

# Introduction

## Topic 1

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# About Finance Theory I

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# Science and research

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- 1 Introduction, economic thought
- 2 Risk and return
- 3 Utility theory
- 4 Intertemporal choice
- 5 Expected utility theory
- 6 Partial equilibrium in capital markets
- 7 General equilibrium in capital markets
- 8 Derivative securities

# Mathematics

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- ❖ The right way and the wrong way
- ❖ What you need to know



# What you'll do

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- ❖ No test, no exam
- ❖ Four assignments
  - ❖ Often real-world data
  - ❖ Experiments
  - ❖ Simulations

# Programming

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- ❖ Empowering
- ❖ Logical
- ❖ Transferable skill
- ❖ Use a little, use a lot: do what it takes to get the job done
- ❖ Mathematica



# Writing

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- ❖ If it was easy to write, it will be tough to read
- ❖ See [shitmystudentswrite.tumblr.com](http://shitmystudentswrite.tumblr.com)
- ❖ Avoid jargon, slang, technical terms, and quotations
- ❖ You've done your job if any bum on the street can understand what you've written, learned something from it, and enjoyed it

# Quick Start

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- ❖ Download and install the Pareto app
- ❖ Read my student guide
- ❖ Get Mathematica CDF Player
- ❖ Get a Mathematica license
- ❖ Take notes, not dictation
- ❖ Use the message board
- ❖ Come to the tutorials if you like



# Economic Thought

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- ❖ Positivist
- ❖ Assumptions about tastes and rationality
- ❖ Relative prices  $\frac{p_x}{p_y}$
- ❖ The pretense of knowledge
- ❖ On scientific publishing