

COURSE SYLLABUS

Financial Markets and Investment

(投资和金融市场)

COURSE CODE	FINA1303	COURSE LEVEL	Undergraduate
CREDITS / HOURS	3 credits / 48 contact hours	TEACHING LANGUAGE	Chinese and English
INSTRUCTOR	Dr. Yapei Zhang	INSTITUTION	ShanghaiTech University

Overview

This course introduces the core concepts and analytical tools used in investment and financial markets. Students learn to evaluate projects, construct portfolios, price financial assets, interpret market efficiency, and use derivatives for risk management. The course connects financial theory with market data, problem solving, online learning materials, and original teaching cases.

Learning Outcomes

- Apply time-value-of-money methods, NPV, and IRR to investment decisions.
- Measure portfolio risk and return and explain the gains from diversification.
- Use the CAPM and multifactor models to interpret expected returns.
- Value stocks and bonds and assess interest-rate and credit risk.
- Explain the pricing and use of forwards, futures, and options in hedging and investment strategies.

Teaching and Learning Approach

The course combines lectures, MOOC videos, exercise-based homework, quizzes, case discussion, and an investment-strategy group presentation. Students practice translating financial models into decisions under time and uncertainty.

Course Structure

UNIT	TOPIC	FOCUS
1	Capital Budgeting	Time value of money; cash-flow valuation; NPV; IRR; project evaluation.
2	Portfolio Theory	Risk and return; diversification; covariance and correlation; efficient frontier; optimal portfolios.
3	Capital Asset Pricing Model	Systematic risk; beta; market portfolio; Security Market Line; expected returns.
4	Efficient Market Hypothesis	Information and prices; forms of efficiency; empirical tests; anomalies and behavioral perspectives.
5	Stocks	Shareholder rights; dividends; dividend-discount models; growth opportunities; valuation ratios.
6	Bonds	Bond pricing; yield to maturity; term structure; forward rates; default and interest-rate risk.
7	Arbitrage Pricing and Factors	No-arbitrage reasoning; factor models; Fama-French extensions; pricing relationships.
8	Forwards and Futures	Contract mechanics; pricing; margins; settlement; hedging and speculation; commodity examples.
9	Options	Payoffs; put-call parity; binomial pricing; hedging; option strategies and structured products.

Assessment

Participation - 10%	Attendance and active engagement in class.
Individual homework - 20%	Exercise-based application of the core models and concepts.
Group presentation - 30%	A 15-minute investment-strategy presentation linking evidence and course content.
Final examination - 40%	An open-book, exercise-based examination covering the core course material.

Teaching Materials and Cases

Instructor lectures and MOOC videos are supported by problem sets and market applications. The course includes the instructor-authored Bank of China Crude Oil Bao case and may also use current examples involving structured products and market stress.

Optional Extension Topics

Risk premia; mortgages; NPV versus IRR; short selling; preferences and utility; the market portfolio; arbitrage; credit default swaps; the Fama-French three-factor model; and foreign exchange.

Academic Integrity

Students are expected to comply with ShanghaiTech University standards on academic integrity. All submitted work must be original, properly attributed, and completed in accordance with the stated collaboration rules.