

# Business Management (BUS)

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## **BUS 225 Personal Finance** (3 credit hours)

Economic and financial strategies used to accumulate, manage and protect personal assets. Emphasizing income generation, expense reduction, investment selection, and wealth creation to meet future needs and goals. Topics include investing (mutual funds, stocks, etc.), annuities, insurance, retirement planning, and estate planning. This course and BUS 425 should not both be taken for credit towards the Business Administration degree.

*Typically offered in Fall, Spring, and Summer*

## **BUS 295 Special Topics in Business Management** (1-6 credit hours)

Experimental course development. Special topics in Business Management at the introductory level.

## **BUS 320 Financial Management** (3 credit hours)

Financial decision making by businesses, including capital structure and dividend decisions, capital budgeting and working capital management. Basic financial concepts are covered such as risk and return measurement, portfolio theory and the time value of money.

Prerequisite: ACC 210

*Typically offered in Fall, Spring, and Summer*

## **BUS 340 Information Systems Management** (3 credit hours)

The use of computing in businesses is rapidly evolving. This course is designed to equip students with foundational knowledge in Information Systems to bring them to pace to the current trends. The course focuses on topics on how business computing solutions are evolving, built and used. Furthermore, the course will expose students to recent trends in business technologies. The course topics include Information Systems (IS) in organizations, design and use of data/databases, cloud computing, Information Security and ethical challenges, business intelligence and impact of AI on businesses, current global trends in IS development and use, along with key technical IS concepts.

*Typically offered in Fall, Spring, and Summer*

## **BUS 350/ST 350 Economics and Business Statistics** (3 credit hours)

Introduction to statistics applied to management, accounting, and economic problems. Emphasis on statistical estimation, inference, simple and multiple regression, and analysis of variance. Use of computers to apply statistical methods to problems encountered in management and economics.

Prerequisite: MA 114

*Typically offered in Fall, Spring, and Summer*

## **BUS 351 Introduction to Business Analytics** (3 credit hours)

This course is an exploration of business analytics, designed to follow BUS/ST 350. It emphasizes practical application of statistical methods and the use of software tools to inform and drive strategic business decisions. Students will delve into a comprehensive curriculum that includes data management, visualization techniques, regression analysis, forecasting, supervised learning, and clustering analysis, with a special focus on machine learning and artificial intelligence applications in the business context. Through hands-on projects and case studies, participants will learn to leverage analytics for impactful outcomes, preparing them for complex challenges in a dynamic business environment.

Prerequisites: BUS 340 and (BUS/ST 350, or ST 312, or ST 370, or ST 372); Corequisite: ST 307 or ST 308

*Typically offered in Fall and Spring*

## **BUS 360 Marketing Methods** (3 credit hours)

Examination of decisions affecting marketing of goods and services in consumer, industrial and international markets. Emphasis on the role of marketing in a managerial context. Areas studied include: the activities of marketing research, identification of marketing opportunities, and the development of marketing mix strategies including the decisions concerning pricing, distribution, promotion and product design.

Prerequisite: MIE 201, Sophomore standing

*Typically offered in Fall, Spring, and Summer*

## **BUS 370 Operations and Supply Chain Management** (3 credit hours)

Concepts in planning, controlling, and managing the operations function of manufacturing and service firms. Topics include operations strategy, process choice decisions, forecasting, production planning and control, and trends in operations management. Common tools for informed decision-making in these areas.

*Typically offered in Fall, Spring, and Summer*

## **BUS 420 Financial Management of Corporations** (3 credit hours)

Advanced theory and practice of corporate financial management. Topics covered include: asset management, evaluating financial statements, capital budgeting, alternative investments, cash flow management, equity valuation, and financing. Corporate financial policy decisions will include: cost of capital, capital structure, and dividend policy decisions.

Prerequisite: BUS 320 and (BUS/ST 350, or ST 312, or ST 370, or ST 372)

*Typically offered in Fall, Spring, and Summer*

## **BUS 422 Investments and Portfolio Management** (3 credit hours)

Analysis of the investment process, dichotomized into security analysis and portfolio management. Background information on financial assets, securities markets, and risk-return concepts. Analysis of valuation theory and techniques, modern portfolio theory and portfolio performance.

Prerequisite: BUS 320 and (BUS/ST 350, or ST 312, or ST 370, or ST 372)

*Typically offered in Fall and Spring*

**BUS 423 Advanced Investments** (3 credit hours)

Advanced Investments focuses on empirically investigating the behavior of asset prices and returns. Students will work directly with data to learn and reproduce the motivating facts that have shaped the development of the modern investment landscape. The course will build a financial analysis tool set, including techniques for data visualization and description, hypothesis testing and statistical inference. Students will explore the behavior of stock returns across broad portfolios and individual stocks as well as other asset classes with the goal of gaining a deeper understanding of topics such as market efficiency, return predictability, and time-varying risk and return relationships.

Prerequisite: BUS 320; Corequisite: BUS 422

*Typically offered in Spring only*

**BUS 425 Advanced Personal Financial Management** (3 credit hours)

Detailed economic, financial and legal analysis of risk management, retirement planning, investments, and estate planning. Additional emphasis on professional financial planning for those interested in personal finance as a career. This course and BUS 225 should not both be taken for credit towards the Business Administration degree.

Prerequisite: BUS 320

*Typically offered in Fall and Spring*

**BUS 426 International Financial Management** (3 credit hours)

Foreign exchange markets, forward markets and derivatives, and their implications for direct and portfolio investment abroad. International capital markets. Multinational company exchange rate exposure measurement and management. Instruments of financing international trade and investment. Multinational capital budgeting and cost of capital.

Prerequisite: BUS 320 and (BUS/ST 350 or ST 305 or ST 312 or ST 370 or ST 372)

*Typically offered in Fall and Spring*

**BUS 427 Capital Markets Essentials** (3 credit hours)

This course will take an in depth look at the capital markets and how they differ for issuers and investors, focusing on various fixed income, equity and alternative markets both in security and derivative form. Students will learn not only how these markets operate but also develop the technical skills to value such instruments as well as understand what factors drives valuations as well as these markets.

Prerequisite: BUS 320

*Typically offered in Fall and Spring*

**BUS 428 Financial Analytics** (3 credit hours)

Advanced course examining the use of big data analytics in finance. The focus will be on the application of these tools in the areas of asset management and equity valuation. Topics covered include risk-return tradeoff, financial intermediaries in asset management (e.g., mutual funds, hedge funds, etc.), stock valuation models, and using financial statement information in stock selection / asset management. Students will complete a semester-long project involving data analysis (e.g., write an equity research report on a publicly traded U.S. firm, backtest an investment strategy, etc.).

Prerequisite: BUS 320

*Typically offered in Fall and Spring*

**BUS 429 Financial Modeling** (3 credit hours)

BUS 429 is 'corporate finance in Excel.' Starting from the theoretical base gained in BUS320, students work through problems in time value of money, capital budgeting, and valuation (among other things) using spreadsheet analyses. The course will take a very hands-on approach in building financial spreadsheet models. Microsoft Excel is the primary tool we will use to implement these financial models and the course will go into detail on the proficient use of Excel.

Prerequisite: BUS 320

*Typically offered in Fall and Spring*

**BUS 440 Database Management** (3 credit hours)

The fundamentals of database management within business applications. Includes data structures, user requirements, data model design, database administration, and Structured Query Language (SQL) to provide storage, security, and sourcing of data to solve business issues and problems. Design and development of both relational and non-relational database management systems (DBMS) as data sources to Machine Learning and AI models are addressed.

Prerequisite: ACC 340 or BUS 340

*Typically offered in Fall and Spring*

**BUS 441 Business Data Communications and Networking** (3 credit hours)

The fundamentals of computer networking and the use of computer networks in business applications. Client-server networks, architecture, network hardware and software, key issues in network management, network security, and the fundamentals of datacommunications.

Prerequisite: ACC 340 or BUS 340

*Typically offered in Fall and Spring*

**BUS 442 Information Systems Development** (3 credit hours)

This course provides concepts and skills necessary for designing, developing, and deploying information systems (applications) to aid in business and managerial decisions. It includes hands-on experience with development (coding) theory and concepts, objected-oriented algorithm design and development concepts, graphical user interface design concepts, and integration with databases and data structures using the Python programming language.

Prerequisite: ACC 340 or BUS 340

*Typically offered in Fall and Spring*

**BUS 443 Web Development for Business Applications** (3 credit hours)

This course provides current technologies for designing and developing interactive, web-based systems for business. Topics may include current programming languages, server-side programming, client-side programming, server-side scripting, database integration, and more. Design concepts will be implemented through team projects.

Prerequisite: BUS 442; Corequisite: BUS 440

*Typically offered in Fall and Spring*

**BUS 444 Systems Analysis and Design** (3 credit hours)

Information systems development is a systematic yet a complex process and this course provides a holistic view of principles, methods and tools that govern that process. Topics in this course will equip the students with the understanding and necessary skills to navigate the complexities of developing Information Systems, which are among the primary responsibilities of technology consultants/analysts/managers. The course covers topics in systems development frameworks such as agile software management, systems development lifecycle, and object-oriented system analysis and design. The course focuses on hands-on experience with project management softwares and methods, systems requirements analysis via Unified Modeling Language (UML) and systems design/ user experience design.

Prerequisite: ACC 340 or BUS 340

*Typically offered in Fall and Spring*

**BUS 449 Information Technology Practicum** (3 credit hours)

This is a completely project-oriented course. Students will work on real applications for national or local firm(s) to solve "live" IT problems. Students will work in teams to develop client deliverables and present their final work to an appropriate industry-based management team. Field trips and/or outside class activities (including client/consultant work) are a major part of this course. Students who are unable to participate in these types of events should not enroll in this course.

Prerequisite: BUS 440 or 441 or 442 or 443 or 444.

*Typically offered in Spring only*

**BUS 458 Analytics: From Data to Decisions** (3 credit hours)

In this course, students will explore and integrate the power of AI and data analytics to tackle real-world business challenges. Through analyzing case studies grounded in authentic business problems and datasets, students will journey through the full analytics lifecycle, encompassing the articulation of business problems, data curation, analysis, and decision-making. Students will learn to identify and elucidate business problems amenable to analytics solutions, incorporating AI to provide innovative insights. A critical part of the course involves evaluating the impact of these advanced analytic methods on business outcomes, ensuring students can effectively communicate the significance of their findings and the potential benefits to the business "bottom line."

Prerequisite: BUS 351

*Typically offered in Fall and Spring*

**BUS 459 Business Analytics Practicum** (3 credit hours)

Advanced application of business analytics and artificial intelligence (AI) skills, tools, and methodologies to solve business issues and problems. Small teams of students will undertake projects to identify business issues, confirm the information needed to address the issues, and apply the required data analytics or AI tools and methodologies. The projects will include interaction with business personnel, refinement of business issues, gathering information, development of business analytics or AI models, and presentation of results through data visualization. Each project will culminate with the student team presenting their findings and recommendations to the organization.

Prerequisites: BUS 351 and BUS 458

*Typically offered in Fall and Spring*

**BUS 460 Consumer Behavior** (3 credit hours)

The consumer decision process, with emphasis on consumer decision making, satisfaction/dissatisfaction factors, perception, learning, group influences, and marketing strategy implications. Restricted to majors within the College of Management.

Prerequisite: BUS 360

*Typically offered in Spring only*

**BUS 461 Channel and Retail Marketing** (3 credit hours)

Retailing composes a substantial component of the US economy, creating millions of jobs. Marketing channels are where marketing mix strategy and tactics ultimately impact customers and produce sales. This course is designed to prepare students for roles such as buying, merchandising, store management, professional selling, distribution, inventory management or other retailing-oriented careers. Emphasis will be placed on developing students' relevant skill sets in key areas such as retail metrics, site analysis, pricing tactics, merchandising strategy, and customer relationship management. Relevant aspects of consumer behavior and organizational leadership in a retail setting will be covered.

Prerequisite: BUS 360

*Typically offered in Fall and Spring*

**BUS 462 Marketing Research** (3 credit hours)

The use, collection, organization and analysis of information pertinent to marketing decisions. Use of qualitative and quantitative data in the solution of specific marketing problems.

Prerequisite: BUS 360 and (BUS/ST 350, or ST 312, or ST 370, or ST 372)

*Typically offered in Fall, Spring, and Summer*

**BUS 463 Sales and Marketing Practicum** (3 credit hours)

This course is a team-based project course where students work on a sales/marketing problem for a business enterprise. Students, company team leads (clients), and the NCSU faculty advisor will work together to document the project scope early in the semester. Ultimately, the student team will be responsible for project management. Components of this typically include a project scope, project work plan, key deliverables and milestones. The projects usually consist of building a framework for analyzing the project data, development of reasonable recommendations for action in both the long and short term, and various reports and presentations to project stakeholders: company participants and management, and the NCSU faculty advisor.

P: BUS 360 and one other Marketing Concentration Course (BUS 460, 461, 462, 465, 466, 467, 468, or 469)

*Typically offered in Fall only*

**BUS 464 International Marketing** (3 credit hours)

Explores moving from a national marketing approach to a global marketing strategy, and discusses competitive advantages and challenges in making the transition. Both traditional countries of Western Europe and emerging markets will be examined. Students will analyze culture considerations when evaluating the impact on local business strategies. In addition to learning the impact on the world's economy through globalization, emphasis will also be placed on developing necessary professional skills.

Prerequisite: BUS 360

*Typically offered in Summer only*

**BUS 465 Traditional and Digital Brand Promotion** (3 credit hours)

This course focuses on advertising and integrated brand promotions, spanning both traditional and digital media. Emphasis is on the brand. Includes development of marketing communications strategy and campaign materials, from consumer insight generation to creative execution.

Prerequisite: BUS 360

*Typically offered in Fall and Spring*

**BUS 466 Personal Selling** (3 credit hours)

Revolves around the art of people-to-people interaction, which applies not only to the business-to-business sales environment but is also applicable to other professions. The selling process will be examined along with activities necessary to be successful in sales. With a common thread of developing and nurturing relationships, students will examine building partnerships, implications of ethical and legal issues, adapting the approach to the situation and identifying social styles with associated behaviors. Attention will also be focused on the steps involved in the sales cycle and how to be successful in their execution.

Prerequisite: BUS 360

*Typically offered in Fall and Spring*

**BUS 467 Product and Brand Management** (3 credit hours)

Provides an in-depth understanding of marketing planning and implementation involved in product and brand management. The course places emphasis on developing specific marketing strategies to support the creation and launch of new products and to successfully manage existing products and brands.

Prerequisite: BUS 360

*Typically offered in Fall and Spring*

**BUS 468 Marketing Strategy** (3 credit hours)

This course is designed to build on the core marketing principles you learned in your introductory marketing course and to enhance your understanding of their strategic implications.

Prerequisite: BUS 360

*Typically offered in Spring only*

**BUS 469 Digital Marketing Practicum** (3 credit hours)

This course provides you with an introduction to the digital marketplace through an experiential learning approach. After conducting a client audit, your team will develop a digital marketing campaign including appropriate major digital platforms. Post-campaign metrics and data analytics will be utilized to measure campaign effectiveness and future marketing strategy. The course pedagogy emphasizes class discussion, industry expert lectures, digital simulation, and a client digital project.

Prerequisite: BUS 360

*Typically offered in Fall and Spring*

**BUS 470 Operations Modeling and Analysis** (3 credit hours)

Tools, techniques, and strategies used for analyzing and improving business operations, including process mapping, capacity analysis, demand forecasting, and quality analysis and improvement. Emphasis on Excel as a tool for analysis, particularly on Excel functions and modules relevant to operations analysis.

Prerequisite: BUS 370 and (BUS/ST 350 or ST 305 or ST 312 or ST 370 or ST 372)

*Typically offered in Fall and Spring*

**BUS 472 Operations Planning and Control Systems** (3 credit hours)

Design and management of operations planning and control systems for manufacturing and service firms. Forecasting, capacity management, production and work force scheduling, project management, just-in-time and time-based competition, the impact of information technologies on planning and control systems.

Prerequisite: BUS 370; Co-requisite: BUS 470

*Typically offered in Fall and Spring*

**BUS 473 Supply Chain Strategy** (3 credit hours)

THERE ARE NO PLANS TO OFFER THIS COURSE IN THE FORESEEABLE FUTURE. Purchasing, materials management, and logistics. Purchasing systems, supplier-based strategies, price-cost management, value analysis. Inventory strategies, quantity and quality decisions, materials planning. Logistics strategies for services and manufacturing.

Prerequisite: BUS 370; Co-requisite: BUS 470

*Typically offered in Spring only*

**BUS 474 Logistics Management** (3 credit hours)

Management of physical flows of goods between firms, management of inventories that support those flows, and assessment of the effects of freight transportation choices on these management activities. A variety of conceptual frameworks and quantitative tools are used to formulate the basis for effective logistics decision making and relate those decisions to broader issues in managing the entire supply chain and fulfilling the strategic objectives of a firm. A nominal fee for simulation software may be required.

Prerequisite: BUS 370; Co-requisite: BUS 470

*Typically offered in Fall and Spring*

**BUS 475 Purchasing and Supply Management** (3 credit hours)

This course is designed to help students develop knowledge of basic principles in purchasing and supply management. Students will be able to explain the potential contributions of these efforts of the competitiveness of the firm.

Prerequisite: BUS 370; Co-requisite: BUS 470

*Typically offered in Fall and Spring*

**BUS 476 Decision Modeling and Analysis** (3 credit hours)

Structured framework and process for modeling and analyzing business decisions. Business decisions are frequently made difficult by the presence of uncertainty and complex interactions among key drivers of the decision. In today's global environment the stakes of bad outcomes may be too high to justify learning by experience. Filled with in-depth insights and practical advice, this course covers the essential tools and techniques to improve your skills, such as: decision trees, influence diagrams, spreadsheet-based decision modeling, Monte Carlo simulation, demand forecasting, and methods to obtain and model decision-relevant data from subject matter experts in an unbiased manner.

Prerequisite: BUS 340 and (BUS/ST 350, or ST 312, or ST 370, or ST 372)

*Typically offered in Spring only*

**BUS 479 Supply Chain Management Undergraduate Practicum** (3 credit hours)

This course is comprised of a team-based project working on a Supply Chain Resource Consortium (SCRC) partner company's supply chain management issues. These projects vary in scope as are company's supply chain issues and improvement initiatives. Student groups need to provide their own transportation to off-campus sites.

Prerequisite: BUS 370 and one 400-level Operations/Supply Chain Management course

*Typically offered in Fall and Spring*

**BUS 480 Capstone Security Valuation & Portfolio Management** (3 credit hours)

This course focuses on practical applications of security selection and modern portfolio theory. Students will use cutting edge industry methods to implement theory into practice. Students will learn technical skills in valuation/forecasting models, investment decision making process, portfolio management, and performance attribution in this advanced quantitative course.

Prerequisite: BUS 420

*Typically offered in Fall and Spring*

**BUS 495 Special Topics in Business Management** (1-6 credit hours)

Presentation of material not normally available in regular course offerings, or offering of new courses on a trial basis.

**BUS 498 Independent Study in Business Management** (1-6 credit hours)

Detailed investigation of topics of particular interest to advanced undergraduates under faculty direction on a tutorial basis. Credits and content determined by faculty member in consultation with Department Head. Individualized/Independent Study and Research courses require a "Course Agreement for Students Enrolled in Non-Standard Courses" be completed by the student and faculty member prior to registration by the department.

*Typically offered in Fall, Spring, and Summer*

**BUS 541 Strategic Risk Analysis Using Excel** (1 credit hours)

This course explores the use of data analysis techniques and tools that are useful for organizing and categorizing large volumes of information for use by executives to make strategic business decisions. The course exposes students to various Excel techniques through a business case to support management's decision making and focuses on how data analysis can be used to inform management and the board about top strategic risk issues.

*Typically offered in Fall and Spring*

**BUS 542 Forecasting and Scenario Planning Using Monte Carlo Simulation** (1 credit hours)

This course explores how forecasting and scenario planning are used to support management's decision making. The course focuses on how data analysis techniques and tools are useful for organizing and categorizing large volumes of information for use by executives to make strategic business decisions and it exposes students to Monte Carlo Simulation and Optimization techniques to support strategic business decisions. The course then focuses on communicating this information to inform management and the board about top strategic risk issues.

*Typically offered in Fall and Spring*

**BUS 543 Communicating Risk Information Using Tableau** (1 credit hours)

This course provides an introduction as well as hands-on experience in data visualization. It introduces students to design principles for creating meaningful displays of quantitative and qualitative data to facilitate managerial decision-making. Students develop an understanding of the fundamentals of communication and alignment around concepts that are required for effective data presentation and it provides an overview and develop an introductory level of competency on the use of the Tableau software tool that can be used for data visualization.

*Typically offered in Fall and Spring*

**BUS 554 Project Management** (3 credit hours)

Life cycle view of organizing and managing technical projects, including project selection, planning, and execution. Methods for managing and controlling project costs, schedules, and scope. Techniques for assessing project risk. Use of popular project management software tools. Application of project management tools and methods to product development, software, and process reengineering projects.

*Typically offered in Spring and Summer*

**BUS 558 Communications, Privacy, and Ethics in Data Science** (2 credit hours)

This class will give you the opportunity to explore the ethical issues associated with the development and use of Big Data and data science activities. The data science lifecycle will serve as a backdrop within which to examine ethical concerns related to the design, collection, use and dissemination of data. These include issues of AI and bias, transparency in communications and data design, privacy and data collection, among others.

*Typically offered in Spring only*

**BUS 571 High Growth Entrepreneurship** (3 credit hours)

Second course in a two-course entrepreneurship sequence focusing on opportunities outside the technology arena. Theoretical and practical, team-based, approach to the evaluation and assessment of opportunities for value creation. Emphasis on how to discover, validate, and then execute on an action plan to create value. Credit not allowed if the student has already taken MBA 576 or MBA 577.

Prerequisite: MBA 570. Credit not allowed if the student has already taken MBA 576 or MBA 577.

*Typically offered in Fall and Spring*

**BUS 590 Special Topics In Business Management** (1-6 credit hours)

Presentation of material not normally available in regular courses offerings or offering of new courses on a trial basis.

*Typically offered in Fall, Spring, and Summer*

**BUS 740 Doctoral Seminar - Operations and Supply Chain Management Research** (3 credit hours)

This seminar introduces non-business doctoral students to research in operations and supply chain management and, more fundamentally, to the process of developing research ideas and projects. At the outset of the course, the focus of the discussion lies on the structure and key elements of research papers and on the general research process. In the following sessions, students identify the findings and contributions of published research papers and propose/defend possible extensions or new research ideas. Throughout the course, the primary emphasis will be placed on each student's development of a research project, from idea to draft working paper.

R: Doctoral Students Only

*Typically offered in Fall only*

**BUS 790 Special Topics In Business Management** (1-6 credit hours)

Presentation of material not normally available in regular courses offerings or offering of new courses on a trial basis.

*Typically offered in Fall, Spring, and Summer*