Finance, M.S.

Degree Offered
• Master of Science in Finance

Nature of the Program
The M.S. Finance program is ideal for potential candidates with undergraduate degrees in Accounting, Finance, Engineering, Mathematics, Physics, Geology, or Economics, or those with industry experience and the drive to be successful. M.S. Finance graduates, especially those earning the Chartered Financial Analyst credential, enjoy careers with leadership positions across the gamut of financial positions. This includes investment banking positions, portfolio management, financial analyst, fund management, and corporate finance positions, among others.

Academic Standards
In addition to the University’s academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master’s degree program must also abide by the following standards:
• Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
  • A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University’s Graduate Catalog for more information about this topic.
• Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
  • A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  • A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
  • A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
  • A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
• Any grade earned in a repeated course at the graduate level is included in the calculation of a student’s overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student’s academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Associate Dean for Graduate Programs and Global Engagement and the Program Coordinator.

FACULTY
CHAIR
• Naomi Boyd - Ph.D.  (The George Washington University)

PROFESSORS
• K. Victor Chow - Ph.D. (University of Alabama), C.F.A.
  Portfolio Management, Investments
• Alex Kurov - Ph.D. (State University of New York, Binghamton), C.F.A.
  Financial Market Microstructure, Future Markets
• Paul Speaker - Ph.D. (Purdue University)

ASSOCIATE PROFESSORS
• Ashok Abbott - Ph.D. (Virginia Polytechnic Institute and State University)
  Financial Institutions, Corporate Finance, Mergers and Acquisitions
• Naomi Boyd - Ph.D. (The George Washington University)
  Financial Market Microstructure, Behavioral Finance
• Ann Marie Hibbert - Ph.D. (Florida International University)
  International Finance, Asset Pricing, Behavioral Finance
• Terry L. Rose - Ph.D. (University of Illinois)
  Insurance, Risk Management

ASSISTANT PROFESSORS
• Ruiyuan Chen - Ph.D. (University of South Carolina)
  Empirical Corporate Finance, Privatization
• Pawan Jain - Ph.D. (University of Memphis), C.F.A., C.F.P.
  Stock Market Regulations, Blockchain
• Bingxin Li - Ph.D. (University of Houston)
  Energy finance, Investments, Risk management
• Helen Wang - Ph.D. (University of South Carolina)
  Corporate Governance, Corporate Social Responsibility
• Gulnara Zynutdinova - Ph.D. (Washington State University)
  Mutual Funds and Investor Behavior

TEACHING ASSISTANT PROFESSOR
• Frank DeGeorge, C.P.A. - M.S.A. (Duquesne University)
  Financial Statement Analysis
• Jonathan Fluharty - Ph.D. (West Virginia University)
  Incentives, Corporate Finance
• Robert Brant Hammer - M.S. (West Virginia University)
  Business Valuation, Disruptive Financial Technology

Admissions
To gain admission to the M.S. in Finance program, an applicant must have a bachelor’s degree from an accredited institution. Admissions decisions are based on an assessment of expected success in the program shown by the application materials and according to space available. The Admissions Committee considers grade point average in all previous college-level work and also the grade point average in the last sixty hours of coursework. Admissions decisions will be based on strength of the following application requirements:

• Academic transcript(s)
• GMAT test scores
• Applicants must provide two letters of recommendation from individuals who can provide information about the applicant’s academic promise, ability to work with others, professionalism, and potential to succeed in this program.
• Statement of purpose
• Resume or CV

Note: The following prerequisite courses may be taken at other institutions but must be successfully completed prior to entering the M.S. in Finance program:

• Principles of Economics – six hours
• Principles of Accounting – six hours
• Investments
• Business Finance
• Statistics
• Calculus

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall. Please visit this program’s webpage (https://business.wvu.edu/academics/finance-department/ms-finance/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

Major Code: 2157

*Note: International Students are required to submit a TOEFL, IELTS, or Duolingo score. The John Chambers College of Business & Economics TOEFL requirement is higher than the University’s—applicants must have a TOEFL score of either 580 (paper prior to July 27) or 68 (paper after July 27), 237 (computer), or 92 (Internet-based). If you have taken the IELTS, the minimum score must be 6.5, and the minimum Duolingo score is a 105. English language exam scores should be sent to the Office of Admissions, West Virginia University, PO Box 6009, Morgantown, WV 26506-6009.
Students are required to maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from this program.

**M.S. Finance Requirements**

A cumulative GPA of at least 3.0 is required in all coursework towards the degree.

**Core Coursework**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 511</td>
<td>Financial Economics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 520</td>
<td>Quantitative Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN 521</td>
<td>Financial Reporting and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>FIN 523</td>
<td>Equity Investment</td>
<td>3</td>
</tr>
<tr>
<td>FIN 525</td>
<td>Derivative Securities</td>
<td>3</td>
</tr>
<tr>
<td>FIN 526</td>
<td>Portfolio Management</td>
<td>3</td>
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</tbody>
</table>

**Additional Coursework**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>FIN 527</td>
<td>Alternative Investments</td>
<td>3</td>
</tr>
<tr>
<td>or FIN 533</td>
<td>Energy Financial Risk Management</td>
<td></td>
</tr>
<tr>
<td>FIN 528</td>
<td>Integrated Financial Analysis</td>
<td>3</td>
</tr>
<tr>
<td>or FIN 532</td>
<td>Energy Financial Accounting</td>
<td></td>
</tr>
<tr>
<td>FIN 593</td>
<td>Special Topics (CFA CBOK Ethics Online Course)</td>
<td>2</td>
</tr>
<tr>
<td>FIN 593</td>
<td>Special Topics (Macro Economics)</td>
<td>2</td>
</tr>
<tr>
<td>FIN 593</td>
<td>Special Topics (FinTech)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 31

* Students enrolled in the Energy AOE are required to complete a specific subset of these courses. Please see Energy AOE requirements.

**M.S. Finance Suggested Plan of Study**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
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<tbody>
<tr>
<td>FIN 511</td>
<td>3</td>
</tr>
<tr>
<td>FIN 520</td>
<td>3</td>
</tr>
<tr>
<td>FIN 521</td>
<td>3</td>
</tr>
<tr>
<td>FIN 527 or 533</td>
<td>3</td>
</tr>
<tr>
<td>FIN 593 (Macro Economics)</td>
<td>2</td>
</tr>
<tr>
<td>FIN 593 (CFA CBOK Ethics Online Course)</td>
<td>2</td>
</tr>
</tbody>
</table>

Total 16 Hours

<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 523</td>
<td>3</td>
</tr>
<tr>
<td>FIN 525</td>
<td>3</td>
</tr>
<tr>
<td>FIN 526</td>
<td>3</td>
</tr>
<tr>
<td>FIN 528 or 532</td>
<td>3</td>
</tr>
<tr>
<td>FIN 593 (FinTech)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 15 Hours

Total credit hours: 31

**Major Learning Outcomes**

**FINANCE**

Goal 1: Students will demonstrate understanding of the ethical and professional standards in the securities industry.

Goal 2: Students will demonstrate understanding of how microeconomic and macroeconomic factors influence the values of financial assets.

Goal 3: Students will apply appropriate quantitative investment analysis tools.

Goal 4: Students will interpret and analyze external financial information from the viewpoint of investors and creditors.

Goal 5: Students will master the fundamental economic techniques for valuing financial assets.
Goal 6: Students will construct, evaluate, and manage diversified portfolios and effectively communicate the process.

COURSES

FIN 500. Corporate Finance. 3 Hours.
PR: BADM 511, BADM 522, and BADM 524. A practical consideration of the operation of financial markets, considerations for the inter-temporal comparisons of opportunities, and the elements of the decision-making criteria for the financial manager.

FIN 510. Investments and Portfolio Management. 3 Hours.
PR: BADM 532. The course provides theoretical understanding of how financial decisions are made under uncertainty. The topics include the securities market environment, modern portfolio theory, risk analysis, bond and stock valuations, and derivative securities.

FIN 511. Financial Economics. 3 Hours.

FIN 512. Ethical Standards in Finance. 3 Hours.
An overview of the impact of legal, societal, and ethical considerations on business decision-making and strategic planning in the finance industry.

FIN 513. Macroeconomics and Financial Markets. 3 Hours.
This course provides students with an understanding of how macroeconomic performance is measured, how monetary and fiscal policies influence macroeconomic performance, and how these relate to financial markets around the world.

FIN 520. Quantitative Finance. 3 Hours.
Examines statistical and probability concepts, statistical inference, regression analysis, time series analysis and financial modeling. Emphasizes financial applications, including portfolio optimization and analysis of financial time series.

FIN 521. Financial Reporting and Analysis. 3 Hours.
Fundamental security analysis requires that cash flows be evaluated primarily using external accounting data. This course provides students with the skills necessary to evaluate financial reports focusing on firm valuation.

FIN 522. Advanced Corporate Finance. 3 Hours.
Case study approach focusing on complex problems in the corporate forecasting, capital budgeting, cost of capital analysis, the financing of capital investments, and financial decisions on strategic investment.

FIN 523. Equity Investment. 3 Hours.
This course provides students with professional knowledge of investment tools in equity markets, industry and company analysis, valuation models, and equity portfolio management.

FIN 525. Derivative Securities. 3 Hours.
This course will extend the student’s knowledge of derivatives markets for commodities and financial instruments. Particular attention will be given to the use of financial derivatives for risk management.

FIN 526. Portfolio Management. 3 Hours.
Examines the complete investment process from constructing investment objectives and policies to strategic asset allocation, security selection, trade execution, portfolio monitoring, and performance measurements.

FIN 527. Alternative Investments. 3 Hours.
Alternative investments are a growing presence in financial markets. These investments allow the investors to diversify their portfolios beyond rational debt and equity securities. This course provides students with the skills necessary to understand the risks and rewards in alternative investment markets.

FIN 528. Integrated Financial Analysis. 3 Hours.
This is a capstone course that brings together all elements of financial planning including ethical standards, quantitative methods, economics, financial reporting, corporate finance, equity and fixed income investments, derivatives, portfolio management, and wealth planning.

FIN 529. FinTech. 3 Hours.
Fintech (or financial technology) is one of the most fast-moving industries. The applications of fintech go over different areas in investments, banking, and other financial institutions. This course introduces students to the major topics of FinTech, including Blockchain, Bitcoin, Alternative Cryptocurrencies, FinTech Credit, InsurTech, Crowdfunding, Big Data, Machine Learning, Robo Advisers, and Algorithmic Trading.

FIN 530. Energy Financial Economics. 3 Hours.
Introduction to the ways in which legal/regulatory systems affect the energy industry and to important economic and political concerns that underlie the regulation of the production and trading of energy and the connections to the derivative markets for the energy sector.

FIN 531. Energy Law/Regulation/Ethics. 3 Hours.
Provides an understanding of energy markets and the ancillary markets, the legal and regulatory environments, and the ethical questions surrounding this business sector. Additionally, the course will help prepare participants to address the ethical standards of the finance profession.

FIN 532. Energy Financial Accounting. 3 Hours.
Provides the tools to interpret and analyze external financial information from the viewpoint of investors and creditors. The energy sector has a unique perspective from other industries. The role of mark to market accounting techniques will be emphasized.
FIN 533. Energy Financial Risk Management. 3 Hours.
Investigates the evolving and expanding practice of financial risk management in the energy sector. Risk management is a complex process of identifying, quantifying, and managing risk exposures. The course analyzes and discusses the various sources of risk.

FIN 591. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

FIN 592. Directed Study. 1-6 Hours.
Directed study, reading, and/or research.

FIN 593. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

FIN 594. Seminar. 1-6 Hours.
Special seminars arranged for advanced graduate students.

FIN 595. Independent Study. 1-9 Hours.
Faculty supervised study of topics not available through regular course offerings.

FIN 596. Graduate Seminar. 1-3 Hours.
PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

FIN 597. Research. 1-9 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.).

FIN 598. Graduate Colloquium. 1-6 Hours.
PR: Consent. For graduate students not seeking coursework credit but who wish to meet residency requirements, use of the University's facilities, and participate in its academic and cultural programs. Note: Graduate students who are not actively involved in coursework or research are entitled through enrollment in their department's 699/799 Graduate Colloquium to consult with graduate faculty, participate in both formal and informal academic activities sponsored by their program, and retain all of the rights and privileges of duly enrolled students. Grading is P/F; colloquium credit may not be counted against credit requirements for masters programs. Registration for one credit of 699/799 graduate colloquium satisfies the University requirement of registration in the semester in which graduation occurs.

FIN 735. Portfolio Theory. 3 Hours.
PR: ECON 701 and ECON 702. Basics of decision making under risk. Portfolio choice under various utility and returns specifications. Asset allocation over time.

FIN 736. Asset Pricing. 3 Hours.
Theories of the determination of prices and returns in financial markets. Properties of general static and intertemporal asset pricing models and determinants of equilibrium returns in specific general equilibrium models.

FIN 737. Corporate Finance Theory. 3 Hours.
A comprehensive examination of the foundational theories in corporate finance. Topics will include: finance theory under certainty and uncertainty, utility theory, capital structure, issuance, dividend policy, corporate governance, M & A theory, and financial distress.

FIN 741. Corporate Finance Seminar. 3 Hours.
This course acquaints students with theoretical and empirical research in corporate finance. Topics include capital structure, dividend policy, stockholder-manager and bondholder-stockholder agency conflicts, governance mechanisms, market for corporate control, bankruptcy and corporate restructuring.

FIN 742. Investments Seminar. 3 Hours.
PR: ECON 736. A comprehensive examination of the theoretical and empirical literature covering the foundational topics in investments. Topics include portfolio theory, performance evaluation, derivatives, market anomalies, investor behavior and other pertinent developments in the investment area.

FIN 743. Advanced Topics Seminar. 3 Hours.
Examination of the theoretical and empirical research in important areas of finance. Examples include financial institutions, international finance, behavioral finance and market microstructure.

FIN 795. Independent Study. 1-9 Hours.
Faculty Supervised study of topics not available through regular course offerings.
FIN 797. Research. 1-9 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.).

FIN 930. Professional Development. 1-6 Hours.
Professional development course provide skill renewal or enhancement in a professional field or content area (e.g. education, community health, geology). These tuition-waived continuing education courses are graded on a pass/fail grading scale and do not apply as graduate credit toward a degree program.