Portfolio Theory 220:415 is an “upper” level elective

Understanding and constructing diversified portfolios are the cornerstone to managing your risk-return relationship as an investor. We start with Modern Portfolio Theory and the concept of mean variance optimization. From here we evaluate, measure and optimize our own portfolios, something that we will all be exposed to in the future. Whether you hope to work in the investment industry or only plan to have a retirement account, the financial markets and portfolio theory will aid you in navigating the seemingly chaotic waters. We will discuss methods to hedge your portfolio in ways diversification lacks and we will conclude with current alternate theories and methods for constructing portfolios outside of Modern Portfolio Theory.

Prerequisite: 220: 413 : Financial Economics
Minimum Grade C

Text: No required text
Useful reference: Investments and Portfolio Management By Bodie, Kane and Marcus

Data analysis tool: Microsoft Excel

Learning Goals:
Upon conclusion students will have researched and practiced:
  Risk-Return relationships among assets
  Modern Portfolio Theory with 2 assets and multi-assets with some matrix algebra
  Difference between Passive and Active Portfolio Management
  Portfolio risk measurement and hedging
  Portfolio performance measurements
  Alternatives to MPT and current portfolio analysis tools and techniques

Pedagogy:

This course will employ lectures, supplemental reading and additional online resources, quizzes and RP (see NOTES page 2)

Grading:
(2) Midterm ( in-class each 25% ) 50%
(2) 30 minute quizzes ( via Sakai) 15%
No make-up quizzes
(4) RP Groups of 4 25%
Attendance/Participation 10 % http://sims.rutgers.edu/ssra

All of our course materials (slides and excels) are for our course use only, redistribution is prohibited and protected.
Academic Integrity

_Cheating and Plagiarism will not be tolerated. I will give enough opportunity to earn high grades by yourself there is no need for me to find any cheating or plagiarism of any sort. Dr. Sopher will be notified immediately._

All quizzes and RP will be completed by their due dates, _no late work to be accepted._

Attendance
Students are expected to attend all classes. If you expect to miss more than one or two classes because of illness or a family emergency, please use the University absence reporting website [http://sims.rutgers.edu/ssra](http://sims.rutgers.edu/ssra) to indicate the date and reason for your absence. An email is automatically sent to me.

Class Conduct
It is the expectation of mutual respect throughout the course, not only between instructor and student but between you and your peers.

_No recordings/photos/videos are to be taken of our class, you will have access to all materials needed via Sakai and such infringes on the privacy of everyone in the course._

Sakai
The quizzes will be administered via our Sakai coursesite module. Any issues taking quizzes via Sakai module will impede your course be aware of this from the start of our course. Discuss with me your issues with this type of testing ASAP. Everything you will need will be available through our Sakai coursesite as well.

Communication:
Primary e-mail: _ldemarco@econ.rutgers.edu_

_E-mails are expected to be professional and proper, only e-mails of this type will be answered._

Missed quizzes/exams:
A missed quiz will earn a zero points, _no make-up for quizzes._
A missed exam will earn zero points. Departmental Make-Up Exams will only be given under extraordinary circumstances the first Friday following exam date. Students should check with me before missing an exam to see whether their particular circumstances meet my very limited definition of extraordinary.

Notes:

- Quizzes and Midterms will be multiple choice, T/F and/or fill in questions that test concept and/or calculation
  - They are to be completed individually
- _RP_ in this course are research and/or practice assignments
  - Groups of 4 or less
  - You will submit your work as well as an accompanying questionnaire via sakai
- Attendance/Participation will include in class and in addition online interaction:
  1. Posting 1 article with question each week on our course website
  2. Answering at least 1 question/post each week on our course website

_All quizzes and RP will be completed by their due dates, _no late work to be accepted._
All grades achieved during the semester are finalized by the last day of class.
Any RP grades for review must be in writing within 4 days of grade return._
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>TOPICS</th>
<th>CH</th>
<th>RP</th>
<th>Quiz/Mid</th>
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</thead>
<tbody>
<tr>
<td>Week</td>
<td>1/14</td>
<td>Financial Markets, Asset classes, interest rates, Expectation, Variance, Co-Variance,</td>
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<td>Notes</td>
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<td>Correlation</td>
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<tr>
<td>Week</td>
<td>1/21</td>
<td>Return, Risk, Expected Value Criterion, Uncertainty, Expected Utility Hypothesis, risk</td>
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<td>Notes</td>
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<td>aversion, risk premium</td>
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<td>BKM Ch</td>
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<td>Week</td>
<td>1/28</td>
<td>Portfolio selection: Mean-Variance Model, Modern Portfolio Theory and 2 asset portfolio</td>
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<td>Release</td>
<td>Quiz 1</td>
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<td>RP1</td>
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<td>Week</td>
<td>2/4</td>
<td>Continue to a Multi asset portfolio with matrix algebra and scenario testing</td>
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<td>Notes</td>
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<td>2/11</td>
<td>Passive Management: Index investing and Strategic Asset Allocation</td>
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<td>Notes</td>
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<td>Week</td>
<td>2/18</td>
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<td>Active Management: Tactical Asset Allocation</td>
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<td>Release</td>
<td>RP2</td>
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<td>Week</td>
<td>2/25</td>
<td>What is the difference between Beta and Alpha? Value at Risk and Expected Shortfall</td>
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<td>Notes</td>
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<td>3/4</td>
<td>Review for exam</td>
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<td>BKM Ch</td>
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<td>Week</td>
<td>3/11</td>
<td>Spring break</td>
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<td>Week</td>
<td>3/18</td>
<td>CAPM, Jensen’s model for portfolios Fama French 3 factor model</td>
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<td>Week</td>
<td>3/25</td>
<td>Portfolio performance Evaluation: risk adjusted returns, portfolio ratios</td>
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<td>BKM Ch</td>
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<td>Week</td>
<td>4/1</td>
<td>Managing portfolio risk with SP500 Futures Managing Interest Rate risk with Eurodollar</td>
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<td>Futures</td>
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<td>BKM Ch</td>
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<td>Week</td>
<td>4/8</td>
<td>International Diversification Midterm 2: Thursday 4/12</td>
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<td>Mid 2</td>
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<td>4/15</td>
<td>MPT alternative: Sector Analysis, Top down investment approach and the power of ETFs</td>
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<td>Week</td>
<td>4/22</td>
<td>Individual portfolios, Pensions, Mutual funds and Hedge Funds</td>
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<td>Notes</td>
<td>Quiz 2</td>
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<td>4/30</td>
<td>Conclusion</td>
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*Disclaimer*: We will cover content in this order. The dates of quizzes, midterms and RP are tentative, they can change due to our class meetings. I will discuss in advance before release and due dates. I reserve the right to make any changes to the syllabus.

*Important Dates:*
Spring 2018 Academic Calendar
GRADE BRACKETS

A  $90 \leq x \leq 100$
B+ $85 \leq x < 90$
B  $80 \leq x < 85$
C+ $75 \leq x < 80$
C  $70 \leq x < 75$
D  $60 \leq x < 70$
F  $x < 60$

Disclaimer: I reserve the right to curve final grades due to the level of difficulty in the nature of the course. No additional points will be given to grades; the grade brackets will shift to support the curve.

Student-Wellness Services:

Just In Case Web App, for a mental health crisis for you are a friend:
http://codu.co/cee05e

Counseling, ADAP & Psychiatric Services (CAPS), for non-emergency psychological health issues:
(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901 www.rhscaps.rutgers.edu/

Violence Prevention & Victim Assistance (VPVA)
(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 www.vpva.rutgers.edu/

Disability Services
(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / https://ods.rutgers.edu/

Scarlet Listeners, for confidential peer counseling and referral hotline:
http://www.scarletlisteners.com/ or call (732) 247-5555