

# Health Data Analytics, MS—Online

The digitization of healthcare systems in clinical settings, in combination with the explosion of personal data collection devices, creates opportunities for using data to revolutionize approaches to health at all levels. The Master of Science in Health Data Analytics prepares students to make an impact on health outcomes, medical knowledge, and healthcare systems by producing data-driven insights.

The fully online and asynchronous Master of Science in Health Data Analytics is intended for students that seek to build analytics skills required to stand out in the healthcare industry. This program is designed for learners from multiple backgrounds and will prepare students with the specific technical skills required to excel in analytical roles in healthcare. Graduates will gain the expertise to extract actionable insights, identify patterns and trends, and inform evidence-based decision making in the dynamic healthcare landscape.

The program combines a robust analytics core presenting fundamental concepts such as data acquisition, data mining, statistics, and data visualization with foundational knowledge for navigating the healthcare data system. Health analytics courses discuss the complex data and information needs throughout the healthcare ecosystem including the needs of payers, providers, and regulatory agencies. Courses on health science as well as courses on the evolving business of healthcare provide students with deep, relevant industry knowledge preparing them for a variety of roles in the space. Students can expect to gain a broad and deep understanding of the various methods, software tools, and topical expertise needed to discover meaningful patterns in health-related data and effectively communicate their implications to a number of diverse stakeholders. In addition to the analytics core and the healthcare core, students will take elective courses allowing them to explore emerging topics of interest in more depth.

Successful graduates of the Master of Science in Health Data Analytics will be effective practitioners and leaders in the rapidly evolving domain of data analytics with a focus on health and healthcare.

## LEARNING OUTCOMES

- Analyze organizational and stakeholder challenges in healthcare settings and develop data-driven solutions to address those challenges, align with strategic goals, and improve patient outcomes
- Collect health-related data from various sources, ensuring its accuracy and integrity
- Analyze health data using statistical, epidemiological, and data-mining methods, leveraging software tools and programming languages such as R, SAS, or Python to derive actionable insights
- Interpret and visualize analytical results by transforming complex data into clear charts and graphs that convey key insights to nontechnical stakeholders
- Present findings to nontechnical stakeholders by delivering concise, engaging narratives that highlight the implications of the analysis in an easily understandable format

## Program Requirements

Complete all courses and requirements listed below unless otherwise indicated.

### Core Requirements

Code	Title	Hours
DADS 6400	Foundations for Data Analytics	4
DADS 6600	Computation and Visualization for Analytics	4
DADS 7275	Machine Learning and Data Analytics	4
HINF 5101	Introduction to Health Informatics and Health Information Systems	3
HINF 5102	Data Management in Healthcare	3
HINF 6355	Interoperability Key Standards in Health Informatics	3
HINF 6400	Introduction to Health Data Analytics	3
HSCI 5130	Introduction to Real-World Evidence	2

### Electives

Code	Title	Hours
Complete 6 semester hours from the following:		6
HINF 5407	Business Application of Decision Support in Healthcare	
HINF 6205	Creation and Application of Medical Knowledge	
HINF 6404	Patient Engagement Informatics and Analytics	
PHTH 5210	Biostatistics in Public Health	

## Program Credit/GPA Requirements

32 total semester hours required

Minimum 3.000 GPA required