

INFORMATION SYSTEMS, MS HEALTH INFORMATICS SPECIALIZATION

The health informatics specialization operates at the convergence of IT and health care, where evidence-based medicine, intelligent medical records, and data are leveraged to fuel more efficient, patient-centered health care, payment reform, and improved population health. Assessing health informatics needs from clinical, technical, operational, and financial perspectives, students gain familiarity with the use of standards, information architecture, standard terminologies, and decision analysis in complex health care organizations. Students develop insights into clinical care processes and how IT impacts patients, health care providers, caregivers, and other key stakeholders in a rapidly evolving health care environment.

Curriculum

Core Courses (4 units)

| Course | Title |
|-----------------------------------|--|
| CIS 413-DL/413-0 | Telecommunications and Computer Networks |
| CIS 414-DL or MSDS 430-DL | Object Oriented Programming Python for Data Analysis |
| CIS 417-DL/417-0 | Database Systems Design & Implementation |
| CIS 498-DL/498-0 or CIS 590-DL | Computer Information Systems Capstone Project Capstone Research |

Specialization Courses (7 units)

| Course | Title |
|------------|--|
| MHI 402-DL | Introduction to Clinical Thinking |
| MHI 403-DL | Fundamentals of Health Informatics |
| MHI 405-DL | HIT Standards and Interoperability |
| MHI 406-DL | Decision Support Systems and Health Care |

Any three electives

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|------------------------------|---|
| CIS 419-DL | Web Application Development |
| CIS 431-DL | Database Administration |
| CIS 435-DL | Practical Data Science Using Machine Learning |
| CIS 436-DL | Data and Digital Platforms |
| CIS 452-DL/452-0 | Cybersecurity Attacks and Counter Measures |
| CIS 453-DL | Enterprise Security Strategy |
| CIS 455-DL/455-0 | Disaster Recovery and Continuity |
| CIS 457-DL/457-0 | Management of Information Security |
| CIS 460-DL/460-0 | Information Technology Management |
| CIS 465-DL/465-0 | Information Technology 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 |
| CIS 496-DL | Business Writing and Communication |
| CIS 497-DL | Information Technology Finance |
| CIS 494-DL or MSDS 475-DL | Project Management Concepts Project Management |

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/498-0 | Computer Information Systems Capstone Project |
| CIS 590-DL | Capstone Research |