FINANCE

Degree Types: PhD

The Finance doctoral program provides students with rigorous training in finance, economics, mathematics and statistics. These tools, plus opportunities for supervised independent research, enable students to make their own contributions to the understanding of financial markets and institutions that lead to productive research careers.

The Finance doctoral program trains students to apply empirical methods and theoretical tools to advance our understanding of how financial markets and institutions work, and how they may contribute to economic development.

The program aims to produce scholars who develop rigorous and creative research in finance and economics. Students are exposed to a variety of research methods in their coursework, and interact closely with faculty as they develop their own research projects. A distinctive characteristic of our program is its close ties with the Department of Economics, which are fostered by joint seminars, mutual advising of students, and frequent collaboration on research projects. The academic interests of the finance faculty also span a very broad range of topics in finance, from the role of culture and trust in financial markets to the identification of jump risk premiums. The breadth of knowledge and interests of our faculty create an environment that encourages students to conduct advanced research in novel aspects of the field.

Additional resources:

- Department website (https://www.kellogg.northwestern.edu/faculty/academics/finance.aspx)
- Program handbook(s)

Degree Offered

- Finance PhD (https://catalogs.northwestern.edu/tgs/finance/finance-phd/)

Learning objective(s)/Students should be able to…

- Learning objectives are provided within the program handbook.

Finance Courses

FINC 499-0 Independent Study (1 Unit)
Students who have established superior records and wish to study some significant phase of finance in more depth than is provided in regular courses may register for independent study with a selected instructor. Permission of the instructor and department are required.

FINC 520-1 Time Series Analysis (1 Unit)
The specification, estimation, and testing of dynamic models involving economic time series present a host of unique statistical problems requiring the use of specialized inference procedures. This course provides an overview of the most important of them. The focus will be on results most relevant for applications, with the various econometric techniques illustrated through problems in both macroeconomics and finance.

FINC 584-0 Introduction to Econometrics (1 Unit)
This course provides an introduction to graduate level econometrics. The first part of the course introduces basic probability and statistical tools that are essential for econometric analysis. The second part of the course covers basic econometric techniques for estimation and hypothesis testing, which are of direct use in various applications in economics and finance. The focus will be on results most relevant for practical applications rather than formal proofs of theorems, with the various econometric techniques illustrated through problems in both economics and finance.

FINC 585-1 Asset Pricing I (1 Unit)
A doctoral-level course that offers an in-depth introduction to competitive asset pricing theory: arbitrage pricing, equilibrium pricing and optimal consumption/portfolio choice. Models are developed for a finite information tree, but from an advanced perspective that motivates and builds intuition toward continuous-time modeling.

FINC 585-2 Asset Pricing II (1 Unit)
This course covers recent developments in asset pricing theory, placing emphasis on the link between financial markets and the real economy. The topics covered include: models of portfolio choice, general equilibrium models of risk and return, and models with financial frictions.

FINC 585-3 Asset Pricing III (1 Unit)
This course covers topics in the empirical asset pricing literature with an emphasis on recent developments. Topics include: Latent factor models; GMM theory and applications in finance; return predictability; performance evaluation; affine asset pricing models; Estimation of asset risk premia; estimation of volatility and jump risks from low/high frequency data; empirical derivatives pricing using parametric and nonparametric methods.

FINC 586-1 Corporate Finance I (1 Unit)
This course introduces students to theories of corporate financing and investment decisions; optimal financial contracting and security design; financial intermediation; and financial crises. Throughout we study the effects of incentive problems and asymmetric information.

FINC 586-2 Corporate Finance II (1 Unit)
This course provides a theoretical and empirical treatment of major topics in empirical corporate finance, including: investment decisions, capital structure, corporate governance, and law and finance.

FINC 586-3 Corporate Finance III (1 Unit)
This course is a topics course in Corporate Finance and Financial Frictions, with some coverage of macro-finance models. The course is mainly about dynamic models, and will cover (1) dynamic optimal cash holdings, (2) dynamic principal-agent models, (3) dynamic models of corporate bankruptcies, (4) search frictions (directed and undirected), (5) mean-field games in which heterogeneity matters, including some basic consumption-savings model and a model of dynamic adverse selection in mortgage markets, (6) dynamic intermediation models, and (7) if time allows some more recent advances on the border between finance and macroeconomics. The focus is on developing the tools for dynamic stochastic models of frictions.

FINC 590-0 Research (3 Units)
Independent investigation of selected problems pertaining to thesis or dissertation. May be repeated for credit.