FINANCE

200 Hudson Street, Harborside 2
(201) 200- 3353
http://njcu.edu/department/finance (http://njcu.edu/department/finance/)

The Master of Business Administration (MBA) in Finance program equips students with broader skills and knowledge in business. The program provides students with specific skills in finance to complement the broad business competencies required of managers in a dynamic and global economy.

The Master of Business Administration (MBA) with a specialization in Business Analytics prepares students to lead and manage organizations through mastery of broadly applicable core disciplines, gaining skills tailored to the ethical solution of complex problems, integration of information technology, leading a diverse workforce, and competing in a global marketplace.

The Master of Science program in Business Analytics & Data Science is designed to prepare students for careers in the field of business analytics. The program will provide students with the skills needed to gather, store, analyze, and interpret large amounts of "Big Data" to facilitate informed business decision making.

The Master of Science in Financial Technology is designed to prepare students for career opportunities in the lucrative field of financial technology. Students in the program will learn the latest technologies, such as Blockchain, AI, and machine-learning algorithms, required to solve business problems using financial technology.

The Master of Science in Business Information Systems will prepare students with the skills needed to work in the information technology industry. This program is designed as a bridge between business and technology. As opposed to a pure computer science program, this program caters to the burgeoning need for information systems professionals who understand the business aspects of technology

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Zhimin Wang (https://www.njcu.edu/directories/faculty-staff-
directory/zhimin-wang/), Co-Chairperson
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Associate Professor of Finance
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Professor of Finance
Zhejiang Gongshang University, B.A.; Shanghai University of Finance and Economics, M.S.; The University of Texas at Dallas, Ph.D.

Various discipline-specific concentrations that will prepare students for multiple fields of employment or areas of additional graduate study are noted below. Course requirements for each concentration are explained in detail. The requirements for graduation, in addition to completion of the major area, are listed on "Completing a Graduate Program (https://catalog.njcu.edu/graduate/academic-requirements-policies-procedures/)."

- Business Analytics and Data Science, M.S. (https://catalog.njcu.edu/graduate/business/finance/business-analytics-data-science-ms/)
- Business Information Systems, M.S. (https://catalog.njcu.edu/graduate/business/finance/business-information-systems-ms/)
- Financial Technology, M.S. (https://catalog.njcu.edu/graduate/business/finance/financial-technology-ms/)
- M.B.A., Business Analytics Specialization (https://catalog.njcu.edu/graduate/business/finance/business-analytics-mba/)
- M.B.A., Finance Specialization (https://catalog.njcu.edu/graduate/business/finance/finance-mba/)

Finance (FINC)

FINC 504 Quantitative Methods for Business Decisions (3 Credits)
This course is aimed at familiarizing the student with the basic statistical techniques necessary to perform the research project (see BUSI 655). Following a brief review of basic statistical techniques the course will concentrate on regression analysis, topics in exponential design and analysis of variance, transformation of data and introductory econometric analysis.

FINC 506 Managerial Economics (3 Credits)
Managerial Economics applies economic theory and models such as supply and demand, optimization, elasticity and regression analysis to business decision making within the firm or organization. Students learn how economic forces affect output, hiring, product pricing, demand estimation and market forecasting and how to make profitable decisions to achieve the goals of the firm.

FINC 507 Corporate Financial Management (3 Credits)
This course provides an advanced level overview of principles and practices used by the finance professional. In particular, it covers the financial environment, utilizing net present value (NPV), valuation of financial assets, project analysis, opportunity cost of capital, risk and return, capital budgeting, debt and dividend policies, mergers, and planning.
Pre-Requisite(s): ACCT 501

FINC 514 Introduction to Business Analytics and Data Science (3 Credits)
This course will provide students with an overview of the field of data science and business analytics. Students will get a high level understanding of data acquisition, data manipulation, data storage, data analysis and data visualization. Students will also be introduced to machine learning and predictive analytics.

FINC 515 Programming for Business (3 Credits)
In this course students will be introduced to the R programming language and the Python programming language, which are the two widely used programming languages in the field of data science. Students will get a good understanding of using R and Python for statistical modeling and machine learning.

FINC 520 Statistical and Mathematical Methods for Data Science (3 Credits)
This course will introduce students to the statistical and mathematical methods needed in the practice of data analytics. Students will learn the basics of statistics, probability, linear algebra, calculus and optimization techniques relevant to data analytics.

FINC 525 Financial Modeling (3 Credits)
This course focuses on the development of microcomputer solutions to financial problems. There is an emphasis on the custom design and implementation of models, using spreadsheet and database applications software. Topics include financial statement modeling, forecasting of free cash flow, leasing and capital budgeting decisions, option pricing and portfolio optimization.

FINC 530 Machine Learning for Business I (3 Credits)
This course will provide students with a thorough understanding of machine learning concepts. Students will learn the common machine learning algorithms and implement them in R or Python. Students will learn how to apply machine learning algorithms to detect patterns in the data and to predict outcomes.
Pre-Requisite(s): FINC 515

FINC 531 Current Topics in Financial Technology (3 Credits)
This course will introduce student to all the current topics in financial technology. Topics will include crypto currencies, cyber security, peer to peer lending systems, digital systems, robo-advisers and blockchain technology.

FINC 535 Data Management (3 Credits)
This course will provide students with a thorough understanding of the process starting from collecting data, cleaning data, to the storage of data. Students will be exposed to various tools and techniques required for collecting data, cleaning and normalizing the data and storing and retrieving large amounts of data.
Pre-Requisite(s): FINC 515

FINC 550 Experimental Design (3 Credits)
This course will provide students with a thorough understanding of Experimental design and help students develop the skills necessary to effectively design and analyze experiments. Common techniques used in Experimental Design such as Fixed Effects model, Random Effects model, Mixture experiment, Factorial Design, and Latin Square will be discussed.
Pre-Requisite(s): FINC 520

FINC 560 Data Visualization and Communication (3 Credits)
This course will provide students with the techniques and state of the art practices in data visualization and communication. The course will also explore a wide range of techniques from simple descriptive charts and maps to multidimensional analysis using dashboards, helping students develop creative visualizations to communicate data analysis.
Pre-Requisite(s): FINC 530

FINC 565 Time Series Modeling and Experimental Design (3 Credits)
This course will provide students with a thorough understanding of regression analysis. It covers both the theory and application of regression analysis. It focuses on maximum likelihood and time series techniques. As well, this course also covers the interpretation of regression results and best practices for regression analysis.
Pre-Requisite(s): FINC 520

FINC 613 Decision Analysis (3 Credits)
Managerial decisions are often made in an environment of great uncertainty. Decision analysis provides practical techniques to structure decision problems and quantitative methods to evaluate choices. The course prepares the student to make excellent decisions while considering objectives, alternatives, consequences, and uncertainties and integrating logical processes with other information.

FINC 670 Working Capital Management (3 Credits)
This course is designed to give practitioners and advanced students of finance exposure to the problems and solutions associated with short-term financial management, particularly in the treasury function of a modern corporation. The emphasis of the course is on the liquidity, risk-management, and institutional issues that affect the corporation's operating or cash cycle. Topics include valuation models for short-term financial decisions, payment mechanisms, cash management systems, short-term borrowing arrangements, and forecasting techniques.

FINC 671 Foundations of Professional Financial Planning (3 Credits)
This course provides an overview of professional financial planning theory and practice in the context of ethical behavior, understanding client needs, and regulatory compliance. Topics include purposes of financial planning, value of objective advice, financial analysis tools, the financial planning process, and the client-advisor relationship.

FINC 672 Risk Management and Insurance Planning (3 Credits)
This course addresses business and personal risk management, insurance theory, legal risk principles; insurance contracts; social insurance; insurance companies and markets; insurance pricing, taxation and regulation. The student learns how to determine life, long-term care and disability income insurance needs and recognize risks that can be reduced by insurance.
Co-Requisite(s): FINC 671 Foundations of Professional Financial Planning

FINC 673 Investment Planning and Portfolio Analysis (3 Credits)
This course presents investment planning concepts, integrated with the techniques of securities and portfolio management, in the context of the financial planning process. Topics include risk and return measurement, traditional and alternative investment choices, valuations techniques, modern portfolio theory, asset allocation and portfolio performance evaluation.

FINC 674 Income Tax Planning for Individuals and Businesses (3 Credits)
This course includes federal income taxation of individuals and businesses. Among topics are tax theory, individual and corporate tax calculations, investments, business entities, cost basis and recovery, property dispositions, passive activity losses, at-risk rules, deficiencies, refunds, penalties, accounting methods, accounting periods, and professional tax planning techniques for most favorable tax treatment.

FINC 675 Retirement Planning and Employee Benefits (3 Credits)
This course focuses on planning secure retirements for individuals and designing retirement plans for businesses. Topics include: integration of personal savings, social security and employer retirement plans; reconciling conflicting needs of employees, owners, and cost considerations in the pension plan design; deferred compensation; and non-qualified executive benefit plans.

FINC 676 Estate Planning (3 Credits)
Estate Planning investigates tax and non-tax considerations in the disposition of assets and protection of survivors at death. The course includes the estate planning process, methods of estate transfer at death,federal gift and estate taxes, issues of generation skipping,estate liqidity, special situations, and methods of transfer during life.
Prerequisite: FINC 671 Foundations of Professional Financial Planning and FINC 674 Income Tax Planning for Individuals and Businesses

FINC 678 Healthcare Financial Management (3 Credits)
This course introduces the language of accounting and the principles of financial management to the healthcare practitioner using examples of hospitals and other healthcare agencies. Both for-profit and not-for-profits entities are considered. The concepts and applications in this course prepare clinical professionals for the financial decisions confronting their own organizations in a managed care environment. The course also acquaints financial personnel with the current issues and practices unique to healthcare finance. Topics include: financial statement analysis, cash budgeting, capital financing, benchmarking, payment systems, and responsibility accounting. Please Note: This course is taught using WebCT Course Management Tools.

FINC 710 Counterparty Credit Risk Management (3 Credits)
In this course students will get a thorough understanding of credit risk management concepts. Techniques such as Potential Future Exposure, Credit Value at Risk etc. will be discussed. Using the Bloomberg terminal for risk management purposes will also be emphasized.
Pre-Requisite(s): FINC 603

FINC 720 Regulation and Compliance (3 Credits)
This course focuses on financial industry regulations and compliance. Topics include regulations' impact on financial industry and regulatory compliance by different types of financial institutions, such as commercial banks, investment banks, insurance companies, central counterparties. It will also cover regulations on various risk disciplines and risk management activities.

FINC 740 Operational Risk Management (3 Credits)
This course focuses on operational risk and its management. Topics include identification of operational risk, assessment of the size of operational risk, monitoring and controlling of operational risk, and the best practices in operational risk management activities. This course will cover both qualitative and quantitative analyses of operational risk.

FINC 750 Market Risk and Liquidity Risk Management (3 Credits)
This course will provide students with a thorough understanding of market risk and liquidity risk management concepts. Common techniques used in market risk management such as Value Risk will be discussed in depth. Students will be exposed to liquidity risk management techniques such as Liquidity adjusted Value at Risk.
Pre-Requisite(s): FINC 603

FINC 770 Ethical and Professional Standards in Investment Management (3 Credits)
This course provides an overview of the laws and industry regulations governing financial reporting and investment management. A code of ethics and professional standards of practice are interpreted in the context of specific situations, including insider trading and soft dollar arrangements. Global performance presentation and statistical reporting practices are discussed. Pre-Requisites: BUSI 603 Quantitative Methods.
Pre-Requisite(s): BUSI 603 Quantitative Methods for Business Decisions

FINC 771 Analysis of Equity Investments (3 Credits)
This course covers the theory and practice of equity valuation for the investment generalist. It presents a comprehensive survey of the prevailing valuation models, using contemporary real-world applications and a thorough integration of accounting and finance concepts. Content includes discounted cash flow methods, relative value models, and technical analysis.

FINC 772 Analysis of Debt Investments (3 Credits)
This course describes the features, risk factors and economics of fixed income securities. Valuation techniques are applied to instruments in different sectors of the bond market. Other topics include yield spreads, interest rate risk, term structure, mortgage - and asset-backed securities, derivative instruments, credit analysis, and trading strategies.
Pre-Requisite(s): FINC 673 Investment Analysis

FINC 774 Analysis of Derivatives and Alternative Investments (3 Credits)
This course provides a comprehensive discussion of investment strategies using derivative instruments and alternative assets. Forwards and futures, options and swaps are examined in the context of hedging strategies to manage equity market, interest rate, and currency risk. Topics also include alternative investments such as real estate investment trusts (REITs), hedge funds, commodity indexes, private equity and venture capital.
Pre-Requisite(s): FINC 673 Investment Plan and Portfolio Analysis

FINC 775 Advanced Portfolio Management (3 Credits)
Course covers advanced topics in portfolio management, emphasizing global investment strategies, risk management tools, and performance evaluation. Topics include exchange rate forecasting, international asset pricing, dynamic asset allocation, style analysis, and attribution.
Pre-Requisite(s): FINC 673 Investment Planning and Portfolio Analysis

FINC 776 Global Finance (3 Credits)
This course analyzes the financial environment, risks, goals, and challenges of multinational corporations and domestic corporations considering entry into global markets. Topics include balance of payments accounting, international monetary systems, foreign exchange risk management, and world financial markets and institutions.
Pre-Requisite(s): BUSI 607 or FINC 607 Corporate Financial Management

FINC 777 Financial Institutions and Banking Relations (3 Credits)
This course examines the role of financial institutions, the response of institutions to changes in the economy, and their relationships with customers. Topics include global financial markets, asset choices of banks and non-bank institutions, risk management, financial regulations, and contemporary developments in finance.
Prerequisite(s): ACCT 601 Financial Accounting I, BUSI 606 Managerial Economics, & FINC 607 Corporate Financial Management

FINC 778 Financial Restructuring and Reorganization (3 Credits)
This course examines the historical, legal and strategic framework, of business combinations and breakups; their impact on business valuation, financing and corporate governance; and their managerial and operational implications. Study includes mergers, spinoffs, leveraged buyouts, junk bond financing, bankruptcy, and other forms of corporate restructuring.
Pre-Requisite(s): ACCT 601 Financial Accounting I and FINC 607 Corporate Financial Management

FINC 779 Capstone in Finance (3 Credits)
This course is the culmination of the Master of Science in Finance degree program. The student produces an original written and oral work that demonstrates mastery of the curriculum in his or her specialty under the supervision of a faculty advisor. The oral portion of the final presentation will be made to three faculty members who will judge the presentation. The form of the work can be a thesis, a capstone project, a case study or other work deemed suitable by the faculty advisor.

FINC 780 Capstone: Creating the Comprehensive Financial Plan (3 Credits)
Students create several group cases and then an individually produced professional caliber comprehensive personal financial plan. The course synthesizes knowledge and skills including ethics, analysis, risk management and insurance, investments, income tax, retirement planning, estate planning, regulation and certification requirements, communication, and professional responsibility into a comprehensive whole.
Pre-requisite(s): Take 3 courses from the following: FINC 671 Foundations of Pro Fin Planni , FINC 673 Investment Plan and Portf Anal, FINC 674 Income Tax Planning for Ind , FINC 675 Retirement Plan and Empl Benef, and FINC 676 Estate Planning.

FINC 781 Capstone Project in Data Science (3 Credits)
This course is the culmination of the Master of Science in Business Analytics and Data Science degree program. The student produces an original written and oral work that demonstrates mastery of the curriculum under the supervision of a faculty advisor. The oral portion of the final presentation will be made.
Pre-Requisite(s): FINC 614, 615, 620, 635, 665, 630, 650, and 660.