

# BUSINESS INFORMATION AND ANALYTICS (BIA)

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**BIA 2040 (s) Special Topics (1-16 credits, max 99)**  
Credit arranged

**BIA 2500 Introductory Systems Development (3 credits)**  
Introduction to event-driven and object-oriented systems development in a graphical user interface environment; significant hands-on demonstrations and uses of a variety of integrated application development tools.

**Prereqs:** Must have taken at least 30 credits

**BIA 2980 (s) Internship (1-3 credits, max 6)**  
Graded Pass/Fail.

**BIA 2990 (s) Directed Study (1-16 credits, max 99)**  
Credit arranged

**BIA 3500 Managing Information (3 credits)**  
Introduction to use and management of data to support decision making. Includes discussion of relevant international and ethical issues. Typically Offered: Fall, Spring and Summer.  
**Prereqs:** STAT 1530/MATH 1153, STAT 2510, BUS 2530 or STAT 3010

**BIA 3980 (s) Internship (1-3 credits, max 6)**  
Graded Pass/Fail.

**BIA 4040 (s) Special Topics (1-16 credits, max 99)**  
Credit arranged

**BIA 4400 Data Visualization for Managerial Decision Making (3 credits)**  
Use of data analytics to improve decision making and provide visual insights for businesses to improve long term predictions and prescribe future actions. Typically Offered: Varies.  
**Prereqs:** BIA 3500 or BUS 3540 or Instructor Permission

**BIA 4530 Database Design (3 credits)**  
Introduction to modern database management systems and their use in solving business problems. May involve evening exams.  
**Prereqs:** BIA 3500 or CS 1120

**BIA 4540 Issues in Information Systems (3 credits)**  
Discussion of major topics of current importance in information systems.  
**Prereqs:** BIA 3500

**BIA 4550 Data Management for Big Data (3 credits)**  
Joint-listed with BIA 5550  
Introduction to big data and the various data models related to managing "Big Data" and very large datasets. Emphasis will be on developing NOSQL data management systems. Additional topics may include data access, data analytics, and data visualization. Additional projects/ assignments required for graduate credit.

**BIA 4560 Cybersecurity Competition (1 credit, max 6)**  
Students will develop, practice, and validate cybersecurity skills. The skills developed from participating in the virtual labs will be used to participate in the competitions. Graded Pass/Fail.

**BIA 4610 Advanced Business Analytics (3 credits)**  
This course delves into sophisticated techniques and tools for analyzing complex business data. Participants will explore advanced statistical methods, machine learning algorithms, and data visualization strategies to derive actionable insights from large datasets. Emphasis will be placed on real-world applications and case studies to bridge the gap between theory and practice. By the end of the course, students will be equipped to tackle intricate business problems and drive strategic decision-making using advanced analytics. Typically Offered: Varies.

**Prereqs:** BIA 3500

**BIA 4650 Data Management and Security in the Cloud (3 credits)**  
This course provides an in-depth exploration of data management practices and security protocols in cloud environments. Participants will learn about cloud storage solutions, data governance, and compliance requirements while gaining hands-on experience with key cloud platforms. The course covers strategies for securing data, managing access controls, and ensuring data integrity across various cloud services. Through practical exercises and real-world scenarios, students will develop the skills needed to effectively manage and protect data in cloud-based systems. Typically Offered: Varies.

**Prereqs:** BIA 3500

**BIA 4990 (s) Directed Study (1-16 credits, max 99)**  
Credit arranged

**BIA 5550 Data Management for Big Data (3 credits)**  
Joint-listed with BIA 4550  
Introduction to big data and the various data models related to managing "Big Data" and very large datasets. Emphasis will be on developing NOSQL data management systems. Additional topics may include data access, data analytics, and data visualization. Additional projects/ assignments required for graduate credit.