

Business & Data Analytics (BADA)

Courses

BADA A105 Introduction to Personal Computers and Application Software **3 Credits**

Develops computer literacy by emphasizing basic hands-on use of personal computers, operating systems, and application software to include word processing, spreadsheets, databases, presentation graphics, and the Internet.

Registration Restrictions: Keyboarding skill of 30 wpm or better is recommended

BADA A110 Computer Concepts in Business **3 Credits**

Employs popular productivity software, operating system software, and computer hardware from a business perspective. Examines personal computer software packages, the information processing cycle, and beginning programming concepts. Emphasizes solving business problems utilizing spreadsheet and database software applications.

Special Note: Recommended: MATH A105 and (BADA A105 or familiarity with personal computers, basic software applications and keyboarding of at least 30 wpm).

BADA A210 Introduction to Programming for Business Analytics **3 Credits**

Provides students with a solid foundation in programming fundamentals and computational thinking concepts, emphasizing the application of these skills to address business-related problems and extract valuable insights from data. Introduces students to widely-used programming languages and tools in the field of business analytics.

Registration Restrictions: If prerequisite is not satisfied, approved UAA mathematics placement test score and current programming experience are required.

Prerequisites: BADA A110 with a minimum grade of C and (MATH A121 with a minimum grade of C or MATH A151 with a minimum grade of C or MATH A152 with a minimum grade of C or MATH A155 with a minimum grade of C or MATH A211 with a minimum grade of C or MATH A212 with a minimum grade of C or MATH A221 with a minimum grade of C or MATH A251 with a minimum grade of C or MATH A251F with a minimum grade of C or MATH A252 with a minimum grade of C or MATH A252F with a minimum grade of C or MATH A253 with a minimum grade of C).

BADA A250 Basic Web Page Development for Business Applications **3 Credits**

Focuses on fundamentals of designing and developing web pages for business applications using the most recent versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Includes concepts related to best practices for managing design processes, selecting service providers, prototyping, testing and accessibility compliance.

Special Note: Students may apply no more than 3 credits from BADA A250 or BADA A350 toward graduation requirements.

May Be Stacked With: BADA A350

BADA A295 Computer Programming Internship **1-6 Credits**

Provides computer programming and/or end-user support work to include maintenance of information systems equipment and/or networks, and software experience in a faculty-approved position.

Special Note: Requires 75 hours of work experience for each credit. Maximum of 3 internship credits may be used to meet major requirements.

Registration Restrictions: Department approval required. Students must be in good standing in the College of Business and Public Policy. Cumulative GPA of 2.75 or higher.

Prerequisites: BADA A210 with a minimum grade of C.

BADA A310 Systems Analysis and Design **3 Credits**

Provides students with the opportunity to achieve a high level of practical understanding of the system development methodologies, with a focus on agile and adaptive incremental methodologies.

Examines techniques for managing and evolving software systems, including project planning from requirements gathering to analysis, estimation, and release, with a hands-on approach to implementing agile methodologies.

Prerequisites: BA A280 with a minimum grade of C and BADA A210 with a minimum grade of C.

BADA A330 Database Systems **3 Credits**

Covers principles and concepts of database systems, including query languages, relational databases, data warehouses, data marts, data lakes, NoSQL databases, online transaction processing systems, and online analytical processing systems.

Prerequisites: BADA A110 with a minimum grade of C.

BADA A345 Managing Data Communications and Computer Networks **3 Credits**

Introduces the rapidly changing environment of data communications over local area networks and over switched and private voice lines. Focuses on the control and management of data in a distributed environment, the technology issues associated with data communications, and current trends in the industry.

Prerequisites: BADA A110 with a minimum grade of C.

BADA A350 Advanced Web Page Development for Business Applications **3 Credits**

Focuses on advanced features of designing and developing web pages for business applications using the most recent versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Includes concepts related to best practices for managing design processes, selecting service providers, prototyping, testing and accessibility compliance. Also includes basic client-side programming for web pages using current scripting techniques such as JavaScript and jQuery.

Special Note: Students may apply no more than 3 credits from BADA A250 or BADA A350 toward graduation requirements.

May Be Stacked With: BADA A250

Prerequisites: BADA A210 with a minimum grade of C or CS A109 with a minimum grade of C or CSCE A201 with a minimum grade of C or CSE A205 with a minimum grade of C.

BADA A361 Advanced Contemporary Business Applications Development **3 Credits**

Develops business applications using contemporary technologies and programming languages at an advanced level. Designs user interfaces and integrates them with other platforms such as spreadsheets and databases.

Prerequisites: BADA A210 with a minimum grade of C.

BADA A370 Data Mining and Machine Learning **3 Credits**

Provides an introduction to the field of data mining and machine learning. Focuses on the concepts, algorithms, and techniques used for discovering patterns in large datasets and building predictive models.

Prerequisites: BADA A210 with a minimum grade of C.

BADA A390 Selected Topics in Management Information Systems **1-6 Credits**

Study of specific current issues, techniques, and trends in Management Information Systems (MIS).

Special Note: May be repeated for a maximum of 9 credits with a change of subtitle. Maximum of 9 elective credits may be used for the Bachelor of Business Administration in Management Information Systems.

Prerequisites: BADA A210 with a minimum grade of C.

BADA A395 Programmer/Analyst Internship **3 Credits**

Provides computer programmer/analyst work experience in a faculty approved position.

Special Note: Requires 225 hours of work experience. Maximum of 3 internship credits may be used to meet major requirements.

Registration Restrictions: Department approval required. Student must be in good standing in the College of Business and Public Policy. Cumulative GPA of 2.75 or higher.

Prerequisites: BADA A210 with a minimum grade of C.

BADA A410 Project Management **3 Credits**

Covers essentials of planning, scheduling, and managing information system projects; risk assessment and risk management; and project management tools. Involves students in the development of a project plan for a community-based information system development project.

Prerequisites: BADA A310 with a minimum grade of C.

BADA A412 Ethics and Privacy Issues in AI, Big Data and Business Analytics **3 Credits**

Provides an overview of fundamental concepts and principles of big data, artificial intelligence (AI), and data security, which are necessary to explore and understand ethical and privacy issues in business analytics.

Corequisites: BADA A370.

BADA A430 Client-Server Programming for Business Applications **3 Credits**

Covers basic client-server system concepts and business application development using client-server development tools. Students will write advanced business application programs using client-server design and development tools with programming languages in order to interface with Database Management System (DBMS) software for interactive processing. Emphasizes application development, program design, program testing, and certification in the client-server environment.

Prerequisites: BA A376 with a minimum grade of C and BADA A210 with a minimum grade of C and BADA A330 with a minimum grade of C.

BADA A445 Advanced Network Management **3 Credits**

Provides practical knowledge about the installation, configuration, administration, and operation of networks in local area and wide area settings. The operation and interconnectivity between commercially available software will be explored as well as the utilization of different communication protocols on the same network.

Prerequisites: BADA A345 with a minimum grade of D.

BADA A460 Web Development in the .Net Environment **3 Credits**

Development of data-driven web applications within the .Net environment. Uses ASP.Net and C# as the development environment.

Special Note: Assumes previous programming experience with HTML and CSS.

Prerequisites: BA A376 with a minimum grade of C and BADA A210 with a minimum grade of C and (BADA A250 with a minimum grade of C or BADA A350 with a minimum grade of C or JPC A345 with a minimum grade of C).

BADA A470 Business Analytics, Data Science, and Machine Learning **3 Credits**

This course introduces database techniques, data visualization, machine learning (ML) methods, and other business intelligence (BI) topics. Students gain practical experience using contemporary BI tools and technologies, and apply sound design principles for creating intelligent solutions to realistic business problems.

Special Note: Not available for credit to students who have completed BADA A670.

May Be Stacked With: BADA A670

Prerequisites: ECON A227 with a minimum grade of C.

BADA A487 Business Analytics Senior Project **3 Credits**

Provides an in-depth, hands-on experience involving all the aspects of a realistic analytics business project. Gives students the opportunity to work in teams as consultants on projects of interest to industry partners, going through industry-standard workflows.

Registration Restrictions: Senior standing and admission to the College of Business and Public Policy

Prerequisites: BADA A310 with a minimum grade of C and BADA A330 with a minimum grade of C and BADA A370 with a minimum grade of C and BADA A410 with a minimum grade of C.

BADA A489 Systems Design, Development and Implementation 3**Credits**

Engages students in the design, development and implementation of an information system project. Students working in small teams integrate and apply MIS concepts and skills, conduct independent research, develop an implementable system for a community organization, and present written and oral reports.

Prerequisites: BA A376 with a minimum grade of C and BADA A410 with a minimum grade of C and (BADA A430 with a minimum grade of C or BADA A460 with a minimum grade of C).

BADA A490 Advanced Topics in Management Information Systems 3**Credits**

Study of advanced current issues, techniques and trends in management information systems (MIS). Students will be required to conduct research.

Special Note: May be repeated twice with a change of subtitle/topic. Maximum of 9 elective credits may be used for the BBA in Management Information Systems degree. Check course schedule for specific titles being offered.

Prerequisites: BADA A210 with a minimum grade of C.

BADA A495 Systems Analyst/User Support Internship 3 Credits

Provides systems analyst or user-support work experience in a faculty approved position.

Special Note: Requires 75 hours of work experience for each credit. May be repeated once for credit. A maximum of 3 internship credits may be used to meet major requirements.

Registration Restrictions: Department approval required. Student must be in good standing in the College of Business and Public Policy with a minimum cumulative GPA of 2.75.

Prerequisites: BA A376 with a minimum grade of C and BADA A210 with a minimum grade of C.

BADA A498 Individual Research Project 1-6 Credits

In a simulated professional environment, students complete an MIS project, prepare a project report, and make a managerial presentation.

Special Note: May be repeated for a maximum of 6 credits. A maximum of 3 credits may be used to meet degree requirements.

Prerequisites: BA A376 with a minimum grade of C and BADA A361 with a minimum grade of C.

BADA A670 Advanced Business Analytics, Data Science, and Machine Learning 3 Credits

Provides strategic knowledge and insight into database techniques, data warehousing, online analytical processing (OLAP), data mining, data visualization, machine learning (ML) methods, and other business intelligence (BI) topics. Students gain practical experience using contemporary BI tools and technologies, and apply sound design principles for creating intelligent solutions to realistic business problems.

Registration Restrictions: Graduate standing

May Be Stacked With: BADA A470

Prerequisites: BA A610 with a minimum grade of B.