

Date: Sep. 2025

Syllabus - Teaching Program for the Course

Fundamentals of Finance – 1

**Dr. Kenneth Mischel**66-251-80

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| **Course Type:** | Lecture |
| **Scope of credits:** | 3 |
| **Year of study:** | 2025-2026 |
| **Semester:** | Fall |
| **Day & Time:** | Mon. 2:00p.m-4:30 |
| **Reception Time:** | Upon appointment |
| **Lecturer Email:** | profmischel@gmail.com |
| **Moodle Site:** | \_\_\_ |

**Course description and learning goals**

**Course Abstract**

This course is intended to help the student learn to think carefully and productively about financial markets. It will provide a survey of questions faced, and techniques used, by financial practitioners.

**Learning objectives**

After completing the course, the student will understand the origins of the 2008 subprime market crisis, the way financial institutions used securitization and credit derivatives to lower their regulatory capital, and the ways that regulators inadvertently encouraged them to do so.

After completing the course, the student will understand basic principles underpinning portfolio optimization,

After completing the course, the student will understand the emergence of index investing and program trading.

**Knowledge**

After completing the course, the student will be familiar with key elements of financial engineering: securitization, credit derivatives and synthetic securitization.

After completing the course, the student will understand the benefits and challenges of index investing.

After completing the course, the student will be able to explain how program trading links together financial markets.

**Skills**

Upon completing the course, the student will be able to work intelligently as an intern at a bank, investment house or hedge fund.

**Active learning –** **lessons plan:**

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| --- | --- | --- | --- | --- |
| Lesson No. | Topic | Active learning | Required reading | Assessment |
| 1 | What is this course about? What is finance? What were the origins of the 2008 Financial markets crash? | Collaborative learning | Accompanying handout & assigned readings |  |
| 2 | What is this course about? What is finance? What were the origins of the 2008 Financial markets crash? | Collaborative learning | Accompanying handout & assigned readings |  |
| 3 | Antecedents and Causes of the 2008 market crash | Collaborative learning | Accompanying handout & assigned readings |  |
| 4 | Antecedents and Causes of the 2008 market crash (continued) | Collaborative learning | Accompanying handout & assigned readings |  |
| 5 | Battle of the Century: Keynes vs. Hayek | Collaborative learning | Accompanying handout & assigned readings |  |
| 6 | Battle of the Century: Keynes vs. Hayek (continued) | Collaborative learning | Accompanying handout & assigned readings |  |
| 7 | Battle of the Century: Keynes vs. Hayek (continued) | Collaborative learning | Accompanying handout & assigned readings |  |
| 8 | Program trading: currency forward rates | Collaborative learning | Accompanying handout & assigned readings |  |
| 9 | Program trading: index arbitrage | Collaborative learning | Accompanying handout & assigned readings |  |
| 10 | Program trading: statistical arbitrage | Collaborative learning | Accompanying handout & assigned readings |  |
| 11 | Program trading: statistical arbitrage (continued) | Collaborative learning | Accompanying handout & assigned readings |  |
| 12 | Mean variance optimization & the birth of index investing | Collaborative learning | Accompanying handout & assigned readings |  |
| 13 | Mean variance optimization & the birth of index investing (continued) | Collaborative learning | Accompanying handout & assigned readings |  |
| 14 | Market microstructure: open limit order books | Collaborative learning | Accompanying handout & assigned readings |  |

**Final grade**

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| --- | --- |
| Description of the learning product | Weight in the final score |
| Take home examination | 90% of final grade |
| Class participation | 10% of final grade |

**Prerequisites**

This course has no course prerequisites. Students are expected to come to each class prepared

**Bibliography:**

Reading assignments will be given each week, in conjunction with the course handout.