

# BUSINESS ADMINISTRATION (BA)

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## Course Descriptions

### BA 510 Introduction to Business Analytics 3 Credit Hours

This course provides a foundation in business analytics, equipping students with the knowledge and skills to extract, transform, visualize, and analyze data and report insights to support informed business decisions. Students will explore fundamental concepts, techniques, and software tools with emphasis on descriptive and predictive (e.g., regression and classification) analytics, and an introduction to prescriptive analytics (e.g., linear programming). The course combines theoretical learning with practical applications and written reporting. It prepares students to tackle real-world business challenges using data-driven approaches, such as the SOAR model or the CRISP-DM Process. They will be ready for advanced analytics courses in their chosen field. (F, W).

**Prerequisite(s):** MATH 104 or MATH 105 or MATH 113 or MATH 115 or Math Placement with a score of 105 or Math Placement with a score of 115

### BA 520 AI Fundamentals for Business 3 Credit Hours

This course provides a comprehensive introduction to Artificial Intelligence (AI) and its applications in business. Designed for business professionals and students, the course focuses on exploring potential of AI technologies, including but not limited to Big Data, Machine Learning and Deep Learning, Large Language model and Generative AI, to transform various business functions. Through a combination of lectures, case studies, and hands-on exercises, students will gain a foundational understanding of AI concepts, tools, and strategies to leverage AI for business innovation and efficiency. The course also prepares students for advanced courses if they choose to pursue a technical oriented career. (F, W).

**Restriction(s):**

Can enroll if Class is Graduate

### BA 530 Programming and Data Structures with Python 3 Credit Hours

In this foundational course, students will gain an understanding for computer programming and skills for data manipulation via hands-on experience. Topics include basic programming concepts and logic, data structures, data models, and data manipulation. Through real world examples students explore data analysis and visualization. Students will explore machine learning and deep learning, neural networks, natural language processing (NLP), large language models, generative AI, and other related applications. The aim for this course is for students to become critical users of data and technologies. The course prepares students for advanced analytics courses in their chosen field or advanced programming and system development courses. (F, W).

**Restriction(s):**

Can enroll if Class is Graduate

### BA 605 Managerial Decision Making 3 Credit Hours

This course covers the findings of research on behavioral decision making as they apply to managerial decision making. You will learn how the human mind works, what it is particularly good at and not so good at, and what the implications of this are for managerial decision making. The course will help you make better decisions and understand the potential shortcomings of the decisions made by your colleagues, competitors, collaborators, and customers. Topics include human cognition, overconfidence, heuristics and biases in decision making, bounded awareness, framing, preference reversal, motivational and emotional influences on decision making, escalation of commitment, expertise in decision making, and fairness and ethics in decision making. We will apply the research on behavioral decision making to a wide variety of problems in various domains of business, study how applications of information systems can mitigate limitations of the human mind, and apply our knowledge of the way the human mind works to develop an understanding of ways to improve managerial decision making. Students interested in careers in a wide variety of business professions will find the knowledge and skills gained in this course to be useful in their professional endeavors.

**Restriction(s):**

Can enroll if Class is Graduate

### BA 607 Business Disruption in the Digital Age: Machine Learning, Platforms, and the Crowd 3 Credit Hours

This course integrates research from the fields of economics, mathematics and statistics, information systems, and organizational behavior as they inform our understanding of the three interrelated phenomena of machine learning, the platform, and the crowd that are disrupting and transforming businesses organizations, industries, and the economy. Our study of machine learning will contrast human decision making (and its limitations and biases) with machine learning and examine the organizational and economic effects of robotics, digitization, and other technological innovations. Our study of platforms will focus on network effects, technical architecture, and strategies related to the monetization and openness of platforms. Our study of the crowd will focus on crowd-based expertise, prediction markets, economic impacts of the sharing economy, blockchain, regulatory issues in the sharing economy, and issues of the nature of work and labor in the sharing economy. We will apply and integrate research in these areas to the development of insights into business problems with an emphasis on shifts in traditional business organizations and emerging types of organizations that use technological innovations in ways that have the potential for disrupting and transforming industries. Students interested in careers in a wide variety of business professions will find the knowledge and skills gained through this course to be useful in their professional endeavors. (YR).

**Restriction(s):**

Can enroll if Class is Graduate

**BA 611 Organizational Dysfunction and Wealth Effects 3 Credit Hours**

Dysfunction abounds in organizations and can have profound impacts on individuals, organizations, and society. In this course you will learn to identify organizational dysfunction and examine how organizational dysfunction spills over to influence various types of wealth (e.g., financial, social, well-being, time) within social systems. Then, you will learn a framework and tools you can use to (1) make sense of your work experiences and navigate organizations, (2) diagnose and address a wide range of organizational problems, and (3) minimize dysfunction in groups and projects you lead. Students interested in a wide variety of professions will find the expertise gained to be useful for structuring complex projects and company-wide initiatives, allocating scarce resources, and fostering organizational change. (YR).

**Prerequisite(s):** OB 510

**Restriction(s):**

Can enroll if Degree is Master of Business Admin

Can enroll if College is Business

Can enroll if Major is Business Admin/Finance, Business Admin/Ind & Syst Engr, Business Admin/Information Sys, Business Admin/Supply Chain, Business Administration, Bus Admin/Health Services Adm

**BA 616 Firm Value and Market Reactions 3 Credit Hours**

This course will analyze various decisions made by the firm relating to its operations and external events which impact the operations of the firm. In either case, the effects of events both on the financial statements of the firm and on the financial markets' evaluation of the firms' prospects will be examined. This examination will include an exploration of how quickly, or slowly, firm decisions and external events are impounded into these estimates of firm value. After developing the relevant skills in accounting, finance, and statistical analysis, students will conduct a project of their own exploring empirically and critically the effects of an event on the performance (and perceived performance) of firms Open only to MBA and dual MBA students.

**Prerequisite(s):** ACC 505 and FIN 531 and (DS 520 or BA 510 or IMSE 514)

**Restriction(s):**

Can enroll if Major is Business Admin/Finance, Business Admin/Ind & Syst Engr, Business Admin/Information Sys, Business Admin/Supply Chain, Business Administration, Bus Admin/Health Services Adm

**BA 682 Experiential Project 1 to 3 Credit Hours**

This course is focused on providing a holistic, project-based learning experience. Under the guidance of iLabs leadership, students will work in small groups on applied projects using current industry data. Topics vary based on industry partner needs, but students will use relevant analytical techniques to develop solutions to the industry questions. Weekly coursework will follow a structure where student teams are responsible for the design of data collection, analysis of the data, and presentation of the findings to industry partners. Since the course is built around experience akin to a consulting project, mentors and the iLabs leadership will help students practice soft skills such as collaboration, communication, leadership, and problem-solving experiences. There is an emphasis of student application of project management techniques in the course. Graduate students are required to utilize advanced data analytics tools and will take a greater leadership role in projects than undergraduate students. (F, W, S).

**Prerequisite(s):** BA 510 or DS 520

**BA 690 Graduate Research 1 to 3 Credit Hours**

To provide masters candidates with the opportunity to undertake a research project under the supervision of a faculty member. The research topic is chosen by the student, in consultation with a faculty member in the appropriate discipline. Written approval must be obtained at least two weeks prior to registration on a form available in the Graduate Office. The request must include a comprehensive description of the proposed research project, as well as a time line for the project's completion.

**Restriction(s):**

Can enroll if Class is Graduate

Can enroll if College is Business

**BA 691 Graduate Seminar 1 to 3 Credit Hours**

Topics Course. To provide masters candidates with an opportunity for study of selected advanced topics in particular fields. Topics vary. See Schedule of Classes for current offerings. May be elected more than once if topics differ.

**Prerequisite(s):** (MIS 525 or MIS 502) and (MKT 515 or MKT 610)

**Restriction(s):**

Can enroll if Class is Graduate

**BA 691A Graduate Seminar 3 Credit Hours**

Topic: The Internal Revenue Service. This course introduces the student to the structure, organization, practices and procedures of the Internal Revenue Service. The course is intended to give students an understanding of the organizational makeup of the Internal Revenue Service and the authority of its various employees. The different approaches to resolving tax controversies will be explored through the study of assigned readings and in-depth class discussions. The course will be conducted in a seminar-like fashion with each student expected to make significant contributions to class discussions. Attentiveness to news items affecting the area of federal tax procedures is expected, as well as conveyance to class of these newsworthy developments. This course is appropriate for MSA? Tax Concentration students.

\*An asterisk denotes that a course may be taken concurrently.

**Frequency of Offering**

The following abbreviations are used to denote the frequency of offering: (F) fall term; (W) winter term; (S) summer term; (F, W) fall and winter terms; (YR) once a year; (AY) alternating years; (OC) offered occasionally