1 Aims
Foundations of Finance is a course designed to introduce students to the analysis of investment decisions and financial markets, training their intuition and providing them with the analytical tools and quantitative methods needed for financial decision making. The course begins with the connection between consumption and investment and the principles of investment decisions under certainty. It continues with how this is modified in the presence of uncertainty, introducing students to the theory of choice under risk and state preference theory with complete markets. Building on that, security pricing by no-arbitrage conditions with complete markets is derived as the main principle of asset pricing. Portfolio optimization and the trade-off between expected returns and risk is illustrated by mean-variance portfolio theory. Putting these investment decisions into the context of markets leads to the Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT). Market incompleteness is also discussed and options are shown to be capable of completing markets. A number of concepts for market efficiency are presented and compared. Finally, an introduction to the topic of market microstructure is provided.

2 Learning Outcomes
In this course students should learn about

- how investment and consumption decisions are related;
- the theory of choice under uncertainty;
- mean-variance analysis and how to form an efficient portfolio;
- how to apply state prices to valuation by no-arbitrage;
- asset pricing models, in particular the fundamental CAPM;
- the various forms of market efficiency and how these can be tested;
- market microstructure and, furthermore, issues with market design.

3 Course Delivery
One 2-hour lecture and one 1-hour seminar class every week. Course outline, lecture notes, problem sets, and readings will appear on Moodle.
4 Assessment
- One 2-hour unseen written exam taken during the summer term, contributing 75% towards the final mark.
- One in-class test contributing 25% of the final mark.
Deadlines and dates of tests will be confirmed in the Departmental Student Handbook and on the Economics Department Website.

5 Reading
The main textbook for the course is:
Students are advised to purchase their own copy of the book. Further reading material, e.g. journal articles, will be posted on Moodle.

6 Topics to be Covered
- Capital markets, consumption, and investment.
- State prices and security valuation.
- Choice under uncertainty.
- Mean-variance portfolio theory.
- Asset pricing models.
- Market Efficiency.
- Market microstructure.