

**Seattle University**  
**Albers School of Business and Economics**

<b>Course</b>	<b>Introduction to FinTech FINC-5910-01</b>
<b>Professor</b>	Dr. Cathy Xuying Cao, CFA
<b>Term</b>	Fall 2020
<b>Format</b>	<b>Blended (A Combination of Synchronous Zoom Sessions and Asynchronous Online Canvas Learning Sessions)</b>
<b>School Policy</b>	Asynchronous/ Synchronous (or Hybrid) Class Sessions <a href="https://www.seattleu.edu/business/news-events/covid-19/">https://www.seattleu.edu/business/news-events/covid-19/</a>
<b>Synchronous Meetings</b>	<b>Tuesday 6-8:00pm Zoom Class Meeting</b>

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### **Professor's Contact Information**

**Email:** [caoc@seattleu.edu](mailto:caoc@seattleu.edu)

*I strongly urge you to use email to contact me.* I will check my email daily on weekdays and occasionally on weekends.

Each week, I will post a Zoom meeting invitation on the Canvas Course Announcement. I will hold a Zoom Q&A meeting every Friday 5:00 -6:00 pm.

Also, please feel free to post your questions on Canvas Discussions. I will create a Discussion Board for each topics. Your questions posted on Discussions will be beneficial to other students.

**Virtual Office Hours     Friday 5:00-6:00pm, Zoom Meeting**

### **General Course Information**

#### **About Instruction Format**

*This class adopts blended or online hybrid framework (a combination of asynchronous and synchronous online sections).* Students will engage asynchronously via Canvas and synchronously via Zoom—at the scheduled meeting time. If you have technology needs, please feel free to contact [library@seattleu.edu](mailto:library@seattleu.edu) .

The course will be a blend of online lectures, student presentations, projects, and coding. There are many assigned academic readings, online articles, videos, industry reports, and survey reports. The key to succeeding in this class is through the readings and discussions. Much of the course content is accessed and even some of the course activities are completed before the class actually meets.

The modalities of our *asynchronous and synchronous* sections have complementary strengths. For instance, asynchronous discussion boards favor reflective activities that require close readings and reasoning, whereas synchronous activities provide in-depth discussion and passionate learning experiences.

During an *asynchronous* online section, students will “read, think, write, and share”. Students will build prior knowledge to scaffold the deeper learning we want to do during class time. To build that knowledge, students are given a “coverage assignment” — such as going through a reading, watching a video or other online activities.

During a *synchronous* online section, students will “present, think, pair, and share”. The synchronous classroom time is spent in an active learning environment where students work individually or with each other to discuss cases, present their research, answer practice questions, listen to spot explanations of key concepts, and watch short demonstrations.

**Pre-requisites, Co-requisites, & other restrictions**

Requirement: This class will assign projects on business analysis, stock valuation, and trading strategies. Thus, students are highly recommended to successfully complete **FINC 5050** before taking this course. Successful completion of FINC5100 is preferable.

You are expected to grasp 1) securities analysis and industry analysis and 2) portfolio construction and performance analysis. To understand how technology is being used in these applications, we will apply a variety of tools to analyze real world examples and data. Programming knowledge is not a prerequisite but a desire to acquire that skill is. We will be using *Python* as a tool to conduct financial analysis.

If you have not completed the necessary coursework or do not feel comfortable with the requisite skills, you will find the concepts introduced in this course challenging.

**Course Description**

“FinTech” refers to financial sector innovations involving technology-enabled business models that can 1) facilitate decentralization, 2) revolutionize or even disrupt how existing firms create and deliver products and services, 3) address privacy, regulatory, and law-enforcement challenges, and 4) promote financial inclusion.

The course provides an overview of the most significant technological advances that are radically changing the industry, focusing on Artificial Intelligence, Blockchain and cryptocurrency, Crowd Funding, and Data Analytics. The course will study the pros and cons of technology innovations in finance and how these innovations affect the financial industry. The course will cover examples and developments from (1) wealth management, (2) insurance, (3) lending, (4) capital raising, (5) blockchain and smart contract, and (6) machine learning and data analytics.

All materials and handouts required for this class will be available via Canvas course website. You are responsible for accessing the appropriate class site and downloading any information that is pertinent to this class.

**Course Objectives**

The aim of this course is to provide students with an opportunity to explore financial technology from four different perspectives: a disruptive technology company, an incumbent financial institution, consumer, and an investor.

On successful completion of this subject students should be able to understand:

- The unique characteristics of technology innovations in finance;
- How FinTech is reconfiguring business models for financial services and what the key disruption points are;
- The impact of FinTech on the traditional financial intermediaries and society;
- The key elements for a successful FinTech innovation;
- What affects the valuation of FinTech products/ FinTech firms; and
- How to analyze financial data using Python.

**Learning Outcomes**

On successful completion of this course, you will be able to reach the following learning outcomes of Seattle University MSF program requirements.

- Justify values for both financial and real assets by applying appropriate valuation methods and principles.
- Evaluate the tradeoff between risks and returns using a variety of appropriate quantitative methods.
- Critique the role of financial markets and institutions in providing the efficient transfer of funds from sources to uses.
- Produce sound financial recommendations by applying financial tools and analytical methods.
- Communicate, in both written and oral form, the results and recommendations of financial analysis to different audiences having various degrees of financial sophistication.
- Recognize social justice issues inherent in FinTech applications.

### **Required Texts & Materials**

Teaching materials are drawn from research papers, survey reports, articles, news or independent media, and periodicals. There are assigned class materials for each class. I expect you to be well-prepared before our synchronous class meeting.

### **Course Requirement**

Class participation (presentation, discussion, and practice) plays a key role in your learning. It is assumed that you will have reviewed the previous lectures, read the assigned materials, completed pre-meeting assignments, and studied the cases prior to our synchronous class meeting.

Students are responsible for all materials and assignments presented in class. If you miss a synchronous class, then it is your responsibility to obtain any missed lecture notes from a class peer.

Students are required to complete all scheduled activities (such as quizzes, projects, presentations, discussions, assignment, and readings) on time. There will be no make-up for missing turn-ins. All missing work will earn a grade of zero.

If you cannot attend synchronous classes regularly and cannot complete assigned class activities on time, you should take the course in a different quarter. Please pay close attention to the rules of etiquette and class behavior outlined below.

### **School Policy**

<https://www.seattleu.edu/business/news-events/covid-19/>

### **Selected Q&A from Albers webpage: Synchronous (or Hybrid) Class Sessions**

#### **Q: DO I NEED TO ATTEND SYNCHRONOUS CLASS SESSIONS REGULARLY?**

**Yes, for FINC5910-Introduction to FinTech, the attendance is required.**

The expectations for attendance in synchronous online sessions are the same as a face-to-face class.

Successful students have recognized that regular attendance dramatically helped them on their assignments and exams. As is long-standing policy, some instructors may grade on attendance and report regular absences to the University.

**Q: WHAT IF I LIVE IN A TIME ZONE THAT MAKES ATTENDANCE DIFFICULT?****Consider your options.**

If you identify a more suitable course section, please communicate with Albers [Undergrad](#) or [Grad Advising](#) in advance and state your concerns regarding the time difference.

In some instances, there may be no suitable alternative. You should consult with your adviser about taking the course in another quarter, when there may be sections taught in a different format.

If taking the course in another quarter is not a suitable option, reach out to your instructor and explain your concern and what you've done so far to address it. Instructors may be more accommodating if your request is reasonable and they know you've exhausted your other options.

**Q: DO I NEED TO HAVE MY WEBCAM ON AND MIC READY DURING CLASS?**

**Yes**, but troubleshoot any specific concerns about this with your instructor so that you can meet course objectives and practice professional skills.

We're members of a shared community of learning, and this means that we're fully present for one another through visible and vocal participation. You'll need voice to interact in real time with your instructor and your classmates and to participate in class and small-group activities. And showing your face in the meetings helps build community, enables greater communication, and demonstrates professional courtesy.

Of course, any one of us can suffer an occasional technology fail, but we make apologies and have a plan for fixing it before the next meeting. **For important meetings in a professional setting (clients, investors, etc.), we even have a backup plan.** Look for what in the course might be equivalent (midterm exam? final exam? day when you're presenting?) and **consider early on what your backup plan might be.** Please raise any individual concerns with your instructor well in advance.

Webcams and mics are often sold as a single piece of equipment and start around \$30. The University Library is loaning laptops with webcams and mics, as well as internet hotspots, to qualifying students free of charge.

Another alternative is to join Zoom with one device (e.g., desktop) to hear the session audio, and then join Zoom with another device (e.g., a smartphone with a functioning camera and mic) to turn on your video and audio. Consider practicing this alternative ahead of time.

**Q: ARE THERE ANY DOS AND DON'TS IN ATTENDING A SYNCHRONOUS CLASS?**

**How you conduct yourself and develop your professionalism are key, no matter whether it's the classroom or Zoom.**

In class, you'd be dressed appropriately and sitting at a table or desk. You'd also refrain from distractions such as other electronics, non-course activities, or food. In class, you'd also raise any individual concerns with your instructor well in advance.

It's the same in Zoom. And the revised Code of Student Conduct applies to University-related online and virtual programs and activities.

**Many companies are looking to hire graduates who can be professional and focused in an online setting, so the etiquette practiced here contributes to your professional formation.**

In an effort to promote a shared learning experience, instructors may address concerns about disruptive or distracted students in synchronous online classes just as they would in a face-to-face class.

**Selected Q&A from Albers webpage: Asynchronous Class Sessions**

**Q: ARE ASYNCHRONOUS CLASSES SELF-STUDY?**

**No.** In asynchronous sections, instructors provide course materials online for you to complete at times that suit your personal weekly schedule. These course materials may include reading assignments, video lectures, online exercises or homework, discussion posts and comments, and so on. These course materials may also include active learning activities, tasks or projects that require you to collaborate with classmates as part of a team. To support your learning of the course materials online and to complement assigned active learning activities, your instructor may also arrange optional online office hours, labs, or review sessions throughout the academic term.

## Assignments & Academic Calendar

This agenda is subject to change. The exact timing of lectures and content of exams will depend on the flow of the course.

### Tentative Class Schedule

**Before Every Synchronous Class Meeting Please check Canvas for relevant lecture and assigned readings.**

**Please complete pre-meeting assigned class activities, such as readings, assignments, discussions, presentations, and so on.**

Date	In-class Activity
Sept. 15	Course Overview Introduction to FinTech
Sept. 22	WealthTech—FinTech in Wealth Management
Sept. 29	Alternative Data & Credit Scoring
Oct. 6	InsureTech—FinTech in Insurance
Oct. 13	Crowd Funding and P2P Lending
Oct. 20	Bitcoin and Blockchain (Part 1)
Oct. 27	Bitcoin and Blockchain (Part 2)
Nov. 3	Machine Learning
Nov. 10	FinTech Ethics and Risks
Nov. 17	Student Presentations
<b>Nov. 24</b>	<b>Final (Optional)</b>

## Course Policies

### Grading (credit) Criteria

Grading will be based on a combination of the following:

Class Participation (Including discussion, class engagement, and etc.)	10%
Quizzes	12%
FinTech Assignment	16%
Python Assignment	10%
Student Presentation	12%
FinTech Research Challenge	25%
Python in Finance Challenge	15%
Final Exam (Optional)	See more details below
<b>Total</b>	<b>100%</b>

### Final Exam (Optional)

If you want to take final exam (scheduled on Nov. 24 6pm), **YOU SHOULD INFORM me of your decision by Nov. 17 11:59pm** via Canvas “Final Exam Decision” turn-in

**box. OTHERWISE**, by default, you agree not to take the final exam. **By taking the final exam, you grade will apply the following policy.**

Class Participation (Including discussion, class engagement, and etc.)	8%
Quizzes	6%
FinTech Assignment	10%
Python Assignment	6%
Student Presentation	10%
FinTech Research Challenge	25%
Python in Finance Challenge	15%
Final Exam (Optional)	20%
<b>Total</b>	<b>100%</b>

Grades will be assigned based on the overall section performance, adjusted for overall section performance. It is expected that the median grade in this course will be a B.

Your course grade depends on the distribution of the weighted average scores. Normally, a weighted average score of 95 or above is an A, between 90 and 95 is A-, between 80-89 is (B+, B, B-), 65-79 is (C+, C, C-). The actual demarcation line for each letter grade depends on the actual distribution of all weighted average scores. If the distribution warrants, plus or minus grades may not be given.

#### **Graded Quizzes/ Final Exam**

**Graded quizzes** will be given for each online lecture. Please be aware of the due date. **There is no make-up for any missing quiz. You can only drop the quiz with the lowest scores.**

**The final exam is optional and will be taken online. The exam has limited time to complete during assigned time frame. The final exam will be cumulative**, including all materials covered in this quarter. The online final exam **format includes** 1) multiple-choices questions; 2) true-or-false questions; 3) essay questions; 4) Python coding; and so on.

**Makeup exams will not be given** except in a dire emergency and only if I am notified prior to the scheduled assignment turn-in and exam time.

Grades are not negotiable and will only be changed in the case of a math or grading error on the instructor's part.

#### **Assignments**

Assignments are done individually. Please turn in your work on time. There is **no make-up of any kind for missed or late assignments.**

I expect from you a high level of responsibility and academic integrity. This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

#### **FinTech Research Challenge**

**This is individually done.** The goals of the FinTech Research Challenge are 1) to foster and undertake research in the financial services realm empowered by deep tech and data analytics,

and 2) to explore the applications of novel technological solutions and analyze their industry implementation for optimal impact on consumers, firms, industry and society.

Students are expected to conduct in-depth analysis on a given FinTech company and produce an in-depth research report on that company. The project grading is mainly based on 1) the thoroughness of analysis to help understand the practice of financial innovations, the transformations of business models, the financial and social impacts, the challenges and barriers to sustainable adoption, 2) convincing arguments to defend conclusions/ investment proposals, and 3) the quality of professional writing.

Details related to the Research Challenge will be provided in a separate document in late academic term.

### **Python in Finance Challenge**

**This is individually done.** The purpose of the use of Python in Finance Challenge is to adopt Python for general-purpose programming and quantitative financial and investment analysis, ranging from understanding trading dynamics to identifying key drivers for firm financial performance.

The project grading is mainly based on 1) correctness of Python coding, 2) the application of proper analysis models; 3) the post-analysis on the implications of analytical outcomes, and 4) quality of professional writing.

Details related to the Python in Finance Challenge will be provided in a separate document in late academic term.

### **Online Class Participation and Discussion Etiquette**

**\*\*\*Important!**

Each student is expected to actively participate in class discussion throughout the week in order to promote a meaningful and engaging learning experience.

I will initialize a discussion for each topic (on average, every week). In order **to earn full credit for an online threaded discussion, you need to make at least three (3) posts per discussion thread.** You need 1) to address discussion questions and 2) to respond to two posts made by other students. There is **no make-up of any kind for missed or late discussions.**

Please be sure to read all messages in a thread before replying to or asking a question. Please do not repeat a similar question asked before. Please avoid short, generic replies such as, “I agree.”

### **When posting on the Discussion Board or Padlet, please follow the policy:**

- Make posts that are on topic and within the scope of the course material.
- Take your posts seriously, and review and edit your posts before sending.
- Be as brief as possible while still making a thorough comment, including your claim, evidence, and concise analysis.
- Always reference or quote the source that you cite.



- Be sure to read all messages in a thread before replying or asking a question. Please do not repeat a similar question asked before.
- Please do not repeat someone else's post comment without adding something of your own to it.
- Avoid short, generic replies such as, "I agree." You should include why you agree or add to the previous point (i.e., claim, evidence, and concise analysis).
- Always be respectful of others' opinions even when they differ from your own.
- When you disagree with someone, you should express your differing opinion in a respectful and non-critical way.
- Please do not make personal or offensive remarks.
- Be open-minded.

### **Synchronous Class Session and Class Participation Etiquette**

#### **\*\*\*Important!**

The distinctive advantage of have synchronous class session is the opportunity to interact with the professor and your peers and inspire each other. I also believe that learning requires active participation. The more engaged you are in learning environments, the more likely you are to complete, learn, and be satisfied. Thus, class participation is expected.

Following are rules that should guide your behavior during synchronous class sessions:

1. Regular **class attendance is expected** during the term. Students are expected to take all reasonable measures to **arrive to class on time**. Leaving early from any synchronous class meeting and/or coming in **30 minutes late will count as absence** for half a class. **Irregular class attendance will lead to reduction from your final grade. There is no make-up for missing classes.**
2. Students are expected to take all reasonable measures to **arrive to class on time**.
3. Once in class, I expect you to stay in the meeting. **Please take care of your personal needs prior to class.**
4. Class does not end until I excuse you. Please do not begin to pack up your papers and books before the end of class. Wait until class is adjourned.
5. Please mute your microphone. To help keep background noise to a minimum, make sure you mute your microphone when you are not speaking.
6. **Please limit distractions.** You can make it easier to focus on the meeting by turning off notifications, closing or minimizing running apps, and turning off your cell phone.
7. **Please avoid multi-tasking.** You'll retain the discussion better if you refrain from replying to emails or text messages during the meeting and wait to work on that PowerPoint presentation until after the meeting ends. I may make cold-calls during class discussion.
8. **Prepare materials in advance.** If you will be sharing content during the meeting, make sure you have the files and/or links ready to go before the meeting begins.

**Frequent violation of classroom etiquette rules will lower your course final grade. There's no make-up for the violation of classroom etiquette rules.**

### **Canvas: Delivery of Course Materials**

I will establish a course web page on the Internet. **Always check the Canvas page for class announcements and course information.** This site will include lectures, course materials, assignments, quizzes/exams, any external web links, and relevant updates about the class including any changes in assignments or exams.

If a file or link is not operational, let me know via email ASAP so I can correct the link. If you have any other problems using Canvas, contact the Seattle University technology help desk.

### **Audio or Video Taping**

**AUDIO OR VIDEOTAPING IN CLASS IS PROHIBITED WITHOUT THE INSTRUCTOR'S PRIOR APPROVAL.** For protection of proprietary knowledge and for a variety of other reasons, audio and videotaping of any class session is strictly prohibited without prior approval of the instructor. Under extreme circumstances or for a pre-approved class absence, audio taping a class session will be allowed on a case by case basis and with the express permission of the instructor. The student will be responsible for making all necessary arrangements. Students will need to adhere to the appropriate agreed upon use of the content material of these audio tapes.

### **Academic Resources & Academic Integrity**

• Library and Learning Commons (<http://www.seattleu.edu/learningcommons/>)

(This includes: Learning Assistance Programs, Research [Library] Services, Writing Center, Math Lab)

• Academic Integrity Tutorial (found on Canvas and SU Online)

• Seattle University is committed to the principle that academic honesty and integrity are important values in the educational process. Academic dishonesty in any form is a serious offense against the academic community. Acts of academic dishonesty will be addressed according to the Seattle University Academic Honesty Policy.

I expect from you a high level of responsibility and academic honesty. This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

### **Academic Policies on Registrar website**

The policies can be found at the address:

Academic Policies on Registrar website (<https://www.seattleu.edu/redhawk-axis/academic-policies/>)

- Academic Integrity Policy
- Academic Grading Grievance Policy
- Professional Conduct Policy (only for those professional programs to which it applies)

### **Notice for students concerning Disabilities**

If you have, or think you may have, a disability (including an 'invisible disability' such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your

performance as a student in this class, you are encouraged to arrange support services and/or accommodations through Disabilities Services staff located in **Loyola 100, (206) 296-5740**. Disability-based adjustments to course expectations can be arranged only through this process.

#### **Notice Regarding Religious Accommodations**

It is the policy of Seattle University to reasonably accommodate students who, due to the observance of religious holidays, expect to be absent or endure a significant hardship during certain days of their academic course or program. Please see, *Policy on Religious Accommodations for Students* (<https://www.seattleu.edu/media/policies/Policy-on-Religious-Accommodations-for-Students---FINAL.pdf>).

#### **Office of Institutional Equity**

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in educational programs or activities that receive Federal financial assistance. This prohibition includes sexual misconduct, which encompasses sexual harassment and sexual violence. Seattle U remains committed to providing a safe and equitable learning, living, and working environment. Seattle U offers emergency, medical, and other support resources, as well as assistance with safety and support measures, to community members who have experienced or been impacted by sexual misconduct.

Seattle U requires all faculty and staff to notify the University's Title IX Coordinator if they become aware of any incident of sexual misconduct experienced by a student.

For more information, please visit <https://www.seattleu.edu/equity/>. If you have any questions or concerns, you may also directly contact the Title IX Coordinator in the Office of Institutional Equity (email: [oiie@seattleu.edu](mailto:oiie@seattleu.edu); phone: 206.296.2824) University Resources and Policies.

#### **Copyright Notice**

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner's rights and such infringement is subject to appropriate disciplinary action as well as criminal penalties provided by federal law. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. As a Seattle University student, you are required to follow the institution's copyright policy. For more information for SU copyright policy, see <http://www.seattleu.edu/policies/copyright.aspx>

***These descriptions and timelines are subject to change at the discretion of the Professor.***