

HEALTH SCIENCES INTEGRATED PROGRAM

Degree Types: PhD

The Health Sciences Integrated Program (HSIP) (<https://www.feinberg.northwestern.edu/sites/cehs/phd-program/>) offers doctoral student training in multiple disciplines within the health sciences. PhD students can choose to focus studies on:

- Health and Biomedical Informatics
- Health Services and Outcomes Research
- Healthcare Quality and Patient Safety
- Social Sciences and Health
- Biostatistics

The PhD program builds upon existing master's degree programs in these fields and incorporates new areas of strength in measurement and health behavior. Doctoral students receive rigorous interdisciplinary training in the core content needed for population health research in the 21st century.

Each student develops an individualized course of study that draws on the broad and deep resources found in The Graduate School and the Feinberg School of Medicine. HSIP provides a strong academic foundation for students to excel in research that addresses processes and methodologies in the clinical and population sciences.

The ultimate goal of the program is to produce graduates who will be leaders in population health science with the ability to connect approaches and methods from multiple disciplines.

Additional resources:

- Department website (<https://www.feinberg.northwestern.edu/sites/cehs/phd-program/>)
- Program handbook(s)

Degree Offered

- Health Sciences Integrated Program PhD (<https://catalogs.northwestern.edu/tgs/health-sciences-integrated-program/health-sciences-integrated-program-phd/>)

The objective of the Health Sciences Integrated PhD Program (HSIP) is to provide doctoral students training across multiple disciplines within the health sciences, spanning from informatics and program evaluation to implementation science and outcomes research. Integration across these disciplines provides rigorous interdisciplinary training in the core competencies of Ethics, Informatics, Communication, Statistical Methodology, Research Design, Measurement and Outcomes, and Writing needed for population and health research in the 21st century. With each track, students should be able to:

- Comprehend fundamental health sciences principles
- Enact ethical research methodologies and practices
- Advance communication skills through writing and oral presentation
- Articulate broader impacts of health sciences research
- Contribute original research to the respective track discipline and apply appropriate research methodology and analyses for a specific research question

- Create and communicate professional development plan.
- Collaborate with graduate faculty on research projects as a research assistant
- Develop classroom activities as a teaching assistant

Health Sciences Integrated Program (HSIP) Courses

HSIP 400-1 Interdisciplinary Health Sciences Doctoral Colloquium (0 Unit)

Year-long introduction to foundational issues in Health Sciences Disciplines that comprise the PhD program.

HSIP 400-2 Interdisciplinary Health Sciences Doctoral Colloquium (0 Unit)

Year-long introduction to foundational issues in Health Sciences Disciplines that comprise the PhD program.

Prerequisite: HSIP 400-1.

HSIP 400-3 Interdisciplinary Health Sciences Doctoral Colloquium (1 Unit)

Year-long introduction to foundational issues in Health Sciences Disciplines that comprise the PhD program.

Prerequisite: HSIP 400-2.

HSIP 401-0 Introduction to Health Measurement Science (1 Unit)

This course will focus on methodological issues regarding the design, implementation, analysis, and interpretation of health measures.

HSIP 430-0 Introduction to Social Sciences and Health (1 Unit)

The objective of this course is to introduce students to the role of social sciences in health and how researchers study psychosocial and behavioral variables in the context of health. The central focus will be on research done within the Department of Medical Social Sciences (MSS).

HSIP 440-0 Introduction to Medical Informatics (1 Unit)

This course is a survey of fundamental concepts and activities on information technology as applied to health care.

HSIP 441-0 Health and Biomedical Informatics Methods I (1 Unit)

This is the first course in a three-course series that provides an extended introduction to the methodologies of biomedical informatics.

Prerequisite: May be taken with instructor approval.

HSIP 442-0 Health Biomedical Informatics Methods II (1 Unit)

This course is the second in a series of courses offered to educate students about methodologies utilized in biomedical informatics.

Prerequisite: May be taken with instructor approval.

HSIP 443-0 Health Biomedical Informatics Methods III (1 Unit)

This course is the third in a series of courses offered to educate students about methodologies utilized in biomedical informatics.

Prerequisite: May be taken with instructor approval.

HSIP 445-0 Data Science for Clinical, Translational, and Population Researchers (1 Unit)

Due to advances in technology and data collection, the ability to analyze complex data sets is a necessary skill for all clinical, translational and population researchers. A variety of data analysis tools exist, some unique to specific domains. This course provides an introduction to the data, analysis tools, ethical considerations, and terminologies from across biomedical data science with an emphasis on clinical, translational and population methods and tools. Prerequisite: BIostat 302-0.

HSIP 499-0 Independent Study (0.5-2 Units)

Graded independent study course for students in the Health Sciences Integrated Program.

Prerequisite: Advisor approval via HSIP 499 - Independent Study Proposal Form (see Student Resources on HSIP website) and program approval.

HSIP 590-0 HSIP Doctoral Research (0.5-3 Units)

Independent research course for students in the Health Sciences Integrated Program.

Prerequisite: program approval.