BUSINESS, BACHELOR OF SCIENCE (B.S.) WITH A CONCENTRATION IN FINANCE

The concentration in finance prepares students for graduate-level study of finance and for careers in corporate finance, the securities industry, banking, financial planning, insurance/risk management and graduate-level study of finance.

Learning goals
The program is designed to help students develop skills in financial management and investments. Graduates will be able to analyze and communicate findings on complex financial issues.

Learning outcomes
Upon completing this program:

- Students will be able to identify and use relevant data to calculate appropriate quantitative measures that help in making informed financial decisions.
- Students will be able to describe and expound on several financial solutions in a structured, organized and deliberate manner with comparisons, anecdotal evidence and descriptive analysis.
- Students will be able to express the analytic, quantitative and ethical dimensions of a business problem and proposed solutions in a clear, well-organized manner that is free of bias or distortions.
- Students will be able to identify and analyze ethical dimensions of a business situation and relate those dimensions to general and professional ethical standards.

Special requirements
The foundation program specifies course work required during the freshman and sophomore years. Students are eligible for admission into the advanced business program with a major in the School of Business upon meeting the minimum cumulative GPA requirement and successful completion of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A minimum of 54 credits in the foundation program</td>
<td>54</td>
<td></td>
</tr>
</tbody>
</table>

- ACCT 203 Introduction to Accounting I
- ACCT 204 Introduction to Accounting II
- BUSN 201 Foundations of Business
- BUSN 212 Differential Calculus and Optimization for Business
- BUSN 225 Winning Presentations
- ECON 210 Principles of Microeconomics
- ECON 211 Principles of Macroeconomics
- INFO 160 Digital Literacy: Computer Concepts, Internet, Digital Devices
- INFO 161 Digital Literacy: Word Processing Skills
- INFO 162 Digital Literacy: Spreadsheets Skills I
- INFO 165 Digital Literacy: Spreadsheet Skills II

The admission requirements for the School of Business (http://bulletin.vcu.edu/undergraduate/business/undergraduate-information/academic-policies/) detail the deadlines for students to be admitted to the advanced business program with a major in the school. At least 30 hours of the required business courses for the Bachelor of Science must be taken at VCU.

All baccalaureate degree programs in the School of Business require successful completion of the business knowledge exam as administered in BUSN 499.

Students may need to take additional mathematics courses as prerequisites to BUSN 212 or MATH 200. These credits will count as electives in the foundation program. The sample curriculum outline includes MATH 151 since many of our students will need to complete this course.

The INFO 160, INFO 161, INFO 162 and INFO 165 requirements may be waived upon successful completion of a Knowledge Equivalency Test administered by the Office of Undergraduate Studies. No more than two additional credits may be applied to the degree from the INFO 16x series.

No more than four credits in physical education courses may be applied to the degree.

INTL 493 may not be counted toward a business degree.

Credit for SPCH 121 or SPCH 321 will substitute for BUSN 225, and no more than three credits of these courses may be applied toward a business degree. Credit for STAT 210 or STAT 212 will substitute for SCMA 301. Students who earned a minimum grade of B in ECON 203 at VCU may substitute that credit for ECON 210.

Students must receive a minimum grade of C in ECON 212, BUSN 225, MATH 151, and they must have a minimum GPA of 2.0 in the remainder of the finance concentration requirements. The minimum grade of C in FIRE 317, FIRE 321 and FIRE 461 must be obtained after two tries or the student is asked to change concentrations.

Degree requirements for Business, Bachelor of Science (B.S.) with a concentration in finance

Business foundation (60 credits minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIV 111 Play course video for Focused Inquiry I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>UNIV 112 Play course video for Focused Inquiry I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

General Education requirements (34 credits minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIV 200 Inquiry and the Craft of Argument</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Approved humanities/fine arts 3
Approved natural/physical sciences 3-4
Approved quantitative literacy 3-4
BUSN 212 Differential Calculus and Optimization for Business 3
or MATH 200 Calculus with Analytic Geometry I
Approved social/behavioral sciences 3-4
Total Hours 24-27

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 210</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 211</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>INFO 160</td>
<td>Digital Literacy: Computer Concepts, Internet, Digital Devices</td>
<td>1</td>
</tr>
<tr>
<td>INFO 161</td>
<td>Digital Literacy: Word Processing Skills</td>
<td>1</td>
</tr>
<tr>
<td>INFO 162</td>
<td>Digital Literacy: Spreadsheets Skills I</td>
<td>1</td>
</tr>
<tr>
<td>INFO 165</td>
<td>Digital Literacy: Spreadsheet Skills II</td>
<td>1</td>
</tr>
<tr>
<td>Business general education elective</td>
<td>(Select credits from the approved list.)</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

Additional Business Foundation requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 203</td>
<td>Introduction to Accounting I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; ACCT 204</td>
<td>and Introduction to Accounting II</td>
<td></td>
</tr>
<tr>
<td>BUSN 201</td>
<td>Foundations of Business</td>
<td>3</td>
</tr>
<tr>
<td>BUSN 225</td>
<td>Winning Presentations</td>
<td>3</td>
</tr>
<tr>
<td>SCMA 302</td>
<td>Business Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>Open electives</td>
<td></td>
<td>8-11</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>23-26</td>
</tr>
</tbody>
</table>

Students may complete additional course work (if needed) in electives to total 60 credit hours in business foundation.

Students who receive waivers to these required courses must complete additional business general education electives to reach the 34-credit minimum.

Advanced business program (60 credits minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 212</td>
<td>Differential Calculus and Optimization for Business</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 200</td>
<td>Calculus with Analytic Geometry I</td>
<td></td>
</tr>
<tr>
<td>BUSN 323</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>or FIRE 325</td>
<td>Real Estate Law</td>
<td></td>
</tr>
<tr>
<td>or FIRE 459</td>
<td>Insurance Law</td>
<td></td>
</tr>
<tr>
<td>FIRE 312</td>
<td>Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>FIRE 317</td>
<td>Investments</td>
<td>3</td>
</tr>
<tr>
<td>INFO 360</td>
<td>Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 319</td>
<td>Leadership</td>
<td>3</td>
</tr>
<tr>
<td>or BUSN 329</td>
<td>Introduction to Intercultural Communication</td>
<td></td>
</tr>
<tr>
<td>Major-specific courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIRE 321</td>
<td>Intermediate Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FIRE 461</td>
<td>Cases in Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>Restricted FIRE electives (choose two)</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>FIRE 316</td>
<td>International Financial Management</td>
<td></td>
</tr>
<tr>
<td>FIRE 417</td>
<td>Security Analysis and Portfolio Management</td>
<td></td>
</tr>
<tr>
<td>FIRE 441</td>
<td>Funds Management in Financial Institutions</td>
<td></td>
</tr>
<tr>
<td>FIRE 451</td>
<td>Options, Futures and Swaps</td>
<td></td>
</tr>
<tr>
<td>Approved finance electives (Choose four from approved list. FIRE 316, 417, 441 and 451 can count here if not used as restricted FIRE electives.)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>

The minimum total of credit hours required for this degree is 120.

Business general education electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIV 211</td>
<td>Food for Thought</td>
<td></td>
</tr>
<tr>
<td>UNIV 213 Play course video for The Truth About Lying</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNIV 217</td>
<td>Finding Your Voice in Contemporary Society</td>
<td></td>
</tr>
<tr>
<td>UNIV 222</td>
<td>Pseudoscience</td>
<td></td>
</tr>
<tr>
<td>UNIV 299</td>
<td>What's the Big Idea?</td>
<td></td>
</tr>
</tbody>
</table>

Approved finance electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 303</td>
<td>Intermediate Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 306</td>
<td>Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSN 400 &amp; BUSN 401</td>
<td>Principles of Consulting and International Consulting Practicum</td>
<td>6</td>
</tr>
</tbody>
</table>

Approved finance electives (Choose four from approved list. FIRE 316, 417, 441 and 451 can count here if not used as restricted FIRE electives.)

Total Hours 60

Additional University Core Education Curriculum approved courses

Any AFAM, ANTH, ANTZ, ARTH, BIOL, BIOZ, CHEM, CHEZ, CRJS, DANC, ENGL, ENVH, FRSC, FRZ, HIST, INNO, INSC, INTL (except INTL 493), MASC, MATH, PHIL, PHYS, PHYZ, POLI, PSYC (except 214), RELS, SOCS, SOCY, USRP or WRLD course

Any foreign language course

Any honors-designated course taught outside of the School of Business

Any of the following UNIV courses:

| UNIV 211 | Food for Thought                           |       |
| UNIV 213 Play course video for The Truth About Lying |       |
| UNIV 217 | Finding Your Voice in Contemporary Society |       |
| UNIV 222 | Pseudoscience                              |       |
| UNIV 299 | What's the Big Idea?                      |       |

Approved finance electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ACCT 303</td>
<td>Intermediate Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 306</td>
<td>Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSN 400 &amp; BUSN 401</td>
<td>Principles of Consulting and International Consulting Practicum</td>
<td>6</td>
</tr>
</tbody>
</table>

Approved finance electives (Choose four from approved list. FIRE 316, 417, 441 and 451 can count here if not used as restricted FIRE electives.)

Total Hours 60
ECON 300 | Contemporary Economic Issues | 3
ECON 301 | Microeconomic Theory | 3
ECON 302 | Macroeconomic Theory | 3
ECON 303 | Managerial Economics | 3
ECON 305 | Public Finance | 3
ECON 307 | Money and Banking | 3
ECON 315 | Economic Development | 3
ECON 325 | Environmental Economics | 3
ECON 333 | Behavioral Economics | 3
ECON 402 | Business Cycles and Forecasting | 3
ECON 419 | History of Economic Thought | 3
ECON 421 | Government and Business | 3
ECON 442 | Economic Growth | 3
FIRE 305 | Principles of Real Estate | 3
FIRE 309 | Risk and Insurance | 3
FIRE 315 | Real Property Management | 3
FIRE 316 | International Financial Management | 3
FIRE 359 | Issues in Risk Management and Insurance | 3
FIRE 417 | Security Analysis and Portfolio Management | 3
FIRE 419 | Advanced Risk and Insurance | 3
FIRE 435 | Real Estate Finance and Capital Markets | 3
FIRE 439 | Life and Health Insurance | 3
FIRE 441 | Funds Management in Financial Institutions | 3
FIRE 449 | Employee Benefit Planning | 3
FIRE 451 | Options, Futures and Swaps | 3
FIRE 491 | Topics in Finance, Insurance and Real Estate | 1-3
FIRE 492 | Independent Study in Finance, Insurance and Real Estate | 1-3
FIRE 493 | Internship in Finance, Insurance and Real Estate | 3

Approved University Core Education Curriculum courses | 6

Term Hours: 15

Spring semester

BUSN 225 | Winning Presentations | 3
INFO 161 | Digital Literacy: Word Processing Skills | 1
INFO 165 | Digital Literacy: Spreadsheet Skills II | 1
MATH 200 | Calculus with Analytic Geometry I (approved quantitative literacy general elective) | 4

UNIV 112 | Focused Inquiry II | 3
Play course video for Focused Inquiry II

Approved University Core Education Curriculum course | 3

Term Hours: 15

Sophomore year

Fall semester

ACCT 203 | Introduction to Accounting I | 3
BUSN 201 | Foundations of Business | 3
ECON 210 | Principles of Microeconomics | 3
UNIV 200 | Inquiry and the Craft of Argument | 3
Business general education elective | 3

Term Hours: 15

Spring semester

ACCT 204 | Introduction to Accounting II | 3
ECON 211 | Principles of Macroeconomics | 3
MKTG 301 | Marketing Principles | 3
SCMA 301 | Business Statistics I | 3
Open electives | 3

Term Hours: 15

Junior year

Fall semester

BUSN 323 | Legal Environment of Business | 3
or FIRE 325 | Real Estate Law | 3
or FIRE 459 | Insurance Law | 3
BUSN 325 | Organizational Communication | 3
FIRE 311 | Financial Management | 3
MGMT 310 | Managing People in Organizations | 3
SCMA 302 | Business Statistics II | 3

Term Hours: 15

Spring semester

FIRE 312 | Financial Modeling | 3
FIRE 317 | Investments | 3
MGMT 303 | Creativity and Ideation | 3
MGMT 319 | Leadership | 3
or BUSN 329 | Introduction to Intercultural Communication | 3

Approved finance elective | 3

Term Hours: 15

Senior year

Fall semester

What follows is a sample plan that meets the prescribed requirements within a four-year course of study at VCU. Please contact your adviser before beginning course work toward a degree.
FIRE 321 Intermediate Financial Management 3
INFO 360 Business Information Systems 3
Approved finance elective 6
Restricted FIRE elective 3

Term Hours: 15

Spring semester
BUSN 499 Business Knowledge Exam 0
FIRE 461 Cases in Financial Management 3
MGMT 434 Strategic Management (capstone) 3
Approved finance elective 3
Open elective 3
Restricted FIRE elective 3

Term Hours: 15
Total Hours: 120

The minimum total of credit hours required for this degree is 120.

FIRE 291. Topics in Finance, Insurance and Real Estate. 1-3 Hours. Variable hours. Variable credit. Maximum of 3 credits per topic. Prerequisite: permission of instructor. An in-depth study of selected business topics. Graded as pass/fail at the option of the department.

FIRE 301. Personal Financial Planning. 3 Hours. Semester course; 3 lecture hours. 3 credits. Designed to assist individuals and households in understanding and making common financial decisions. Units include income and expenditure, credit, borrowing, banking, savings, insurance, home buying, investment, and estate planning.

FIRE 305. Principles of Real Estate. 3 Hours. Semester course; 3 lecture hours. 3 credits. Focuses on the language, principles, practices and laws that govern the real estate enterprise, including property rights, legal elements, physical aspects of location and production, brokerage, valuation, ethical dimensions, development, financing and land use.

FIRE 306. Regulatory Aspects of Safety and Risk Control. 3 Hours. Semester course; 3 lecture hours. 3 credits. This course is restricted to students who have completed at least 54 credit hours (junior standing). Examines political, scientific and social concepts of risk that influence the regulation of certain societal hazards and threats. Includes a survey of federal and state laws, regulations and standards that impact upon employment, the environment, industrial security, consumer protection and occupational safety and health.

FIRE 307. System Safety. 3 Hours. Semester course; 3 lecture hours. 3 credits. This course is restricted to students who have completed at least 54 credit hours (junior standing). Addresses the concepts and practices of system safety; included are basic system concepts, application of system safety techniques, qualitative and quantitative applications such as fault-free, failure-mode-and-effects, MORT and cost-benefit analyses.

FIRE 308. Incident Investigation and Analysis. 3 Hours. Semester course; 3 lecture hours. 3 credits. This course is restricted to students who have completed at least 54 credit hours (junior standing). Reviews various conceptual and analytical models used in accident/incident investigation strategies and reporting systems, report formats, data collection methods, causal inferences, problem identification and data analysis; in-depth case studies and epidemiological reviews of recent events will be emphasized.

FIRE 309. Risk and Insurance. 3 Hours. Semester course; 3 lecture hours. 3 credits. Nature of risk; insurance and other risk-handling methods; examination of basic life, health, property and liability principles and coverages.

FIRE 311. Financial Management. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisites: MATH 200 or BUSN 212*; and ACCT 203 or ACCT 202 (for non-business majors). Enrollment is restricted to students who have completed at least 54 credit hours (junior standing) or 24 credits with minimum cumulative GPA of 2.5. Principles of optimal financial policy in the procurement and management of wealth by profit-seeking enterprises; the application of theory to financial decisions involving cash flow, capital structure and capital budgeting. *Formerly MGMT 212, SCMA 212.

FIRE 312. Financial Modeling. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 311 with a minimum grade of C. Enrollment is restricted to students with majors or concentrations offered by the Department of Finance, Insurance and Real Estate who have completed at least 54 credit hours (junior standing). This course is designed to introduce students to a wide array of primarily Excel techniques used in financial model building. Students will be introduced to techniques such as data tables, solver, matrix manipulation, array formulas, pivot tables, etc., to create financial models that are common in the areas of finance, risk management and real estate finance.

FIRE 313. Financial Management for Small Business. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 311. This course is restricted to students who have completed at least 54 credit hours (junior standing). This course emphasizes financial management needs for entrepreneurs or persons who expect to be employed in closely held corporations.

FIRE 315. Real Property Management. 3 Hours. Semester course; 3 lecture hours. 3 credits. This course is restricted to students who have completed at least 54 credit hours (junior standing). Real property economics, planning, construction, marketing and management of leased properties.

FIRE 316. International Financial Management. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 311. This course is restricted to students who have completed at least 54 credit hours (junior standing). Financial management of business in an international environment. Emphasis on tools and techniques to prepare financial managers of multinational firms to effectively respond to the challenges of the international environment. Crosslisted as: INTL 416.

FIRE 317. Investments. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisites: FIRE 311; and SCMA 301, STAT 210, STAT 212, STAT 312 or STAT 541. This course is restricted to students who have completed at least 54 credit hours (junior standing). An analysis of the market for long-term corporate securities. Emphasis is given to the valuation of bonds, common stocks, options and convertible securities, and portfolio concepts. Designed to provide an understanding of the functioning of an efficient market.

FIRE 321. Intermediate Financial Management. 3 Hours. Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 312 with a minimum grade of C. Pre- or corequisite: SCMA 302, MATH/STAT 309, STAT 314 or STAT 321. This course is restricted to students who have completed at least 54 credit hours (junior standing). Advanced topics in financial management with emphasis on the theoretical bases for the valuation of the firm.
FIRE 325. Real Estate Law. 3 Hours.
Semester course; 3 lecture hours. 3 credits. This course is restricted to students who have completed at least 54 credit hours (junior standing). Legal fundamentals of real estate including contracts, risk management, environmental and ethical issues, concepts of title, title examination, easements, conveyances, liens and recording statutes affecting real estate.

FIRE 329. E-Business Risk Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: INFO 202. This course is restricted to students who have completed at least 54 credit hours (junior standing). An analysis of the risks associated with e-business and the practice of e-commerce.

FIRE 359. Issues in Risk Management and Insurance. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. The course focuses on timely issues in the field of risk management and insurance. Students will consider the role of government and the insurance industry as well as the use of other financial solutions in handling risks faced by businesses and individuals. The topics covered change to reflect current societal and industry issues and to explore new risk management innovations.

FIRE 417. Security Analysis and Portfolio Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: FIRE 317 with a minimum grade of C; and SCMA 302, MATH 309/STAT 309, STAT 314 or STAT 321. This course is restricted to students who have completed at least 54 credit hours (junior standing). A detailed analysis of stocks and bonds as well as options and futures. Emphasis is on models for portfolio selection, revision and performance evaluation.

FIRE 419. Advanced Risk and Insurance. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 311. This course is restricted to students who have completed at least 54 credit hours (junior standing). It is a risk and insurance course with emphasis on more mathematical computations and analysis. Market, credit and operational risks are covered, along with legal and catastrophic risk assessments. Sustainability is important to this course. Topics covered include (but not limited) to forecasting of losses -- loss triangles and computations of reserves; risk mapping and the risk management matrix; cost/benefit and risk/award analyses; pricing; capital structure, risk-based capital and economic capital; financial statements using audit techniques (accounting); insurance regulation; life cycle financial risks; insurance solutions to property/casualty and life/health risks.

FIRE 424. Property and Liability Insurance. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 309. This course is restricted to students who have completed at least 54 credit hours (junior standing). Property and liability risk identification and measurement. Major commercial line coverages including fire, marine, automobile, general liability, worker’s compensation, fidelity and surety bonds.

FIRE 425. Real Estate Appraisal. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 305 or FIRE 316. This course is restricted to students who have completed at least 54 credit hours (junior standing). Theory and practice of real property valuation from fundamental concepts to complex income-producing properties and partial-interest valuations. Technology-related tools are employed in the course, including financial modeling with various software programs.

FIRE 429. Property and Liability Insurance. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 309 or FIRE 333. This course is restricted to students who have completed at least 54 credit hours (junior standing). Property and liability risk identification and measurement. Major commercial line coverages including fire, marine, automobile, general liability, worker’s compensation, fidelity and surety bonds.

FIRE 435. Real Estate Finance and Capital Markets. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 305. This course is restricted to students who have completed at least 54 credit hours (junior standing). Instruments, techniques and institutions of real estate finance; the mortgage market; financing process; mortgage risk analysis; creative financing; emphasis on policies and procedures used in financing residential and commercial properties and their interaction with the capital markets. Technology-related tools are employed in the course, including financial modeling with various software programs.

FIRE 439. Life and Health Insurance. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. The function, nature and uses of life and health insurance and annuities; operational aspects of life insurance companies. The course covers insurance solutions for life cycle risks: death; health and longevity – sustainability; legal and tax aspects. Full-time students who pass this course can receive credit for the CLU HS323 examination from the American College. See instructor for details.

FIRE 441. Funds Management in Financial Institutions. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 312 with a minimum grade of C. This course is restricted to students who have completed at least 54 credit hours (junior standing). Funds management techniques for selected financial institutions including investment companies (mutual funds), life and casualty insurers, savings and loans, mutual savings banks, commercial banks, and pension funds.

FIRE 444. Occupational Safety, Health and Security. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Covers the principles and practices, and regulatory dimensions of occupational safety, health and security. Causes of workplace health hazard exposures, accidents and domestic and international industrial violence are studied with an emphasis on prevention. Characteristics of effective occupational safety, health and workplace security programs are studied to facilitate understanding and application in the workplace.

FIRE 445. Real Estate Investment Analysis. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: FIRE 425 and FIRE 435. This course is restricted to students who have completed at least 54 credit hours (junior standing). This is the capstone course for real estate majors and covers the analytical methods and tools useful for analyzing commercial real estate investments, including a multidisciplinary approach to financial, spatial and social economics, which builds a cohesive framework for analyzing complex investment decisions emphasizing fundamentals of property and financial markets.

FIRE 449. Employee Benefit Planning. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Management of group life, health, disability and retirement plans. Governmental and employers' solutions to life cycle risks – sustainability through social insurance programs, group insurance and innovations. The course reflects the dynamic nature of this field and requires cost/benefits analysis, best solutions to risks and a complete portfolio project of plan design, cost considerations, funding, regulation and tax considerations.
FIRE 451. Options, Futures and Swaps. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 321 with a minimum grade of C or FIRE 317 with a minimum grade of C. This course is restricted to students who have completed at least 54 credit hours (junior standing). Analysis and valuation of speculative securities and markets, including options, futures and swaps, with emphasis on their use for hedging and speculative purposes. Major valuation models and term structure models are discussed with applications to problems in finance considered.

FIRE 459. Insurance Law. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. The course covers the legal concepts and doctrines applicable to insurance. Fundamental legal aspects of all risks and aspects of sustainability. The course provides legislative issues for all solutions to life cycles risks: life and health insurance, pensions, catastrophes (natural and man-made such as terrorism) and property and liability insurance.

FIRE 461. Cases in Financial Management. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 321 with a minimum grade of C. This course is restricted to students who have completed at least 54 credit hours (junior standing). Cases involving financial decisions for various forms of business enterprises.

FIRE 469. Advanced Property/Casualty Insurance: Alternative Markets. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisite: FIRE 309 or FIRE 419. This course is restricted to students who have completed at least 54 credit hours (junior standing). Property and liability risk with emphasis on alternative, less-regulated insurance solutions to all types of risks. The course includes sustainability issues and the way to mitigate natural and man-made catastrophes including sophisticated modeling and techniques. The course covers Lloyds of London; excess and surplus lines carriers; risk retention group, self-insurance, captives and shadow insurance; reinsurance; multilayers of coverage; catastrophe bonds; terrorism; regulation; liability issues globally; social responsibility.

FIRE 479. Managing Financial Risk. 3 Hours.
Semester course; 3 lecture hours. 3 credits. Prerequisites: FIRE 309 and FIRE 317. This course is restricted to students who have completed at least 54 credit hours (junior standing). Sources of financial risk. Measurement and uses of enterprisewide financial risk techniques. A variety of analytical tools will be used to learn about value at risk, credit risk, stress testing, financial risk management and actuarial models, and how to manage financial risk.

FIRE 491. Topics in Finance, Insurance and Real Estate. 1-3 Hours.
Semester course; variable hours. Variable credit. Maximum of 3 credits per course; maximum total of 6 credits for all topic courses. Prerequisite: junior standing. An in-depth study of a selected business topic, to be announced in advance.

FIRE 492. Independent Study in Finance, Insurance and Real Estate. 1-3 Hours.
Semester course; 1-3 credits. Maximum total of 3 credits. Prerequisites: junior or senior standing as a major in a business curriculum and approval of adviser and department chair prior to course registration. Intensive study under supervision of a faculty member in an area not covered in-depth or contained in the regular curriculum.

FIRE 493. Internship in Finance, Insurance and Real Estate. 3 Hours.
Semester course; 3 credits. Course restricted to students with junior standing and a concentration in finance or risk management and insurance or a declared major in financial technology or real estate, a minimum GPA of 2.5, and permission of the Department of Finance, Insurance and Real Estate chair or the director of the insurance or real estate programs. Involves students in a meaningful experience in finance, insurance or real estate. Intention to enroll must be indicated to the chair or appropriate program director.