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**33:390:410 Asset Pricing & Portfolio Analysis Dr. Cheng-Few Lee**

Fall 2018 Room 5188, 100 Rock

BRR 5071

Monday and Thursday 10:20 – 11:40 am cflee@business.rutgers.edu

Office Hours: Wednesday 3:00 - 4:00 pm or by appointment

**COURSE DESCRIPTION**

This course will first teach theoretical aspects of both asset pricing and portfolio analysis, then the application of both asset pricing and portfolio analysis will be discussed in detail. Asset pricing and portfolio analysis will be both theoretically and empirically explored in detail. Real world examples will be used to enhance students understanding of both asset pricing and portfolio analysis.

**COURSE MATERIALS**

* Required textbooks:

1. Security Analysis, Portfolio Management, and Financial Derivatives

by Cheng-Few Lee, Joseph Finnerty, John C. Lee, Lee, Alice C.,

and Donald Wort, World Scientific Publishing, 3rd Edition, 2017

2. Supplement Chapter 1 “Financial Markets and Financial Instruments”

3. Supplement Chapter 2 “Raising Equity Capital and Security Trading”

* Reference textbooks:

1. Financial Analysis, Planning, and Forecasting

by John C. Lee, and Cheng F Lee

World Scientific, 3rd Edition, 2017 (ISBN-9789814723848)

1. Statistics for Business and Financial Economics

by Cheng-few Lee, John C. Lee and Alice C. Lee

Springer, 3rd edition, 2013

1. Encyclopedia of Finance

by Cheng-few Lee, and Alice C. Lee

Springer, 2nd edition, 2013

1. Modern Portfolio Theory

by J.C. Francis and D. Kim

John Wiley & Sons, Inc. 2013

1. From East to West: Memoirs of a Finance Professor on Academia, Practice, and Policy  
    By Cheng-Few Lee, World Scientific, 2017  
    Chapter 7 "Teaching Method and Educational Philosophy",

Chapter 9 "Innovative and Active Approach to Teaching Finance"

These two chapters can be found here: http://www.worldscientific.com/worldscibooks/10.1142/10182

- Check Blackboard ([blackboard.rutgers.edu](https://blackboard.rutgers.edu/webapps/portal/frameset.jsp)) and your official Rutgers email account regularly.

**LEARNING GOALS AND OBJECTIVES**

- The main purposes of this course are to teach students the subjects of theoretical aspect of asset pricing and portfolio analysis and how they are applied in the real world.

- Students who complete this course will demonstrate the following:

An understanding of basic concepts, the theoretical aspect, and real world application of asset pricing and portfolio analysis. The asset pricing topics will include stock and bond valuation, asset pricing models and beta forecasting. The portfolio analysis topics will include Markowitz Portfolio-Selection Model, index Models for Portfolio Selection, Performance-Measure Approach for Selecting Optimum Portfolios, International Portfolio Analysis and Bond Portfolios.

Students will also learn option strategy and option valuation and portfolio insurance. Students will also learn option strategies and their valuation.

- Students develop these skills and knowledge through the following course activities and assignments:

This course will have homework assignments and two tests. In addition, I will use Johnson & Johnson and other companies as examples to show how the above mentioned objectives can be achieved.

**PREQUISITES**For students to take this course, they need to complete an investment analysis course. This course will approximately spend 20 percent of the time to review their knowledge learned from Investment Analysis and it will use about 20 percent of the time to build upon their knowledge from Investment Analysis. In addition, we will spend about 60 percent of the time discussing new topics. We will discuss the asset pricing and portfolio analysis and their application.

**ACADEMIC INTEGRITY**

I do not tolerate cheating. Students are responsible for understanding the RU Academic Integrity Policy (<https://slwordpress.rutgers.edu/academicintegrity/wp-content/uploads/sites/41/2014/11/AI_Policy_2013.pdf>)

I will strongly enforce this Policy and pursue *all* violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, “On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment.” Don’t let cheating destroy your hard-earned opportunity to learn. See [business.rutgers.edu/ai](http://www.business.rutgers.edu/ai) for more details.

**ATTENDANCE AND PREPARATION POLICY**

- Expect me to attend all class sessions. I expect the same of you. If I am to be absent, my department chair or I will send you notice via email and Blackboard as far in advance as possible. If you are to be absent, report your absence in advance at <https://sims.rutgers.edu/ssra/>. If your absence is due to religious observance, a Rutgers-approved activity, illness, or family emergency/death and you seek makeup work, also send me/TA an email with full details and supporting documentation within 3 days of your first absence. For job interviews students can be also excused.

- Each student should sign in to show their attendance.

- For weather emergencies, consult the campus home page. If the campus is open, class will be held.

- Expect me to arrive on time for each class session. I expect the same of you. If you are going to be tardy, then your grade will be penalized.

- Expect me to remain for the entirety of each class session. I expect the same of you. If you are going to leave early, then you will be counted as absent, unless you have a good excuse and tell me in advance.

- Expect me to prepare properly for each class session. I expect the same of you. Complete all background reading and assignments. You cannot learn if you are not prepared. The minimum expectation is that for each 80-minute class session, you have prepared by studying for at least twice as many hours.

- Expect me to participate fully in each class session. I expect the same of you. Stay focused and involved. You cannot learn if you are not paying attention.

**CLASSROOM CONDUCT**

When you are in class you cannot use either cell phones or notebooks to perform activities that are not related to class materials.

**EXAM DATES AND POLICIES**There are 2 exams in this course.

During exams, the following rules apply:

My exams will be open book and open notes, however, you cannot talk to other students in the class during the exam. It should be noted that the amount of material covered in the exams will not allow you to talk to someone else. In addition, please note that my exams are semi-take home tests. In other words, you need to be well-prepared before you come to class. Therefore, if you don't prepare and try to find the answer from the book or your notebook you will not do well on the exams.

- If you have a disability that influences testing procedures, provide me an official letter from the Office of Disability Services at the start of the semester.

- No cell phones or other electronics are allowed in the testing room. However, you are allowed to use laptop in the test room.

- You must show a valid Rutgers photo ID to enter the room and to turn in the exam.

- Alternate seating; do not sit next to another student or in your usual seat.

- Use the bathroom prior to the exam start; bathroom breaks, if essential, will be escorted.

- Your exam will not be accepted unless you sign the Honor Pledge.

**GRADING POLICY**

Course grades are determined as follows:

1st Exam ............................... 20%

2nd Exam .............................. 30%  
 Project ....................................30%

Homework ………………….10%

Class Performance ………….10%

**Other grading policies:**

1. No extra credits will be given in this class.

2. Grade distribution will be used if necessary.

3. Your grades will not be posted.

4. I will try to finish my grading within 48 hours after the test.

5. I will give warning grade roster if necessary.

6. Your final grade is not subject to negotiation. If you feel I have made an error, submit your written argument to me within one week of receiving your final grade. Clarify the precise error I made and provide all due supporting documentation. If I have made an error, I will gladly correct it. But I will adjust grades only if I have made an error. I cannot and will not adjust grades based on consequences, such as hurt pride, lost scholarships, lost tuition reimbursement, lost job opportunities, or dismissals. Do not ask me to do so. It is dishonest to attempt to influence faculty in an effort to obtain a grade that you did not earn, and it will not work.

**COURSE SCHEDULE**

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| September 6 | **Introduction**  Lee et al. (2013) Chapter 1 and Supplement Chapter 1 |
| September 10, September 13 | **Accounting Information, Regression Analysis, and Financial Management**  Lee et al. (2013) Chapter 2 |
| September 17 | **Introduction to Valuation  Theories**  Lee et al. (2013), Chapter 4  Lee et al. (2017), Chapter 6 |
| September 20, September 24, September 27 | **Risk-Aversion, Capital Asset Allocation, and Markowitz Portfolio-Selection Model**  Lee et al. (2013), Chapters 7 and 8  Lee et al. (2017), Chapter 8 |
| October 1, October 4, October 8 | **Capital Asset Pricing Model and Beta Forecasting**  Lee et al. (2013), Chapters 9 and 13 |
| October 11, October 15, October 18 | **Index Models for Portfolio Selection**  Lee et al. (2013), Chapter 10 |
| October 22, October 25 | **Performance-Measure Approach for Selecting Optimum Portfolios**  Lee et al. (2013), Chapter 11 |
| October 29, November 1 | **Security Analysis and Mutual Fund Performance**  Lee et al. (2013), Chapter 21 |
| November 5 | **Review** |
| November 8 | **Midterm** |
| November 12 | **Security Analysis and Mutual Fund Performance**  Lee et al. (2013), Chapter 21 |
| November 15, November 19 | **International Diversification and Asset Pricing**  Lee et al. (2013), Chapter 22 |
| November 20, November 26 | **Bond Portfolios: Management and Strategy**  Lee et al. (2013), Chapter 23 |
| November 29, December 3, December 6 | **Portfolio Insurance and Synthetic Options**  Lee et al. (2013), Chapters 20 and 24 |
| December 10 | **Summary** |

**Outline of Term Project**

Suggested title:

"Security Analysis and Portfolio Management for three companies.”

Note:

1) The companies should be from either the industrial transportation or utility industry

2) These companies should have at least a 3-year annual financial report data

3) These companies should pay dividends almost every year

4) They should have monthly stock prices from January 2011 to September 2018.

Section A: Introduction

Section B: Security analysis for company A, B, and C

(B.1) Using at least 3-year accounting data to analyze the following financial ratios:

Current ratio

Debt to equity ratio

Total-asset utilization ratio

Return on total asset ratio

Return on equity

Payout ratio

Price/Earnings (P/E) ratio

Market/Book ratio

DOL (Degree of Operating Leverage)

DFL (Degree of Financial Leverage)

DCL (Degree of Combined Leverage)

Net Sales

Earnings per Share (EPS)

(B.2) Using stock valuation models to calculate the theoretical value of stock price for company A, B, and C.

(B.3) Determination of Commercial Lending Rate for each of the company.

Section C: Rate of Return, Market Models and CAPM

(C1.a) Use monthly price of individual company and market index data to calculate rate of returns for company A, B, C, and the market rate of return from January 2011 to September 2018.

(C1.b) Calculate mean, standard deviation, and coefficient of variation. Compare these values (mean and risk) of three individual companies with the market index to see if your companies perform better or worse than the market.

(C1.c) Calculate Sharpe investment performance measures and make a comparison.

(C2.a) Run a regression for market model to obtain the beta coefficient. Draw scatter diagraphs.

(C2.b) Calculate Treynor and Jensen investment performance measures and do some analysis.

(C3) Calculate cost of capital of your companies by (i) Dividend growth model and (ii) CAPM formula.

Section D: Markowitz Portfolio-Selection model

The inputs of this section have been calculated in section C.

Section E: Index models for portfolio selection

The inputs of this section have been calculated in section C.

Section F: Performance-measure approach for portfolio selection

The inputs of this section have been calculated in section C.

Section G: Summary and conclusion

* Each group should compose three students.
* The major inputs of this project are accounting data, stock price data, and market index data.
* Detailed description of this project will be discussed in class section by section.

**Brief CV of Professor Cheng-Few Lee**

Cheng-Few Lee is a Distinguished Professor of Finance at Rutgers Business School, Rutgers University and was chairperson of the Department of Finance from 1988–1995. He has also served on the faculty of the University of Illinois (IBE Professor of Finance) and the University of Georgia. He has maintained academic and consulting ties in Taiwan, Hong Kong, China and the United States for the past three decades. He has been a consultant to many prominent groups including, the American Insurance Group, the World Bank, the United Nations, The Marmon Group Inc., Wintek Corporation, and Polaris Financial Group.

Professor Lee founded the Review of Quantitative Finance and Accounting (RQFA) in 1990 and the Review of Pacific Basin Financial Markets and Policies (RPBFMP) in 1998, and serves as managing editor for both journals. He was also a co-editor of the Financial Review (1985-1991) and the Quarterly Review of Economics and Finance (1987-1989). In the past 39 years, Dr. Lee has written numerous textbooks ranging in subject matters from financial management to corporate finance, security analysis and portfolio management to financial analysis, planning and forecasting, and business statistics. In addition, he edited two popular books, Encyclopedia of Finance (with Alice C. Lee) and Handbook of Quantitative Finance and Risk Management (with Alice C. Lee and John Lee). Dr. Lee has also published more than 220 articles in more than 20 different journals in finance, accounting, economics, statistics, and management. Professor Lee was ranked the most published finance professor worldwide during the period 1953-2008.

Professor Lee was the intellectual force behind the creation of the new Masters of Quantitative Finance program at Rutgers University. This program began in 2001 and has been ranked as one of the top ten quantitative finance programs in the United States. These top ten programs are located at Carnegie Mellon University, Columbia University, Cornell University, New York University, Princeton University, Rutgers University, Stanford University, University of California at Berkley, University of Chicago, and University of Michigan.

**SUPPORT SERVICES**If you need accommodation for a *disability*, obtain a Letter of Accommodation from the Office of Disability Services. The Office of Disability Services at Rutgers, The State University of New Jersey, provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law Against Discrimination. <https://ods.rutgers.edu>

If you are a military *veteran* or are on active military duty, you can obtain support through the Office of Veteran and Military Programs and Services. <http://veterans.rutgers.edu/>

If you are in need of *mental health* services, please use our readily available services.

[Rutgers Counseling and Psychological Services – New Brunswick: <http://rhscaps.rutgers.edu/>]

If you are in need of *physical health* services, please use our readily available services.

[Rutgers Health Services – New Brunswick: <http://health.rutgers.edu/>]

If you are in need of *legal* services, please use our readily available services: <http://rusls.rutgers.edu/>

If you are in need of additional *academic assistance*, please use our readily available services.

[Rutgers University-New Brunswick Learning Center: <https://rlc.rutgers.edu/>]