

# Master of Science in Health Informatics & Analytics

Tufts' online Master of Science in Health Informatics & Analytics (MS-HIA) program **integrates informatics and analytics** within one curriculum. Students develop the broad-range of skills and knowledge needed to succeed in the interdisciplinary fields that lie at the intersection of **healthcare, IT, information management, and data science**. The program's curriculum provides students with a deep understanding of emerging health information technologies and advanced information systems, along with the knowledge and practical skills needed to improve patient outcomes. The MS-HIA combines live online classes with an on-campus immersion and can be completed in as few as 20 months.

## Sample Courses

- Health Data Analysis and Usage
- Health Information Systems, Standards, Decision Support
- Introduction to Big Data Analysis and Artificial Intelligence in Healthcare
- Data Trust - Information Governance in Health
- Fundamentals of Privacy and Security in Health IT
- Introduction to Python for Health Informatics and Analytics

## On-Campus Immersion and Capstone Project

Students will attend an immersion experience on the Tufts campus in Boston, where they will collaborate with faculty, subject matter experts, and classmates to build the foundation for their capstone project. In the capstone project, students gain practical experience applying their informatics and analytics skills to a real-world health data problem at an organization of students' choosing. Students will work both remotely and on-site for the selected organization.



## Sample Capstone Projects

- Assisting in monitoring the implementation of privacy and security policies for cross-state data exchanges for telehealth patients
- Analyzing data to develop clinical decision support or other technology-based interventions to address pain points in clinical workflow at a hospital
- Evaluating a web portal designed to improve care coordination in the emergency department of a hospital
- Reviewing and analyzing hospitalization data as part of a quality improvement initiative at a hospital
- Researching business standards for interoperability to support information sharing for a state emergency operations center

## Degree Requirements

- Thirty-six (36) credits are required for the MS-HIA degree
- Attend a three-day immersion on Tufts' Boston campus
- Spend approximately 140 hours over a semester completing a capstone project

## Health Informatics and Analytics Career Outlook

The integrated curriculum is geared towards maximizing career opportunities for graduates of the program. Health informatics and analytics professionals work at various types of health organizations, including healthcare providers, public health agencies and clinical research organizations. Professionals in the field help to reduce medical errors, decrease medical costs, improve patient self-management of illness, increase medical responsiveness and adaptability, improve pandemic management, and more.

### Health informatics and analytics professionals may work as:

- Health informatician
- Health informatics consultant
- Health services manager
- Health informatics director
- Clinical informatics specialist
- Nurse informatics specialist
- Population health analysts
- Research and evaluation specialists
- Pharmacy informatics specialist
- Healthcare analyst
- Health data scientist
- Healthcare data analytics director
- Healthcare consultants
- Health services managers
- Lead informaticians

## Faculty Spotlights



**Ramya S. Palacholla, MD, MPH** | *Assistant Professor, Director of Health Informatics and Analytics Program*  
**Career Highlights:** Dr. Palacholla's research on "Innovative Tumor Response Forecasting Model in Breast Cancer Patients" was awarded first place in the Harvard Ideation Challenge.



**Olaf Dammann, SM, MD** | *Professor, Public Health and Community Medicine*  
**Career Highlights:** Dr. Dammann's research focuses on the integration of epidemiology, computation, informatics, and science philosophy to improve public health research. He has authored ten publications.



**Kenneth Chui, PhD, MPH** | *Assistant Professor, Public Health and Community Medicine*  
**Career Highlights:** In 2014, Chui was awarded the Tufts Teaching with Technology Award for using a wiki system in his class, a collaboratively built and perpetually evolving knowledge base.

## Application Requirements

- Online application
- Personal statements
- Three letters of recommendation
- Official transcripts

## Entry Terms

- January
- May
- September