



# BOSTON COLLEGE

## Carroll School of Management

### PH.D. IN FINANCE COURSE DESCRIPTIONS

#### YEAR 1: FALL

##### **ECON7740 MICROECONOMIC THEORY I**

This course covers basic consumer and producer theory and the theory of general equilibrium. Also covered are applications of simple game theory such as oligopolies, contests, and public good provision problems.

##### **ECON7770 STATISTICS**

The first part of this course deals with topics in probability theory, including random variables, conditional distributions, expectation, and multivariate distributions. The second part presents topics in mathematical statistics, including moment estimation, hypothesis testing, asymptotic theory, and maximum likelihood estimation.

##### **MFIN8890 PH.D. SEMINAR: ADVANCED TOPICS IN CAPITAL MARKETS**

This course focuses on continuous time models in capital market theory. Topics covered include capital market equilibrium, option pricing, and the term structure of interest rates. The mathematics necessary to analyze these problems are also presented, including stochastic (Ito) calculus, stochastic differential equations, and optimal control.

#### YEAR 1: SPRING

##### **ECON7741 MICROECONOMIC THEORY II**

This course comprises four modules. The first treats social choice theory and the second covers decision under risk and uncertainty (altogether, one third of the course). The third is an introduction to non-cooperative game theory while the fourth covers topics in information economics.

##### **ECON7751 MACROECONOMIC THEORY II**

This course is divided into three sections. Part I covers consumption and asset pricing. Part II introduces business-cycle theory with flexible prices. Part III covers monetary models, including business-cycle theory with nominal rigidities and the role of monetary policy.

##### **ECON7772 ECONOMETRIC METHODS**

This course provides an understanding of the econometric theory that underlies common econometric models. The focus is on regression models and their many extensions. Topics include finite and asymptotic properties of estimators, consistency and limiting distributions, specification issues, heteroskedasticity, autocorrelation, endogeneity and simultaneity, and nonlinear model estimators including maximum likelihood and the generalized method of moments.

### **MFIN8891 PH.D. SEMINAR: CORPORATE FINANCE**

The primary purpose of this course is to expose doctoral students to recent developments in the theory of corporate finance. The course will focus on theory and evidence in corporate finance. Possible topics include new theoretical frameworks, signaling theory, the economics of information, agency theory, new issues of securities, recapitalizations, stock repurchases, and the market for corporate control.

### **YEAR 2: FALL**

#### **MFIN8863 PH.D. SEMINAR: ASSET PRICING**

The course covers a variety of asset pricing topics and models. The first part of the course deals with representative agent models in economies with a single risky asset. The second part of the course introduces heterogeneity along the investor side or the asset side. We cover models of learning, asymmetric information, differences in beliefs, market segmentation, idiosyncratic risk, agency conflicts, and others.

#### **MFIN8895 PH.D. SEMINAR: ADVANCED TOPICS IN CORPORATE FINANCE**

This course will cover current research issues and tools in corporate finance and intermediation. The course will be based primarily on research papers from three specific areas: theoretical and empirical corporate finance, theoretical and empirical financial intermediation, and advanced game theory.

#### **MFIN8896 PH.D. SEMINAR: TOPICS IN CORPORATE FINANCE**

This Ph.D. course considers topics that are at the center of ongoing research in corporate finance. We will cover both new theoretical research and the applications of empirical methods to corporate finance. Examples of topics that we will consider are: corporate governance, financial contracting with applications to debt contracts and executive compensation, and the market for corporate control.

### **YEAR 2: SPRING**

#### **MFIN8875 PH.D. SEMINAR: RESEARCH TOPICS IN FINANCE**

The objective of this class is to expose Ph.D. students to research areas actively studied by the Finance Faculty. During this class, students will not only familiarize themselves with most relevant papers in each area, but will also be challenged to identify directions for future research.

#### **MFIN8877 PH.D. SEMINAR: RESEARCH TOPICS IN BEHAVIORAL FINANCE**

This course will examine how psychological biases and non-standard preferences interact with traditional topics in corporate finance and asset pricing. We will survey recent research on biases in individual decision-making, the predictability of security returns, and the practical limits to arbitrage. The objective of the course is (1) to familiarize students with the foundations and recent developments of research in behavioral finance, and (2) to help students develop research ideas and quantitative skills, which can be used to write a successful Ph.D. dissertation.

## **MFIN888<sub>5</sub> PH.D. SEMINAR: ADVANCED TOPICS IN ASSET PRICING**

The course is intended to generate enthusiastic, high quality intellectual activity around the course material. Focuses on the development of skills that will help students become conversant enough with basic theory and the current literature on asset pricing that would permit them to read critically and analyze papers in this area, develop enough expertise in selected empirical methods in finance that they will be able to use these techniques in their research, and to find potential thesis topics.

*Updated August 22, 2023*