

CSIS - Computer Information Systems

<i>Global Citizenship Program Knowledge Areas (....)</i>	
ARTS	Arts Appreciation
GLBL	Global Understanding
PNW	Physical & Natural World
QL	Quantitative Literacy
ROC	Roots of Cultures
SSHB	Social Systems & Human Behavior

<i>Global Citizenship Program Skill Areas (....)</i>	
CRI	Critical Thinking
ETH	Ethical Reasoning
INTC	Intercultural Competence
OCOM	Oral Communication
WCOM	Written Communication
** Course fulfills two skill areas	

business problems, techniques for extracting meaning from data and general approaches of data analytical thinking.

CSIS 2700 Data Privacy, Security, and Ethics (3)

There is a subtle balance between improvements in business operations by using big data analytics and increased risk if (inadvertently) overstepping certain legal or social boundaries. This course addresses the pros and cons of using data analytics in business and social, ethical and security issues associated with it. Several real-world cases will be discussed and analyzed in the course. **Prerequisite:** CSIS 2500.

CSIS 2800 Data Visualization Fundamentals (3)

In this course, students will learn how to choose the best visualization for the required information, and how to

CSIS 1500 Introduction to Business Technologies (3)

Business organizations operate in competitive environments and constantly redefine their business strategies to create competitive advantages. Information technology plays an important role in daily business activities by supporting and implementing enterprise-wide initiatives and global business strategies. This course will provide a broad overview of the close correlation between business and technology. The course will explore various information technologies and how they fit into business operations as a key enabler to help business success.

CSIS 1700 Data Exploration (3)

Data is the foundation for business decision making in this information age. Students in this class explore data from various perspectives and learn how it can be used in business context. Using spreadsheet as a tool, students gain basic understanding on data organization, manipulation, and presentation.

CSIS 2300 Electronic Commerce (3)

More and more business is conducted over the internet. Electronic commerce (e-commerce) is expanding across the globe. The course provides students with opportunities to gain an understanding of electronic commerce with its major driving forces in information technology. The study covers features of electronic commerce, technology foundations, business strategies and electronic commerce environment. **Prerequisite:** CSIS 1500.

CSIS 2500 Introduction to Data Science (3)

This course serves as an introduction to data science, which incorporates theories and techniques from many areas, such as statistics and data mining, to extract valuable knowledge from data. The course provides an overview of fundamental principles about how data science can provide solutions to

CSIS - Computer Information Systems

CSIS 3800 Machine Learning (3)

This course will provide a background and benefits of Machine Learning to data science-related tasks. The fundamental concepts and algorithms in machine learning will be introduced, as well as effective ways of applying machine learning to a variety of subject areas. Topics covered in this course include Supervised Learning, Unsupervised Learning, Linear Regression, Clustering, Bayesian Learning, Decision Trees, and Neural Networks. **Prerequisite:** COSC 1800, MATH 3160, MATH 3610.

problems, focused on problem outcome, and will be conducted with business, government, and academic context.

Students will apply what they learned in mathematics, statistics, analytics, and computer science to build an efficient data analysis and accurate association, prediction, classification, or forecasting model. Conduct model evaluation and selection, and produce an analytics story to show their findings. **Prerequisite:** Department Approval.

CSIS 3810 Management Information Systems (3)

This course covers the organizational foundations of systems, their strategic role and the organizational and management changes driving electronic commerce, electronic business and digital firms. The course also covers technical foundations of information systems and the roles of information systems in capturing and enhancing management decision making across the enterprise. **Prerequisite:** Junior standing.

CSIS 4300 Database Systems (3)

This course will provide a foundation for understanding database technology by examining the way databases are used, designed and managed. The course will introduce fundamental concepts related to databases with an emphasis on the relational model. The course will cover the principles of designing databases and provide students with introductory experience in developing and using database applications. Management of databases in the workplace and the responsibilities of database administrators will be covered. This course uses a database management system (DBMS) for hands-on activities. **Prerequisite:** Junior standing.

CSIS 4310 Decision Support Systems (3)

This course will teach fundamental concepts of information as well as decision support systems. The course will study management support systems' terminologies, decision-making process, problem modeling for analysis and solution design, data management, access, visualizations and constructing simple decision support systems. The course will briefly discuss business intelligence and the role of networks in implementing and using decision support systems. **Prerequisite:** Junior standing.

CSIS 4320 Data Warehousing (3)

This course will provide a foundation to understand data warehouse technology by examining the way they are designed, managed, and used. The course will explore the fundamental concepts related to data warehouses. Some of the topics of interest that are covered in this course are the business justification of a data warehouse, management of a data warehouse project, the design, construction and operation of a data warehouse, issues of data quality and performance, and using the data warehouse. **Prerequisite:** CSIS 4300.

CSIS 4330 Machine Learning for Data Analytics (3)

This course will provide a foundation to understand machine learning algorithms and methods by examining how these technologies provide useful knowledge that supports critical business decisions. This course will introduce machine learning concepts and have students experiment with machine learning applications. **Prerequisite:** CSIS 3700.

CSIS 4500 Data Science Capstone (3)

This capstone course will allow students to create a usable data science solution that can be used to show their skills to potential employers. Projects will be drawn from real-world