Healthcare Leadership, DMSc (Boston)

Northeastern University's Doctor of Medical Science is an interdisciplinary degree designed for medical professionals to advance their education and expand their career opportunities through various healthcare concentration areas. Students from diverse healthcare backgrounds share the common goal of developing facility with healthcare systems and becoming leaders within the greater healthcare community.

In addition to taking core courses in healthcare leadership, advocacy, and research methods, students can obtain additional education in one of several areas of specialization. These concentrations are designed to empower graduates from diverse backgrounds with the technical and analytical expertise that is relevant and in high demand in today's healthcare environment. Students will have the opportunity to collaborate with faculty from the Department of Medical Sciences and world-renowned faculty from a variety of interdisciplinary fields within Northeastern and the greater Boston community. This collaboration allows students to access expertise and knowledge across disciplines that will culminate in the creation of an original thesis study.

This degree will take between 16 and 20 months to complete and can be completed fully online. Some concentrations have on-ground curriculum requirements.

Please visit Bouvé College Learning Outcomes for the specific student learning outcomes for this program.

Program Requirements

Complete all courses and requirements listed below unless otherwise indicated.

Milestones

Thesis topic approval
Thesis committee
Thesis proposal
Thesis defense

Core Requirements

A grade of B− or higher is required in each course.

Code	Title	Hours
Healthcare Leadership		
MSCI 6001	Principles of Healthcare Advocacy	3
MSCI 6002	Workforce Metrics: Measuring, Comparing, and Privileging the Interprofessional Healthcare Team [7]	3-4
or HLTH 5800	AI Across the Health Sciences	
MSCI 6003	Healthcare Leadership Seminar	3
PHTH 6204	Society, Behavior, and Health	3
Research		
HLTH 5410	Introduction to Statistics in Health and Behavioral Science	3
MSCI 6900	Research Methods and Design	3
MSCI 6901	Doctoral Writing Seminar	3
MSCI 7990	Thesis	3
Registration in the following course is required if the thesis is not completed by the conclusion of the term of registration for MSCI 7990:		
MSCI 7996	Thesis Continuation - Half-Time [1]	

Concentrations

Completing a concentration is required to complete this program. A minimum of 12 semester hours is required.

- AI Applications (p. 2)
- Business Management (p. 2)
- Exercise Science (p. 2)
- Extreme Medicine (p. 2)
- Health Informatics (p. 3)
- Health Informatics Research (p. 3)
- Health Law (p. 3)
- Interdisciplinary Healthcare Leadership (p. 3)

- Patient Safety (p. 5)
- Public Health (p. 5)

Program Credit/GPA Requirements

Minimum of 36 total semester hours required

Minimum 3.000 GPA required

CONCENTRATION IN AI APPLICATIONS

Code	Title	Hours
Complete 12 semester hours from the following:		12
ARTG 6460	Human-Centered AI	
CS 5047	Exploring AI Trends and Tools	
HLTH 5800	AI Across the Health Sciences [8]	
PHIL 5110	Responsible AI	

CONCENTRATION IN BUSINESS MANAGEMENT

Code	Title	Hours
Complete a minimum of 12 semester hours from the following:		12
ACCT 6318	Analyzing Accounting Data for Strategic Decision Making	
BUSN 6402	Stakeholder Values and Societal Challenges in Business	
ENTR 6250	Lean Design and Development	
FINA 6318	Financial Management	
HINF 5105	The American Healthcare System	
HRMG 6318	Managing the Organization	
INNO 6225	Acquisitions, Alliances, and Growth	
INNO 6318	Innovation Driven Strategy	
MISM 6201	Database Management for Business	
MISM 6202	Foundations of Data Analysis for Business	
MISM 6210	Information Visuals and Dashboards for Business	
MISM 6212	Data Mining and Machine Learning for Business	
MKTG 6318	Customer Value and the Enterprise	
SCHM 6318	Managing Operations and the Supply Chain	
STRT 6318	Strategic Planning for the Future	

CONCENTRATION IN EXERCISE SCIENCE

Code	Title	Hours
Concentration Required [2]		
EXSC 5210	Physical Activity and Exercise: Prescription, Measurement, and Testing [3]	3
EXSC 5220	Advanced Exercise Physiology	3
EXSC 6202	Electrocardiography, Clinical Assessment, and Prescription	3
Selective		
Complete 3 semester hours from the following:		3
EXSC 5200	Cardiopulmonary Physiology	
EXSC 5230	Physical Activity and Exercise: Effects on Musculoskeletal Health and Disease	

CONCENTRATION IN EXTREME MEDICINE

Code	Title	Hours
Complete a minimum of 12 semester hours.		
Concentration Required		
MSCI 5403 and MSCI 5400	Expedition and Wilderness Medicine Experience and Experiential Reflections: Bridging Theory and Experience [4, 6]	3
Complete a minimum of 6 semester hours from the following (students may choose additional courses from the list below and/or an optional experiential elective to meet the minimum 12-semester-hour program requirement):		6-9
MSCI 5001	Human Factors and Situational Awareness	

MSCI 5002	Crisis Resource Management and Case Studies	
MSCI 5003	Humanitarian Aid Practice and Principles	
MSCI 5004	Humanitarian and Disaster Response Ethics	
MSCI 5005	Care During Conflict	
Optional Elective Experiential Courses [5]		
MSCI 5401 and MSCI 5400	Human Factors and Situational Awareness Experience and Experiential Reflections: Bridging Theory and Experience [4, 6]	
MSCI 5402 and MSCI 5400	Expedition and Cold Weather Medicine Experience and Experiential Reflections: Bridging Theory and Experience [4, 5, 6]	
MSCI 5405 and MSCI 5400	Humanitarian Medicine Experience and Experiential Reflections: Bridging Theory and Experience [4, 5, 6]	

CONCENTRATION IN HEALTH INFORMATICS

Code	Title	Hours
Concentration Required		
HINF 5101	Introduction to Health Informatics and Health Information Systems	3
HINF 6220	Database Design, Access, Modeling, and Security	3
HINF 6400	Introduction to Health Data Analytics	3
Selective		
Complete 3 semester hours from the following:		3
HINF 5105	The American Healthcare System	
HINF 5407	Business Application of Decision Support in Healthcare	
HINF 6205	Creation and Application of Medical Knowledge	

CONCENTRATION IN HEALTH INFORMATICS RESEARCH

Code	Title	Hours
Concentration Required		
HINF 5101	Introduction to Health Informatics and Health Information Systems	3
HINF 6220	Database Design, Access, Modeling, and Security	3
HINF 6400	Introduction to Health Data Analytics	3
Selective		
Complete 4 semester hours from the following:		4
CS 6350	Empirical Research Methods	
HINF 5300	Personal Health Interface Design and Development	

CONCENTRATION IN HEALTH LAW

Code	Title	Hours
Concentration Required		
LW 6102	Introduction to Legal Studies 2	3
Selectives		
LW 6102 is a prerequisite for the LW courses listed below. Complete 9 semester hours from the following:		9
LW 6110	Law of Information and Records	
LW 6150	Law and Organizational Management	
LW 6180	Health Law Survey	
LW 6181	Healthcare Regulation and Compliance	
LW 6182	Patient Records, Privacy, and Security	
LW 6210	Special Topics in Employee Rights and Employer Obligations	

CONCENTRATION IN INTERDISCIPLINARY HEALTHCARE LEADERSHIP

Code	Title	Hours
Complete a minimum of 12 semester hours from the following:		12
Artificial Intelligence		
ARTG 6460	Human-Centered AI	
CS 5047	Exploring AI Trends and Tools	
HLTH 5800	AI Across the Health Sciences [9]	
PHIL 5110	Responsible AI	

Business Management

ACCT 6318	Analyzing Accounting Data for Strategic Decision Making
BUSN 6402	Stakeholder Values and Societal Challenges in Business
ENTR 6250	Lean Design and Development
FINA 6318	Financial Management
HINF 5105	The American Healthcare System
INNO 6225	Acquisitions, Alliances, and Growth
INNO 6318	Innovation Driven Strategy
MISM 6201	Database Management for Business
MISM 6202	Foundations of Data Analysis for Business
MISM 6210	Information Visuals and Dashboards for Business
MISM 6212	Data Mining and Machine Learning for Business
MKTG 6318	Customer Value and the Enterprise
SCHM 6318	Managing Operations and the Supply Chain
STRT 6318	Strategic Planning for the Future

Exercise Science

EXSC 5200	Cardiopulmonary Physiology
EXSC 5210	Physical Activity and Exercise: Prescription, Measurement, and Testing
EXSC 5220	Advanced Exercise Physiology
EXSC 5230	Physical Activity and Exercise: Effects on Musculoskeletal Health and Disease
EXSC 6202	Electrocardiography, Clinical Assessment, and Prescription

Extreme Medicine

MSCI 5001	Human Factors and Situational Awareness
MSCI 5002	Crisis Resource Management and Case Studies
MSCI 5003	Humanitarian Aid Practice and Principles
MSCI 5004	Humanitarian and Disaster Response Ethics
MSCI 5005	Care During Conflict

Health Informatics

CS 6350	Empirical Research Methods
HINF 5101	Introduction to Health Informatics and Health Information Systems
HINF 5105	The American Healthcare System
HINF 5200	Theoretical Foundations in Personal Health Informatics
HINF 5300	Personal Health Interface Design and Development
HINF 5407	Business Application of Decision Support in Healthcare
HINF 6205	Creation and Application of Medical Knowledge
HINF 6220	Database Design, Access, Modeling, and Security
HINF 6400	Introduction to Health Data Analytics

Health Law

LW 6102	Introduction to Legal Studies 2

LW 6102 is a prerequisite for the following LW courses:

LW 6110	Law of Information and Records
LW 6150	Law and Organizational Management
LW 6180	Health Law Survey
LW 6181	Healthcare Regulation and Compliance
LW 6182	Patient Records, Privacy, and Security
LW 6210	Special Topics in Employee Rights and Employer Obligations

Patient Safety

HLTH 5600	Introduction to Patient Safety

HLTH 5600 is a concurrent prerequisite for the following HLTH courses:

HLTH 5610	Patient Safety Science
HLTH 5620	Leadership, Patient Safety, and Clinician Wellness
HLTH 5630	Quality Improvement in Patient Safety

Pharmacy and Health Systems Science

PHMD 5575	Pharmaceutical Industry

Public Health

HLTH 5700	Social Determinants of Health
PHTH 5120	Race, Ethnicity, and Health in the United States
PHTH 5212	Public Health Administration and Policy
PHTH 6200	Principles and History of Urban Health
PHTH 6208	Foundations of Community Health Assessment

CONCENTRATION IN PATIENT SAFETY

Code	Title	Hours
Concentration Required		
HLTH 5600	Introduction to Patient Safety	3
HLTH 5610	Patient Safety Science	3
HLTH 5620	Leadership, Patient Safety, and Clinician Wellness	3
HLTH 5630	Quality Improvement in Patient Safety	3

CONCENTRATION IN PUBLIC HEALTH

Code	Title	Hours
Concentration Required		
PHTH 5120	Race, Ethnicity, and Health in the United States	3
PHTH 5212	Public Health Administration and Policy	3
PHTH 6200	Principles and History of Urban Health	3
PHTH 6208	Foundations of Community Health Assessment	3

[1] Students who have not completed their thesis but have already registered for the required number of thesis hours, and have no remaining coursework to complete the degree, may register for Thesis Continuation—Half-Time (MSCI 7996) in their last semester (including summer term). There is a 1-semester-hour tuition charge for Thesis Continuation—Half-Time (MSCI 7996). Thesis Continuation may be taken only once.

[2] Anatomy and Physiology I and II or equivalent and an exercise physiology or medical background are strongly recommended for the Concentration in Exercise Science.

[3] Physical Activity and Exercise: Prescription, Measurement, and Testing (EXSC 5210) is offered online with a four-day, on-campus, hands-on lab component in a low-residency format.

[4] Courses are offered in partnership with World Extreme Medicine. Additional expenses may be associated with the experience courses. Offered on-ground in a four-day experiential format.

[5] Some of the optional experiential learning experiences are limited to specific groups of medical or allied health professionals.

[6] One semester hour of Experiential Reflections: Bridging Theory and Experience (MSCI 5400) must be completed for each experience course. Experiential Reflections: Bridging Theory and Experience (MSCI 5400) may be taken concurrently or after the associated courses.

[7] Students who select AI Across the Health Sciences (HLTH 5800) (4 semester hours) versus Workforce Metrics: Measuring, Comparing, and Privileging the Interprofessional Healthcare Team (MSCI 6002) (3 semester hours) will incur an additional 1-semester-hour cost beyond the total program credits.

[8] Students who have completed AI Across the Health Sciences (HLTH 5800) as a core requirement must complete the remaining three courses in the Concentration in AI Applications.

[9] Students who have completed AI Across the Health Sciences (HLTH 5800) as a core requirement may not select this course as part of the Concentration in Interdisciplinary Healthcare Leadership requirements.