

CLINICAL INFORMATICS, MCI

The MCI is designed to train practicing healthcare professionals to become biomedical informaticians. Students will become proficient in informatics methods and clinical applications and be prepared to serve as applied informaticians in a variety of healthcare settings.

For more information: <https://www.med.upenn.edu/mbmi/curriculum-overview.html>

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2026 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.

The MCI program requires students to complete 10 course units, including required courses, electives, and a capstone project. In addition, students must complete the online HIPAA and CITI training modules. MCI students also have the option to present at informatics related symposium on campus.

The MCI course sequence is flexible, allowing students to pursue required courses and electives at their own pace, provided they complete all requirements within four years of matriculation. A typical student might complete the program in two years. Students may request additional time to complete their degree if needed provided they complete the requisite forms and upon approval by the leadership committee.

Curriculum

Code	Title	Course Units
Requirements		
BMIN 5010	Introduction to Biomedical and Health Informatics	1
BMIN 5030	Data Science for Biomedical Informatics	1
BMIN 5020	Database and Data Integration in Biomedical Research	1
BMIN 5110	Biomedical Informatics Methods for Learning Health Systems	1
BMIN 5060	Standards and Clinical Terminologies	1
BMIN 5070	Human Factors	0.5
BMIN 5120	Human Computer Interaction for Healthcare	0.5
BMIN 5200	Foundations of Artificial Intelligence in Health	1
BMIN 9900	Capstone	1
Select two electives ¹		2
Total Course Units		10

¹ A complete list of pre-approved electives can be found here (<https://www.med.upenn.edu/mbmi/course-descriptions.html>). Up to 2.0 CUs of transfer credit may be accepted to satisfy elective requirements.

² A minimum GPA of 3.0 is required for graduation.

Sample Plan of Study

First Year		Course Units
Fall		
BMIN 5010	Introduction to Biomedical and Health Informatics	1
BMIN 5030	Data Science for Biomedical Informatics	1
		Course Units 2.00
Spring		
BMIN 5020	Database and Data Integration in Biomedical Research	1
BMIN 5110	Biomedical Informatics Methods for Learning Health Systems	1
Select one Elective ¹		1
		Course Units 3.00
Second Year		
Fall		
BMIN 5060	Standards and Clinical Terminologies	1
BMIN 5070	Human Factors	0.5
BMIN 5120	Human Computer Interaction for Healthcare	0.5
Select one Elective ¹		1
		Course Units 3.00
Spring		
BMIN 5200	Foundations of Artificial Intelligence in Health	1
BMIN 9900	Capstone	1
		Course Units 2.00
		Total Course Units 10.00

¹ A complete list of pre-approved electives can be found here (<https://www.med.upenn.edu/mbmi/course-descriptions.html>).