

DIGITAL TRANSFORMATION SPECIALIZATION

We have entered the Fourth Industrial Age, where high bandwidth connectivity and technologies like artificial intelligence and cyber-physical integration are driving societal and business change at a scale, scope and pace unprecedented in human history. Digital transformation is the response to this revolution, designed to help businesses and institutions adapt to the realities and the ever-increasing pace of this change. Focused on more than merely digitizing existing operations and systems, digital transformation is about using tech to change fundamentally how a business acts, changing the means and the pace of interaction with customers, employees, and value chain participants. Digital transformation practitioners need to capture and drive that change. The digital transformation specialization is focused on preparing students to become leaders of transformation by providing students with a deep understanding of how to identify transformative trends, how to take advantage of change, and how to prepare and design technology strategies to deliver against that change, including data strategy and structure, designing agile organizations, and applying digital technologies to real world business problems. This specialization will include creation of a practical digital transformation plan for a real-world business or institution, providing students with the skills to think about transformation in a practical case and to deliver change that matches the moment.

Curriculum

Core Courses (4 units)

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

Specialization Courses (7 units)

Course	Title
CIS 435-DL	Practical Data Science Using Machine Learning
CIS 436-DL	Data and Digital Platforms
Any five of the following specialization electives:	
CIS 453-DL	Enterprise Security Strategy
CIS 471-DL	Digital Transformation: Strategy and Planning
CIS 473-DL	Digital Technologies
CIS 475-DL	Leading Digital Transformation Execution
CIS 477-DL	Enterprise Architecture
CIS 495-DL	Enterprise Agility Frameworks
MS_IDS 401-DL	Models and Theories of User-Centered Design

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	Computer Information Systems Capstone Project
CIS 590-DL	Capstone Research