The PhD concentration in finance emphasizes theoretical economics and provides a rigorous, analytically-grounded education. The Finance Department has a long and prominent intellectual history. Ideas that we now take as commonplace, such as moral hazard problems caused by deposit insurance and the Hansen-Jagannathan bounds in asset-pricing, have their origin at the Carlson School. Faculty members are also dedicated to producing top-flight scholars by offering both doctoral courses that focus on cutting edge research as well as collaborative research opportunities. Students who have strong interests and abilities in quantitative methods, mathematics, and economics will find this program both challenging and stimulating. For more information about this program visit: [z.umn.edu/CarlsonPhDFinance](z.umn.edu/CarlsonPhDFinance)

### Curriculum & Courses

The PhD finance concentration requires a strong mastery of economic theory. During the first year students take doctoral-level courses in microeconomic theory, econometric analysis, and four 2-credit finance PhD seminars. Second-year coursework includes additional finance doctoral seminars along with elective courses in accounting, economics or mathematics.

#### Finance PhD Seminars Offered:

- **Fina 8802:** Theory of Capital Markets I: Discrete Time
- **Fina 8803:** Theory of Capital Markets II: Continuous Time
- **Fina 8804:** Advance Continuous Time Finance
- **Fina 8810:** Topics in Asset Pricing
- **Fina 8812:** Corporate Finance I
- **Fina 8813:** Corporate Finance II
- **Fina 8820:** Topics in Corporate Finance
- **Fina 8822:** Empirical Methods in Finance
- **Fina 8823:** Empirical Corporate Finance
- **Fina 8890:** Topics in Finance

### Admissions Statistics (Fall 2016)

- **75** Applications
- **3** Admissions
- **15** Program size
- **27** Average age in program
- **1445** Average GRE (before August 2011)
- **324** Average GRE (after August 2011)
- **710** Average GMAT
Finance Faculty

Hengjie Ai  
Assistant Professor  
PhD, University of Minnesota  
Areas of Interest: Financial economics, macroeconomics, economic theory

Gordon J. Alexander  
Professor and John Spooner Chair in Investment Management  
PhD, University of Michigan  
Areas of Interest: Value at risk, portfolio theory and management, short selling and margin purchasing, estimation risk, market microstructure, investment companies

Santiago Bazdresch  
Assistant Professor  
PhD, Yale University  
Areas of Interest: Corporate finance and investment dynamics, financial market development, international finance

Mark Egan  
Assistant Professor  
PhD, University of Chicago  
Areas of Interest: Corporate finance, industrial organization, health economics

Murray Z. Frank  
Professor and Piper Jaffray Professor of Finance  
PhD, Queens University  
Areas of Interest: Corporate capital structure

Robert S. Goldstein  
Professor and C Arthur Williams Jr/MN Insurance Industry Chair, Academic Director of MS in Finance Program  
PhD, University of California - Berkeley  
Areas of Interest: Term structure of interest rates, credit risk, capital structure theory, general equilibrium

Stephan Parente  
Associate Dean of MBA Programs; Professor and Minnesota Insurance Industry Chair of Healthcare Finance; Academic Director, Medical Industry Leadership Institute  
PhD, Johns Hopkins University  
Areas of Interest: Health e-commerce, managed care, health information technology, health economics

Juliana T. Salomao  
Assistant Professor  
PhD, Stanford University  
Areas of Interest: International economics, macroeconomics, finance

Raj Singh  
Associate Dean of Undergraduate Programs; Professor and Curtis L. Carlson Chair in Finance  
PhD, Carnegie Mellon  
Areas of Interest: Corporate finance, agency theory, auction theory, market microstructure

Martin Szydlowski  
Assistant Professor  
PhD, Northwestern University  
Areas of Interest: Microeconomic theory, contract theory, corporate finance

Richard Thakor  
Assistant Professor  
PhD, Massachusetts Institute of Technology  
Areas of Interest: Investigating how financial frictions and constraints affect financial policy and real outcomes

Tracy Yue Wang  
Associate Professor  
PhD, University of Maryland-College Park  
Areas of Interest: Corporate finance, corporate governance, behavioral finance

Colin Ward  
Assistant Professor  
PhD, University of Pennsylvania, The Wharton School  
Areas of Interest: Asset pricing, international finance, macrofinance, investments

Andrew Whitman  
Professor  
PhD, University of Wisconsin-Madison  
Areas of Interest: Risk management and insurance, insurance theory and practice, employee benefits, personal financial planning

Andrew Winton  
Department Chair, Professor and Minnesota Chair in Banking & Finance  
PhD, University of Pennsylvania, The Wharton School  
Areas of Interest: Corporate finance and ownership structure, financial contracting, financial institutions

Jianfeng Yu (Leave of Absence)  
Associate Professor and Piper Jaffrey Professorship in Finance  
PhD, University of Pennsylvania  
Areas of Interest: Theoretical and empirical asset pricing