowledged...The principles of academic integrity entail simple standards of honesty and truth. Each member of the university has a responsibility to uphold the standards of the community and to take action when others violate them...Students are responsible for knowing what the standards are

and for adhering to them. Students should also bring any violations of which they are aware to the attention of their instructors.”¹

Students are expected to know, understand and adhere to the policies on academic integrity outlined above. Procedures for violation of these policies outlined in the University Code of Academic Conduct will be followed.

Exam Make-up Policy:

If, for a university approved reason, you cannot take an exam at the scheduled time you must give the professor written notice at least one week in advance so that other arrangements can be made. If the situation does not allow for advance notification (for example, emergency hospitalization), contact the professor as soon as possible after a missed exam. Make-up exams for non-university approved reasons are not guaranteed. I reserve the right to request written documentation to support your absence (such as a doctor’s note, an obituary, or military orders).

2. DISCUSSIONS:

Active participation in class discussions is a crucial component of this course. You are expected to contribute regularly to online forum discussions, demonstrating your engagement with the assigned course material through thoughtful and well-informed comments.

Throughout the semester, you will work on hands-on projects that span multiple weeks. As part of these projects, you will be required to post your intermediate steps, findings, and reflections as bi-weekly discussion posts. This will allow you to share your progress, seek feedback, and collaborate with your peers.

In addition to posting your own updates, you are encouraged to engage with your classmates by replying to at least two other students' posts per discussion. Use these opportunities to ask for advice, offer solutions, or provide helpful resources. Collaboration and mutual support are key to the success of these multi-week projects.

To enhance your learning experience and streamline your workflow, it is **highly recommended** that you collaborate with an AI chatbot, such as the latest models from OpenAI (e.g., ChatGPT-4-O) or Anthropic (e.g., Opus 3). These cutting-edge tools can provide valuable insights, assist with research, and help you efficiently tackle complex problems. However, please ensure that you critically evaluate the information provided by the AI and always cite any sources used.

Your discussion posts and replies will be assessed based on their relevance, depth of understanding, and the value they add to the overall class discussion. Strive to create a supportive and engaging learning environment where everyone can benefit from shared knowledge and experiences.

3. HOMEWORK ASSIGNMENTS (Quizzes):

Quizzes are difficult and are based exclusively on the content of the required assigned readings. You should carefully read the assigned materials before attempting to take the quiz.

¹ Rutgers University Code of Academic Conduct, taken from the Student Advising Handbook - <http://camden-sbc.rutgers.edu/CurrentStudents/students/advising.pdf>.

GRADING:

For the assignment of final grades, the course requirements will be weighted approximately as follows:

Final exam	25%
Weekly Quizzes.....	50%
Bi-Weekly Discussions (Projects)....	25%

90-100%	A
85-89%	B+
80-84%	B
75-79%	C+
70-74%	C
Less than 70%	F