

# FINANCE

## UNDERGRADUATE

### Bachelor's program

- Bachelor of Science with a major in finance (<http://bulletin.gwu.edu/business/finance/bs/>)

### Concentrations

- Finance concentration (<http://bulletin.gwu.edu/business/finance/concentration-finance/>)
- Real estate concentration (<http://bulletin.gwu.edu/business/finance/concentration-real-estate/>)

### Minor

- Minor in real estate (<http://bulletin.gwu.edu/business/finance/real-estate-minor/>)

### Combined program

- Dual Bachelor of Arts or Bachelor of Science and GW School of Business Master's Degree (<http://bulletin.gwu.edu/business/dual-ba-bs-and-business-masters/>)

## GRADUATE

### Master's programs

- Master of Science in Finance (<http://bulletin.gwu.edu/business/finance/ms/>)
- Master of Science in the field of applied finance (<http://bulletin.gwu.edu/business/finance/ms-applied-finance/>)

### Combined programs

- Dual Master of Business Administration and Master of Science in the field of applied finance (<http://bulletin.gwu.edu/business/dual-mba-and-applied-finance-ms/>)
- Dual Master of Business Administration and Master of Science in the field of finance (<http://bulletin.gwu.edu/business/dual-mba-and-finance-ms/>)
- Dual Master of Business Administration (STEM) and Master of Science in the field of applied finance (<http://bulletin.gwu.edu/business/dual-mba-stem-and-applied-finance-ms/>)
- Dual Master of Business Administration (STEM) and Master of Science in the field of finance (<http://bulletin.gwu.edu/business/dual-mba-stem-and-finance-ms/>)

## CERTIFICATES

### Graduate certificate programs

- Financial management (<http://bulletin.gwu.edu/business/finance/certificate/>)

## FACULTY

Professors: S. Agca, W. Handorf, G.M. Jabbour, G. Jostova, M.S. Klock, R. Van Order (*Co-Chair*)

Associate Professors: A. Baptista, V. Bhagwat, B.J. Henderson, M. Hwang (*Co-Chair*), R. Savickas, A.J. Wilson

Assistant Professors: C. Dim, A. Hasler (*Research*), B. Kottimukkalur Rengan, Rodney Lake (*Teaching*), M. Medlej (*Teaching*), J. Stoddard (*Visiting*)

## COURSES

### Explanation of Course Numbers

- Courses in the 1000s are primarily introductory undergraduate courses
- Those in the 2000s to 4000s are upper-level undergraduate courses that also may be taken for graduate credit with permission and additional work assigned
- Those in the 6000s and 8000s are for master's, doctoral, and professional-level students
- The 6000s are open to advanced undergraduate students with approval of the instructor and the dean or advising office

Note: MBAD 6234 is prerequisite to FINA 6221 Financial Decision Making through FINA 6248 Real Estate Development Cases.

#### **FINA 1099. Variable Topics. 1-36 Credits.**

#### **FINA 3001. Intermediate Finance. 3 Credits.**

Theory and practice of acquiring and using funds. Simulations of business decisions by cases and/or models to assess the risk/return interaction of investment, financing, and dividend decisions. Prerequisites: BADM 3501.

#### **FINA 3101. Investment and Portfolio Management. 3 Credits.**

Theory and principles of security analysis and portfolio management, including analysis of the national economy, industry, company, and security markets. Risk-reward and computer-aided analysis. Prerequisites: BADM 3501.

#### **FINA 3201. Exploring Finance with Simulation. 3 Credits.**

Corporate financial analysis as explored through the FINGAME financial simulation software. Focus on intertemporal decision making for capital budgeting and financing of a simulated firm. Prerequisites: BADM 3501.

#### **FINA 3201W. Exploring Finance with Simulation. 3 Credits.**

Corporate financial analysis as explored through the FINGAME financial simulation software. Focus on intertemporal decision making for capital budgeting and financing of a simulated firm. Includes a significant engagement in writing as a form of critical inquiry and scholarly expression to satisfy the WID requirement. Prerequisite: BADM 3501.

**FINA 3301. Money and Capital Markets. 3 Credits.**

Capital formation in a free enterprise economy. Emphasis on factors affecting the level and structure of interest rates. Money market, capital market, and derivative contracts (futures and swaps) evaluated from investment and financing perspectives. Prerequisites: BADM 3501. Credit cannot be earned for this course and ECON 2121.

**FINA 3401. A Brief History of Finance. 3 Credits.**

History of financial events and practices and how finance has changed over time; how these events have shaped current practices and the impact of ethical issues. Same As: FINA 3401W.

**FINA 3401W. A Brief History of Finance. 3 Credits.**

History of financial events and practices and how finance has changed over time; how these events have shaped current practices and the impact of ethical issues. Includes a significant engagement in writing as a form of critical inquiry and scholarly expression to satisfy the WID requirement. Same As: FINA 3401.

**FINA 4001. Advanced Financial Management. 3 Credits.**

Analysis and readings covering applications of theory to financial management. Case studies for decision making involving working capital, capital budgeting, financing, dividend policy, and valuation. No alternative to this course will be accepted to fulfill the GWSB Signature course requirement. Prerequisite courses may be taken concurrently. Prerequisites: BADM 3501; and FINA 3301 or FINA 3001. Same As: FINA 4001W.

**FINA 4001W. Advanced Financial Management. 3 Credits.**

Analysis and readings covering applications of theory to financial management. Case studies for decision making involving working capital, capital budgeting, financing, dividend policy, and valuation. No alternative to this course will be accepted to fulfill the GWSB Signature course requirement. Includes a significant engagement in writing as a form of critical inquiry and scholarly expression to satisfy the WID requirement. Prerequisite courses may be taken concurrently. Prerequisites: BADM 3501; and FINA 3301 or FINA 3001.

**FINA 4101. Applied Financial Securities Analysis. 3 Credits.**

Practical security analysis techniques and investing approaches employed by professional investment managers. Prerequisite: BADM 3501.

**FINA 4102. Investing in Real Estate Investment Trusts. 3 Credits.**

Practical security analysis techniques and investing approaches employed by professional investment managers and real estate professionals, through the lens of managing the GW Real Estate Student Investment Fund. Restricted to . Prerequisites: ACCY 3106, BADM 3501, and FINA 3001.

**FINA 4103. Quantitative Investing. 3 Credits.**

Overview of select common quantitative (quant) investing strategies, with a focus on data-driven models. Students learn to analyze time-series data and work in groups to find and analyze real data and build and test a predictive model. Prerequisites: BADM 3501 and one of the following: APSC 3115, DNSC 1001, STAT 1051, STAT 1053, or STAT 1111.

**FINA 4104. Foundations of Venture Capital. 3 Credits.**

Practical aspects of the venture capital investment industry. Recommend for students seeking careers in venture capital, venture-backed startup companies, corporate innovation, and related financial services industries. Prerequisites: ACCY 2001 and BADM 3501.

**FINA 4121W. Exploring Finance with Simulation. 3 Credits.**

Includes a significant engagement in writing as a form of critical inquiry and scholarly expression to satisfy the WID requirement.

**FINA 4201. Real Estate Investment. 3 Credits.**

Principles of real estate investment, including valuation, appraisal, financing, and development, in addition to a discussion of the mortgage market and its institutions. Prerequisites: BADM 3501.

**FINA 4242. Real Estate Valuation and Investment. 3 Credits.**

Valuation of different types of real estate from different viewpoints. Analysis of risks of and opportunities in investing in real estate. How differences in valuation methodology and levels of financing affect the value analysis of real estate. Prerequisites: FINA 4201 or the permission of the department chair.

**FINA 4248. Commercial Real Estate Development Cases. 3 Credits.**

The tasks, skills, relationships, and strategies needed to successfully evaluate real estate development projects. Design, functionality, and attributes of asset and site; area economy and demographic; and market and submarket data. Prerequisites: FINA 4201 or the permission of the department chair.

**FINA 4301. Financial Derivatives. 3 Credits.**

The defining properties of and uses for financial derivatives. Institutional features; forward and futures contracts, option contracts, and swap agreements; and valuation methodologies. The proper use of financial derivatives and the potential for unintended consequences. Prerequisites: BADM 3501. Recommended background: undergraduate students in finance with exposure to another discipline such as mathematics, physics, computer science, economics, or statistics.

**FINA 4900. Special Topics. 3 Credits.**

Experimental offering; new course topics and teaching methods. Prerequisite: BADM 3501.

**FINA 4900W. Special Topics. 3 Credits.**

Experimental offering; new course topics and teaching methods. Includes a significant engagement in writing as a form of critical inquiry and scholarly expression to satisfy the WID requirement.

**FINA 4995. Independent Study. 1-4 Credits.**

Students undertake research in an area of particular interest under the direction of a finance faculty member. May be repeated for credit. Faculty and department chair approval are required to enroll. Prerequisites: BADM 3501.

**FINA 5099. Variable Topics. 1-99 Credits.****FINA 6221. Financial Decision Making. 3 Credits.**

Theory and practice of business finance, emphasizing the impacts of long- and short-term uses and sources of funds on the firm's market value. Prerequisites: MBAD 6235.

**FINA 6223. Investment Analysis and Portfolio Management. 3 Credits.**

Risk-reward analysis of security investments, including analysis of national economy, industry, company, and market; introduction to portfolio management; emphasis on theory and computer methods. Prerequisites: MBAD 6235.

**FINA 6224. Financial Management. 3 Credits.**

Advanced case studies in domestic and international financial management; working capital policy, capital budgeting, financing with debt and equity, dividend policy, valuation, project finance, venture capital, and mergers and acquisitions. Prerequisites: MBAD 6235.

**FINA 6234. New Venture Financing: Due Diligence and Valuation Issues. 3 Credits.**

Fundamentals and practice of due diligence and screening of early-stage investment opportunities. Prerequisites: MBAD 6234 or MBAD 6235. (Same as MGT 6293)

**FINA 6236. Options. 3 Credits.**

Pricing of options on financial instruments. Role of options in risk management, trading strategies, hedging implications for national and international investors, financial engineering, and structure and regulation of option markets. Prerequisites: MBAD 6235.

**FINA 6239. Applied Portfolio Management. 3 Credits.**

Synthesis of the theoretical concepts of securities analysis and portfolio management with the application of analyzing securities and building an actual portfolio. Prerequisites: MBAD 6235 and permission of instructor.

**FINA 6240. Real Estate Development. 3 Credits.**

Examination of the forces that shape real estate development; market analysis methods and techniques to evaluate project feasibility. Prerequisites: MBAD 6235.

**FINA 6242. Real Estate Valuation and Investment. 3 Credits.**

Understanding the valuation of different types of real estate from different viewpoints. Analysis of the risks and opportunities of investing. Solid theoretical framework is augmented with practical examples and applications. Prerequisites: MBAD 6234 or MBAD 6235.

**FINA 6243. Strategic Planning for Walkable Urban Real Estate Companies. 3 Credits.**

Introduction to the various facets of the real estate industry. Students gain practical training in strategic planning by conducting a consulting assignment for a DC-based real estate company.

**FINA 6248. Real Estate Development Cases. 3 Credits.**

Case study analysis of large-scale commercial real estate developments to gain comprehension of financial, political, legal, and technical complexities and constraints inherent in the real estate development process. Prerequisite: FINA 6221 or permission of instructor.

**FINA 6271. Financial Modeling and Econometrics. 4 Credits.**

Applied statistical and econometric analysis and modeling in finance. Methodologies include descriptive and inferential statistics, multivariate regression, and time series analysis. Empirical studies are reviewed, and a series of research projects are undertaken. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6272. Global Financial Markets. 4 Credits.**

Theories explaining domestic and international interest rate and exchange rate structures. Roles of financial institutions and markets are investigated and forecasting methodologies are applied. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6273. Cases in Financial Management and Investment Banking. 4 Credits.**

Computer modeling for analysis and forecasting of a firm's financial statements to reflect possible future performance. Application and integration of financial accounting and financial analysis, using a different case study each week. Financial issues faced by companies and their commercial and investment bankers as tactical and strategic decisions are made about organic growth, growth through merger and acquisition, and corporate reorganization. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6274. Corporate Financial Management and Modeling. 4 Credits.**

Causal connections between decisions made by business firms, their expected performance, and the resulting current valuation of the firm's common stock. Factors affecting the level and structure of interest rates, which are incorporated by many financial models, theories, and decisions. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6275. Investment Analysis and Global Portfolio Management. 4 Credits.**

Financial markets and instruments viewed from the investor's perspective. Analysis of the value of equity and fixed-income securities and the construction of efficient portfolios in a global financial market. Issues of market efficiency, tax structures, and investment funds; computer-based models. Prerequisite: Master of Science in Finance degree candidacy.

**FINA 6276. Financial Engineering and Derivative Securities. 4 Credits.**

Mathematical and theoretical foundations to value-derivative securities, including options, futures, and swaps; hedging and trading applications of these contracts. Arbitrage trading across cash and derivative markets and its role in maintaining equilibrium prices. Prerequisite: Master of Science in Finance degree candidacy.

**FINA 6277. Comparative Financial Market Regulation and Development. 4 Credits.**

Theory and current status of comparative regulation of domestic and international financial institutions and markets. Effects on country economic development and international trade. Prerequisite: Master of Science in Finance degree candidacy.

**FINA 6278. Financial Theory and Research. 4 Credits.**

Theoretical constructs of business investment and financing decisions and of financial asset pricing structures in domestic and international environments. Analytical and numerical models are developed, and empirical studies are evaluated. Prerequisite: Master of Science in Finance degree candidacy.

**FINA 6279. Real Estate Finance and Fixed-Income Security Valuation. 4 Credits.**

Application of financial theory to real estate investment: the housing market, mortgage valuation and securitization, commercial properties, CMBS, and REITs. Fixed-income security valuation with focus on theory and data applications on interest rate movements, fixed-income security and derivative pricing, and credit risk. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6280. Financial Institution Management and Modeling. 4 Credits.**

Analysis of the financial performance and condition of a bank, toward understanding of the financial environment in which banks operate and regulation of the banking system. Application of asset/liability management principles and statistical and mathematical models employed in bank risk management. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6281. Cases in Financial Modeling and Engineering. 4 Credits.**

Through the use of real-world examples from various aspects of finance, students are exposed to the modeling of complex financial instruments and techniques used in market and credit risk management. Underlying mathematics and theoretical constructs are explored and solidified through modeling exercises that make use of analytical solutions and numerical methods. As a practical course, students are asked to implement models. Examples may be motivated by corporate finance, corporate and investment banking, asset management, or other activities. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6282. Advanced Financial Econometrics and Modeling. 4 Credits.**

Testing of several types of applied financial econometric models typically used in practice. Advanced quantitative techniques applied to aspects of financial markets, the behavior of agents, and market and credit risk management. Various software packages used to implement and program models. Prerequisites: Master of Science in Finance degree candidacy.

**FINA 6290. Special Topics. 3 Credits.**

Experimental offering; new course topics and teaching methods. May be repeated once for credit.

**FINA 6297. International Management Experience. 3 Credits.**

Same as IBUS 6297/ MGT 6297/ MKTG 6297/ SMPP 6297. May be repeated for credit.

**FINA 6298. Directed Readings and Research. 2-4 Credits.****FINA 6299. Thesis Seminar. 3 Credits.****FINA 6999. Thesis Research. 3 Credits.****FINA 8311. Seminar: Public and Private Sector Institutions and Relationships. 3 Credits.**

An analysis and critique of alternative theoretical frameworks for describing, understanding, and predicting the nature, values, and actions of American public and private institutions. Problems, potentials, and alternatives for structuring public and private institutional arrangements to meet the needs of society. Same as SMPP 8311.

**FINA 8321. Seminar: Financial Markets Research. 3 Credits.**

Market efficiency, utility testing, the capital asset pricing model, the arbitrage pricing theory, the option pricing model, and aggregate market volatility.

**FINA 8322. Seminar: Corporate Finance Research. 3 Credits.**

Capital budgeting, capital structure issues, dividend policy, microeconomic foundations, mergers, and agency theory.

**FINA 8323. Seminar: Continuous-Time Finance. 3 Credits.**

Review of the stochastic calculus methods needed for continuous-time pricing models. The most important continuous-time models, including pricing of derivative securities, consumption-portfolio selection models, continuous-time capital asset pricing models, consumption-based capital asset pricing models, continuous-time arbitrage pricing theory, and different yield curve models.

**FINA 8324. Seminar: Financial Markets and Institutions. 3 Credits.**

Multi-period asset pricing, term structure of interest rates, market imperfections and institutional factors, auctions, manipulation, derivative markets, market microstructure, and financial institutions.

**FINA 8397. Doctoral Seminar. 1-3 Credits.****FINA 8998. Advanced Reading and Research. 1-12 Credits.**

Doctoral candidates preparing for general examination.

**FINA 8999. Dissertation Research. 1-12 Credits.**

Doctoral candidates performing research. Restricted to doctoral candidates.