



UNC CHARLOTTE

BELK COLLEGE *of* BUSINESS

**BPHD 8210**  
**Investments & Portfolio Theory**  
**Spring 2020**

**Instructor:** I-Hsuan Ethan Chiang  
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**Office Hours:** Friday 340B, by appointment  
**Class Time:** Wednesdays 1:00 PM–3:45 PM  
**Class Location:** Center City 602

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*This syllabus contains the expectations, policies, procedures, and schedule for the course. Please read the entire syllabus carefully before continuing in this course. The policies and expectations stipulated in this syllabus are intended to create a productive learning atmosphere for all students. Students are expected to abide by these policies and expectations. The standards and requirements set forth in this syllabus may be modified at any time by the instructor. Notice of such changes will be announced in class and electronically. (Last update: January 7, 2020)*

### **Course Description**

The goal of this doctoral seminar course is to develop key theoretical framework and empirical skills in portfolio analysis and prepare students to conduct research in asset pricing. Students will learn how to, in a systematic manner, measure risk and return, establish appropriate investment objectives, develop optimal portfolio strategies, assess risk-return tradeoffs, formulate and test asset pricing models, and evaluate investment performance. Class discussions focus on theories, methodologies, and literature in portfolio analysis, and empirical projects will familiarize students with the applications.

### **Prerequisites**

1. Previous coursework: As this course is for doctoral students interested in financial economics, a prior exposure to graduate level investments, economics, mathematics, and econometrics is assumed.

2. Proficiency in programming languages or statistical packages is required.

## Materials

1. Handouts: Handouts will be available from Canvas.
2. Research articles: Each handout has a number of related articles and they will be available from Canvas.
3. Required reading: Ferson, W.E., 2019, *Empirical Asset Pricing Models and Methods*, MIT Press.
4. Recommended readings:
  - (1) Campbell, J.Y., 2017, *Financial Decisions and Markets: A Course in Asset Pricing*, Princeton University Press.
  - (2) Cochrane, J.H., 2005, *Asset Pricing: Revised Edition*, Princeton University Press.
  - (3) Huang, C.-F., and R.H. Litzenberger, 1988, *Foundations for Financial Economics*, Elsevier.
  - (4) Back, K.E., 2010, *Asset Pricing and Portfolio Choice Theory*, Oxford University Press.
5. Econometrics references:
  - (1) Enders, W., 2015, *Applied Econometric Time Series*, 4th ed., Wiley.
  - (2) Tsay, R.S., 2010, *Analysis of Financial Time Series*, 3rd ed., Wiley.
  - (3) Campbell, J.Y., Lo, A.W., and A.C. MacKinlay, 1996, *The Econometrics of Financial Markets*, Princeton University Press.

## Assessment

### *Graded Components*

1. Empirical projects: For each project, each student should prepare a write-up with
  - (1) A description of the empirical model
  - (2) A description of the data used in the analysis
  - (3) The tabulated results with discussion
  - (4) The code (as the appendix)and present the main results. Students are encouraged to participate in study groups to discuss the projects, but coding, writing, and analysis should be performed by each student individually.

2. Research article presentations: Each student will take turns presenting research articles. Non-presenting students are expected to participate class discussions.
3. Discussions: Each student will take turns serving as the discussant of the research articles.
4. Homework assignments: Additional analytical or data problems will be assigned.
5. Final project and presentation: Replicate a journal article with extension. The choice of article to replicate must be pre-approved by the instructor. Submit the project and also present it on the final exam date.

### *Grading Policies*

- The above graded components are equally weighted.
- A penalty will be applied to late assignments. Extension might be given to students with a legitimate reason.
- Grading scale: your overall numerical grade will be rounded to the nearest integer and then converted to a letter grade based on the following scale: A (90+), B (80-89), C (70-79), and U (0-69).

## **Presentation/Discussion Guidelines**

### *General Guidelines*

Here are some questions that you should think about when you read, discuss, and referee a paper:

- What is the nature of the paper? Is it theory, methodology, or empirical? Is it normative or positive?
- What is the research question? Is it an interesting question? Does the paper motivate the question well?
- What are the major contributions of the paper?
- How does the paper answer the research question? If it is a theory paper, do the readers learn something new from the theory? If it is an empirical paper, what is its empirical strategy (data and methodology)?
- What are the main results? Are they convincing and clearly presented? Do they cause confusion or raise further questions?
- Are there biases in the estimates or inferences? Carefully examine the existence of: irrelevance of hypothesis, sample selection bias, misspecification, omitted variables, reverse causality, etc.
- What other tests might you want to see done?

### *Specific Presentation Guidelines*

- View the presentations as formal academic finance seminar presentations.
- Each presentation is allotted 45 minutes, including questions. Please plan accordingly. Typically you need at least two minutes for each slide.
- Tables are more effective than text; and diagrams are more effective than tables.
- Arrive the main results as soon as possible.
- Structure your slides around the items in the “*General Guidelines*” section. Your slides should contain the following components:
  - (1) Research question
  - (2) Motivation
  - (3) Related literature
  - (4) Summary of main results and contributions
  - (5) Methodology
  - (6) Data and results
  - (7) Conclusion

### *Specific Discussion Guidelines*

- Each discussion is allotted 10 minutes.
- Structure your critiques around the items in the “*General Guidelines*” section. Your critiques should contain the following components:
  - (1) Summary of the paper
  - (2) Evaluation of the contribution
  - (3) Strength and weakness
  - (4) Ways to improve the paper

## **Academic Policies**

- Email: Much out-of-class communication is done by email. Please make sure you are able to be reached via your UNC Charlotte email account.
- Disability services: UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please provide a letter of accommodation from Disability Services early in the semester. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 or visit their office at Fretwell 230.
- Student conduct: All students are required to read and abide by the UNC Charlotte Code of Student Academic Integrity, the UNC Charlotte Code of Student Responsibility, and Academic Integrity in Belk College of Business. Violations of the Codes will result in disciplinary action as provided in the Codes.
- Statement on diversity: The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

## **Acknowledgement**

- Special thanks go to Pierluigi Balduzzi and Wayne Ferson for their generosity of sharing course materials.

## Tentative Schedule

Date	Lecture	Presentation	Project
1/8	Portfolio Theory: The Classics		
1/15	Portfolio Theory: The Classics		
1/22	Present Value Models	DeMiguel, Garlappi, and Uppal (RFS, 2009)	
1/29	Present Value Models	Chen, Da, and Zhao (RFS, 2013)	
2/5	Return Predictability	Balduzzi and Chiang (RAPS, 2019)	
2/12	Return Predictability	Lewellen (JFE, 2004)	
2/19	Portfolio Theory: Conditioning Information	Rapach, Strauss, and Zhou (RFS, 2010)	Empirical Project #1 Due
2/26	Portfolio Theory: Conditioning Information	Chan, Karceski, and Lakonishok (RFS, 1999)	
3/11	Beta Pricing Models	Fleming, Kirby, and Ostdiek (JF, 2001)	
3/18	Beta Pricing Models	Brandt and Santa-Clara (JF, 2006)	Empirical Project #2 Due
3/25	Beta Pricing Tests	Novy-Marx (JFE, 2013)	
4/1	Beta Pricing Tests	Ferson and Harvey (JF, 1999)	
4/8	Performance Evaluation	Campbell and Vuoteenaho (AER, 2004)	
4/15	Performance Evaluation	Ferson and Schadt (JF, 1996)	Empirical Project #3 Due
4/22	Review	Agarwal, Green, and Ren (JFE, 2018)	
5/6	Final Exam Day	Final Project Presentation	Final Project Due