CSIS - Computer Information Systems | Undergrad

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.

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 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.