

Precision Health, MS (Boston)

The Master of Science in Precision Health prepares learners from diverse backgrounds for a range of roles in the dynamic field of precision health. The program provides training in multiple disciplines to create agile graduates with the health sciences, business, and technology skills needed to succeed in precision health contexts. Students will choose a concentration based on their career aspirations and experience from the following options:

- **Bioinformatics:** This concentration prepares students for computational and analytical roles in precision health through training in bioinformatics, genomics, and health data science.
- **Clinical research and translation:** This concentration prepares students for operational and translational roles that move precision health innovations from research through regulatory approval to clinical implementation. Graduates gain broad exposure to clinical trial design and management, regulatory affairs, and product development—positioning them for careers coordinating research, navigating compliance requirements, or supporting biomedical commercialization efforts.
- **Public health innovation:** This concentration focuses on designing and implementing targeted health interventions for specific populations by integrating precision health approaches with community health practice. Students will study how to assess population health needs, develop evidence-based interventions, and leverage health technologies to address health equity and improve outcomes at the community and systems level.

Program Requirements

Beginning with students admitted in the fall of 2026, all students pursuing on-ground master's degree programs must complete a university-level experiential learning requirement. This requirement may be fulfilled through the curriculum, co-op, or other work- or industry-integrated learning experiences.

Complete all courses and requirements listed below unless otherwise indicated.

Core Requirements

Code	Title	Hours
HINF 5407 or PHTH 5212	Business Application of Decision Support in Healthcare Public Health Administration and Policy	3
HINF 5500 or PHTH 5210	Artificial Intelligence and Health Informatics Biostatistics in Public Health	3
HLTH 5700 or PHTH 5202	Social Determinants of Health Introduction to Epidemiology	3
HLTH 5750	Foundations of Precision Health	3
Capstone		
HLTH 6980	Capstone	4

Concentrations

Complete one of the following:

- Bioinformatics (p. 2)
- Clinical Research and Translation (p. 2)
- Public Health Innovation (p. 2)

Optional Co-op Experience

Code	Title	Hours
Complete the following (students must complete HLTH 5101 to qualify for co-op experience):		
HLTH 5101	Professional Development for Bouvé Graduate Co-op	1
HLTH 6964	Co-op Work Experience	0

Program Credit/GPA Requirements

31 minimum semester hours required (32 with optional co-op; some elective choices may require additional hours)

Minimum 3.000 GPA required

BIOINFORMATICS CONCENTRATION

Code	Title	Hours
BINF 6200	Bioinformatics Programming	4
BINF 6420	Omics in Bioinformatics	4

Electives

Complete a minimum of 7 semester hours from the following: 7

BINF 6400	Genomics in Bioinformatics
BIOL 5821	Cell and Gene Therapies
BIOL 6131	CRISPR: Gene Editing Fundamentals
BIOT 5220	The Role of Patents in the Biotechnology Industry, Past and Future
BIOT 5830	Regulatory Landscape of Cell and Gene Therapies
HLTH 5550	Product Design, Development, and Innovation in Health Science
HLTH 5820	AI Project for Health Applications
NNMD 5310	Bioethics in the Age of Artificial Intelligence
NNMD 5470	Nano/Biomedical Commercialization: Concept to Market
PHTH 6130	Public Health Technologies: Ethics and Equity

CLINICAL RESEARCH AND TRANSLATION CONCENTRATION

Code	Title	Hours
PHSC 5212	Research Skills and Ethics	2
PHSC 6213	Ethical Problems in Health Sciences Research	2
PHTH 6820	Design and Analysis of Clinical Trials	4

Electives

Complete a minimum of 7 semester hours from the following: 7

BINF 6511	Using Real-World Data to Advance Discovery in the Fields of Bioinformatics and Biotechnology
BIOL 5591	Advanced Genomics
BIOT 5219	The Biotechnology Enterprise
BIOT 5220	The Role of Patents in the Biotechnology Industry, Past and Future
BIOT 5228	Planning and Executing Biotechnology Projects
MSCI 6900	Research Methods and Design
NNMD 5310	Bioethics in the Age of Artificial Intelligence
NNMD 5470	Nano/Biomedical Commercialization: Concept to Market
PHSC 6214	Experimental Design and Biostatistics
PHTH 5226	Management and Leadership in Public Health and Healthcare
PHTH 5234	Economic Perspectives on Health Policy
PHTH 6130	Public Health Technologies: Ethics and Equity
RGA 6285	Validation and Auditing of Clinical Trial Information
RGA 6290	Clinical Trial Design Optimization and Problem Solving
RGA 6450	Financing and Reimbursement in Biomedical Product Development
RGA 6480	Real-World Evidence and Patient-Reported Outcomes in Regulatory Decision Making
RGA 6490	Emerging Trends and Challenges in Regulatory Affairs
RGA 6500	Biomedical Product Development: Regulatory Affairs in a Market-Based Setting
RGA 6600	Introduction to Food and Drug Administration Pharmaceutical Regulation
RGA 6610	Introduction to Food and Drug Administration Medical Device Regulation
RGA 6620	Medical Device Development: A Regulatory Overview
RGA 6660	Therapeutic Product Development: A Regulatory Overview

PUBLIC HEALTH INNOVATION CONCENTRATION

Code	Title	Hours
PHTH 6130	Public Health Technologies: Ethics and Equity	3
PHTH 6208	Foundations of Community Health Assessment	3

Electives

Complete a minimum of 9 semester hours from the following: 9

BIOL 5591	Advanced Genomics
CAEP 6346	Behavior Change for Individuals and Communities
MSCI 6001	Principles of Healthcare Advocacy
PHTH 5226	Management and Leadership in Public Health and Healthcare
PHTH 5234	Economic Perspectives on Health Policy
PHTH 5360	AI at the Intersection of Health and Society
PHTH 5540	Health Education and Program Planning
PHTH 6204	Society, Behavior, and Health