Finance

Degree Offered
• Master of Science in Finance with an optional Area of Emphasis in Energy

Nature of the Program
The West Virginia University is a CFA® Institute Partner School through the M.S. Finance program. Program graduates are prepared to sit for examination for the Chartered Financial Analyst designation and graduates boast a high pass rate on all three testing levels.

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.

The optional area of emphasis in Energy Finance prepares graduates for leadership careers in the energy sector. This area of emphasis is part of West Virginia University’s Shale Gas Initiative and offers B-School graduates entry into the energy sector and Energy Sector geologists, engineers, and other practitioners the business acumen for energy sector advancement into leadership and decision-making positions.

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
• 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
• Alex Kurov - Ph.D. (State University of New York, Binghamton), C.F.A.  
  Financial Market Microstructure, Futures Markets
• Terry L. Rose - Ph.D. (University of Illinois)  
  Insurance, Risk Management

ASSISTANT PROFESSORS
• Bingxin Li - Ph.D. (University of Houston)  
  Energy finance, Investments, Risk management
• 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

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. The Graduate Management Admissions Test (GMAT) is required and the Admissions Committee takes no action on an application for admission to the
program until the applicant submits a GMAT score. Each applicant must submit a resume with the application. Additionally, applicants are encouraged to submit a personal statement and two letters of reference. Provisional admissions are rare and evaluated on a case-by-case basis.

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

Transcripts and Deadlines

Application for admission to the M.S. in Finance program and official transcripts of all prior academic work should be submitted to the WVU Office of Graduate Admissions and Recruitment as early as possible. Applicants who have attended institutions other than WVU must request the registrar or records office of those institutions to forward a complete official transcript directly to the WVU Office of Graduate Admissions and Recruitment. Review of applications and consideration of financial awards will begin in January and continue until April 15.

M.S. Finance Requirements

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

### Core Coursework

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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>
</tr>
</tbody>
</table>

### Additional Coursework

- FIN 591 Advanced Topics (Macro Economics) 2
- FIN 591 Advanced Topics (CFA CBOK Ethics Online Course) 2
- FIN 527 Alternative Investments 3
  - or FIN 533 Energy Financial Risk Management 3
- FIN 528 Integrated Financial Analysis 3
  - or FIN 532 Energy Financial Accounting 3

Elective 3

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

### First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
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<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 527 or 533</td>
<td>Alternative Investments</td>
<td>3</td>
</tr>
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</table>
| FIN 591 (Macro Economics) | 2
| FIN 591 (CFA CBOK Ethics Online Course) | 2

16

### Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tr>
<td>FIN 523</td>
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<td>3</td>
</tr>
<tr>
<td>FIN 525</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>FIN 526</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>FIN 528 or 532</td>
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<td>3</td>
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</tbody>
</table>
Elective 3

Total credit hours: 31

Energy Area of Emphasis Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 530</td>
<td>Energy Financial Economics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 531</td>
<td>Energy Law/Regulation/Ethics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 532</td>
<td>Energy Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>FIN 533</td>
<td>Energy Financial Risk Management</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
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<td>12</td>
</tr>
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Dual Degree-MBA and M.S. Finance

For students who have been accepted into both the MBA and M.S. Finance program, the program of study involves a combination of coursework described above and that required by the MBA program. University policy permits up to 12 credit hours to overlap. Currently, the initial summer session includes FIN 513 or FIN 530, which meets the MBA requirement of BADM 527 and the M.S. Finance course FIN 512, which meets the MBA requirement of BADM 512 or FIN 531. The initial fall semester M.S. Finance offering FIN 511 meets the MBA requirement of BADM 511.

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 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. 1-6 Hours.
Faculty supervised study of topics not available through regular course offerings.

FIN 596. Teaching Practicum. 1-3 Hours.
PR: Consent. Supervised practice in college teaching of finance. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It also provides a mechanism for students not on assistantships to gain teaching experience. (Grading will be P/F.).

FIN 597. Research. 1-15 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 699. 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.
PR: FIN 737. 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. 1-15 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 798. Thesis or Dissertation. 1-6 Hours.
PR: Consent. This is an optional course for programs that wish to provide formal supervision during the writing of student reports (698), or dissertations (798). Grading is normal.

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.