BACHELOR OF SCIENCE WITH A MAJOR IN FINANCE

Emphasizing a finance-focused education, the Bachelor of Science with a Major in Finance degree program directly targets the financial industry including commercial banks, investment banks, investment companies, and insurance companies.

The degree is offered by the School of Business both to its own students and to those enrolled in other GW schools. School of Business students enrolled in the program are required to take a second major in another GW school, while those from other GW schools take the program as a second major. Having two majors that span the School of Business and another school ensures the breadth and depth of a student's program while integrating the University's emphasis on interdisciplinary study. The degree is offered with a major in finance requiring a minimum of 120 credits and completion of all required courses. Students must apply and be admitted to this competitive program.

Visit the [program website](http://business.gwu.edu/undergraduate/bs-finance) for additional information.

**REQUIREMENTS**

**General education**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>UW 1020</td>
<td>University Writing</td>
</tr>
</tbody>
</table>

One humanities course from approved list **

Two science courses from approved list **

**Prerequisite**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MATH 1231 &amp; MATH 1232</td>
<td>Single-Variable Calculus I and Single-Variable Calculus II</td>
</tr>
<tr>
<td>ECON 1011 &amp; ECON 1012</td>
<td>Principles of Economics I and Principles of Economics II</td>
</tr>
<tr>
<td>STAT 1051</td>
<td>Introduction to Business and Economic Statistics</td>
</tr>
<tr>
<td>or STAT 1053</td>
<td>Introduction to Statistics in Social Science</td>
</tr>
<tr>
<td>or STAT 1111</td>
<td>Business and Economic Statistics I</td>
</tr>
<tr>
<td>or APSC 3115</td>
<td>Engineering Analysis III</td>
</tr>
<tr>
<td>STAT 2118</td>
<td>Regression Analysis</td>
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**Signature**

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<tbody>
<tr>
<td>BADM 1001 &amp; BADM 1002</td>
<td>First Year Development Course I and First Year Development Course II</td>
</tr>
<tr>
<td>or BADM 1003</td>
<td>Transfer Student Development</td>
</tr>
<tr>
<td>BADM 1004</td>
<td>The Age of Globalization</td>
</tr>
<tr>
<td>BADM 2001W</td>
<td>Markets and Politics</td>
</tr>
<tr>
<td>BADM 3001</td>
<td>Career Management Strategy</td>
</tr>
<tr>
<td>BADM 4101</td>
<td>Business Law and Ethics</td>
</tr>
</tbody>
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**Major**

<table>
<thead>
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<tbody>
<tr>
<td>ACCY 2001</td>
<td>Intro Financial Accounting</td>
</tr>
<tr>
<td>ACCY 3106</td>
<td>Financial Statement Analysis</td>
</tr>
<tr>
<td>BADM 3501</td>
<td>Financial Management and Markets</td>
</tr>
<tr>
<td>FINA 3001</td>
<td>Intermediate Finance</td>
</tr>
<tr>
<td>FINA 3101</td>
<td>Investment and Portfolio Management</td>
</tr>
<tr>
<td>FINA 4001</td>
<td>Advanced Financial Management</td>
</tr>
<tr>
<td>or FINA 4001W</td>
<td>Advanced Financial Management</td>
</tr>
</tbody>
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Four of the following:

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>FINA 3201W</td>
<td>Exploring Finance w/Simulation</td>
</tr>
<tr>
<td>FINA 3301</td>
<td>Money and Capital Markets</td>
</tr>
<tr>
<td>FINA 4101</td>
<td>Applied Financial Securities Analysis</td>
</tr>
<tr>
<td>FINA 4201</td>
<td>Real Estate Investment</td>
</tr>
<tr>
<td>FINA 4900</td>
<td>Special Topics (Financial Derivatives)</td>
</tr>
<tr>
<td>FINA 4900</td>
<td>Special Topics (History of Finance)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ECON 2180</td>
<td>Survey of International Economics</td>
</tr>
<tr>
<td>ECON 2181</td>
<td>International Trade Theory and Policy</td>
</tr>
<tr>
<td>ECON 2182</td>
<td>International Macroeconomic Theory and Policy</td>
</tr>
<tr>
<td>IBUS 3001</td>
<td>Introduction to International Business</td>
</tr>
<tr>
<td>IBUS 3101</td>
<td>Global Financial Environment</td>
</tr>
<tr>
<td>IBUS 3301</td>
<td>International Business Finance</td>
</tr>
<tr>
<td>IBUS 4302</td>
<td>International Banking</td>
</tr>
<tr>
<td>IBUS 4303</td>
<td>International Monetary and Financial Issues</td>
</tr>
</tbody>
</table>
*Freshmen are required to take BADM 1001 and BADM 1002; transfer students are required to take BADM 1003.

**A list of approved courses can be found on the General Education Requirement page (http://bulletin.gwu.edu/university-regulations/general-education).

COURSES

Explanation of Course Numbers

• Courses in the 1000s are primarily introductory undergraduate courses

• Those in the 2000-4000s are upper-division undergraduate courses that can also be taken for graduate credit with permission and additional work

• 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

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. Prerequisite: 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. Prerequisite: BADM 3501.

FINA 3201W. Exploring Finance w/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. Prerequisite: BADM 3501.

FINA 3301. Money and Capital Markets. 3 Credits.
The process of capital formation in a free enterprise economy, with special emphasis on factors affecting the level and structure of interest rates. Money market, capital market, and derivative contracts (futures and swaps) are evaluated from both investment and financing perspectives. Prerequisite: BADM 3501.

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. Prerequisite or concurrent registration: BADM 3501 and FINA 3301 or FINA 3001.

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. Prerequisite or concurrent registration: 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 4121W. Exploring Finance w/Simulation. 3 Credits.

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. Prerequisite: BADM 3501.

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.

FINA 4995. Independent Study. 1-15 Credits.
Assigned topics. Admission by prior permission of advisor. May be repeated once for credit. Prerequisite: BADM 3501.

FINA 6220. Business Financial Management. 3 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. Prerequisite: MBAD 6234 or MBAD 6235.

FINA 6222. Capital Formation. 3 Credits.
Determinants of saving and investment and resultant funds flow are evaluated. Special emphasis on the level and risk structure and term structure of interest rates. The role and management of financial institutions is stressed. Prerequisites: MBAD 6234 or 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 6234 or 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 6234 or MBAD 6235.

FINA 6230. Urban Development Economics. 3 Credits.

FINA 6231. Sem:Investment & Portfolio Mgt. 3 Credits.
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 6235. Futures Markets: Trading and Hedging. 3 Credits.

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. Recommended: FINA 6221. Prerequisites: MBAD 6234 or MBAD 6235.

FINA 6237. Private Wealth Management/Personal Financial Advising. 3 Credits.
For students preparing to be personal financial advisors; the combination of taxes, pensions, investing, budgets, estates and trusts, and insurance into comprehensive personal financial plans. Regulation, professional ethics, and the economics of advisory firms. Extensive use of computer spreadsheets and case studies. Recommended: ACCY 6401. For students preparing to be private wealth managers/personal financial advisors; the combination of taxes, pensions, investing, budgets, estates and trusts, and insurance into comprehensive personal financial plans. Regulation, professional ethics, and the economics of advisory firms. Extensive use of computer spreadsheets and case studies. Recommended: FINA 6221. Prerequisites: MBAD 6234 or MBAD 6235.

FINA 6238. Financial Engineering. 3 Credits.
Valuation and risk management theory for bonds, forward contracts, swaps, options, exotic options, and interest rate options. Development of financial software, including Monte Carlo simulation modeling. Case studies of innovative solutions to investment, corporate finance, and financial institution management problems. Prerequisites: MBAD 6234 or 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 6234 or 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; the institutional and legal framework within which real estate development occurs and that influences controls, land value, and development potential. Prerequisites: MBAD 6234 or MBAD 6235.

FINA 6241. Financing Real Estate. 3 Credits.
Principles of real estate finance; evaluating different methods of financing real estate; sources of real estate funding with emphasis on securitization. Incentives provided by governments. Prerequisites: MBAD 6234 or MBAD 6235.

FINA 6242. Real Estate Valuation and Investment. 3 Credits.
Applications of market analysis, valuation, and financial techniques for the real estate appraisal and investment process. Prerequisites: MBAD 6234 or MBAD 6235.

FINA 6245. Land Development Law. 3 Credits.
FINA 6247. Urban Development Economics. 3 Credits.
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.

Bachelor of Science with a Major in Finance
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. 0-4 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. 0-3 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: PublicPrivate 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.
Limited to doctoral candidates preparing for the general examination. May be repeated for credit.

FINA 8999. Dissertation Research. 1-12 Credits.
Limited to doctoral candidates. May be repeated for credit.