INFORMATION SYSTEMS, MS DATABASE AND INTERNET TECHNOLOGIES SPECIALIZATION

This specialization addresses the growing demand for professionals with technical skills to analyze, design, implement, and manage software applications and digital media for the enterprise and IoT (Internet-of-Things).

The program emphasizes experimentation and application of theoretical concepts to real-world scenarios with the goal of creating business value. Throughout the course of study, students will acquire knowledge and skills in the following areas that can immediately be put to use throughout the digital enterprise:

- Data modeling and database design, implementation, and programming skills, using both Relational Database Management Systems and NoSQL technologies
- Design and development of distributed software systems that adhere to sound design principles and best practices, including scalable data services architecture and robust security
- Integration of data science concepts and machine learning algorithms to solve business problems

Curriculum

Core Courses (5 units)

Course	Title
CIS 413-DL	Telecommunications Networks
CIS 414-DL	Object Oriented Programming
MSDS 430-DL	Python for Data Analysis
CIS 417-DL	Database Systems Design & Implementation
CIS 498-DL	Information Systems Project
or CIS 590-DL	Capstone Research

Specialization Courses (6 units)

Course	Title
CIS 419-DL	Web Application Development
CIS 431-DL	Database Administration
CIS 435-DL	Practical Data Science Using Machine Learning
Any three electives	
CIS 436-DL	Big Data Management and Analytics
CIS 452-DL	Fundamentals of Network Security
CIS 453-DL	Advanced Cyber Security
CIS 455-DL	Disaster Recovery and Continuity
CIS 457-DL	Management of Information Security
CIS 459-DL	Innovation with Blockchain Technology
CIS 460-DL	Information Technology Management
CIS 465-DL	Information Technology Strategy
CIS 494-DL	Project Management Concepts
CIS 495-DL	IT Project Management
CIS 496-DL	Information Technology Business Writing and Communication
CIS 497-DL	Information Technology Finance

About the Final Project

Students may pursue their capstone experience independently or as part of a team. As their final course, students take either the individual research project in an independent study format or the classroom final project class in which students integrate the knowledge they have gained in the core curriculum in a project presented by the instructor. In both cases, students are guided by faculty in exploring the body of knowledge on information systems while contributing research of practical value to the field. The capstone independent project and capstone class project count as one unit of credit.

Course	Title
Choose one	
CIS 498-DL	Information Systems Project
CIS 590-DL	Capstone Research