

HEALTH PROFESSIONS EDUCATION

Degree Types: MS

The Master of Science in Health Professions Education (MS-HPE) is a two-year, part-time executive program through Northwestern University Feinberg School of Medicine. The master's program is tailored for educators, clinicians, and healthcare professionals who aspire to make a significant impact on the way healthcare is taught and practiced. The MS-HPE provides a challenging environment for learning and discovery with an emphasis on scholarship and technology. The in-person residencies, which cover topics such as mastery learning and implementation science, offer students the opportunity to broaden their knowledge areas and develop new skills.

All students complete intensive formal training (<https://www.feinberg.northwestern.edu/sites/ms-hpe/curriculum/>) in curriculum development, assessment, and equity. MS-HPE students will also complete a capstone project (<https://www.feinberg.northwestern.edu/sites/ms-hpe/curriculum/>) with mentoring by program faculty.

Additional resources:

- Department website (<https://www.feinberg.northwestern.edu/sites/ms-hpe/>)
- Program handbook(s)

Degree Offered

- Health Professions Education MS (<https://catalogs.northwestern.edu/tgs/health-professions-education/health-professions-education-ms/>)

Learning objective(s)/Students should be able to...

- Develop a comprehensive understanding of educational theories, principles, and practices applicable to health professions education.
- Acquire the necessary tools to be outstanding educators and advance their careers as scholars, teachers, and researchers in classroom and clinical settings.
- Cultivate skills in curriculum design, educational research, and assessment techniques tailored to health professions education learners.
- Gain expertise in utilizing innovative educational technologies and simulation-based learning tools for health professions instruction.
- Explore the role of equity in health professions education and scholarship and develop strategies to mitigate unconscious bias and promote a culturally competent clinical and learning environment.

Health Professions Education Courses

HLTH_PRF 401-0 Curriculum Development for Health Professions Educators (1 Unit)

This course will focus on the formal process of curriculum development. Students will explore the various stages of curriculum development: problem identification, needs assessment, learning objectives, educational strategies, implementation, and evaluation. Much of the course will cover the standard medical education curriculum development process developed by Kern and Thomas (Thomas PA, Kern DE et al. Curriculum Development for Medical Education: A Six-Step Approach. 3rd ed. The Johns Hopkins University Press). Alternative

approaches, including instructional design models, will also be presented. Students will work with peers to develop a curriculum of their choosing throughout the course, receiving feedback from classmates and their instructors. The course will culminate in a final presentation of their curriculum.

Prerequisite: Must be enrolled in Master of Science in Health Professions Education or have instructor approval.

HLTH_PRF 410-1 Educational Research for Health Professions Educators (1 Unit)

This course will focus on the principles of scholarship regarding healthcare learners. Key topics will include the definitions of scholarship in this field, the worldviews that inform scholarship, studies about an intervention vs. the outcomes of the intervention, development of a question, ethical concerns in the practice of educational research, and current directions in the fields.

Prerequisite: Must be enrolled in Master of Science in Health Professions Education or have instructor approval.

HLTH_PRF 420-1 Learning Theory for Health Professions Educators (1 Unit)

The goal of this course is for health professions educators to use the neuroscience of learning and adult learning theory to optimize learning outcomes and professional development for students at all levels across the various fields of health professions education. We will explore and compare various learning theories and principles important to medical education and identify how neuroscience informs them. Learning strategies, approaches and practices that do and do not align with these important theories and principles will be analyzed and discussed along with the evidence which supports their use. As the course progresses, students will be challenged to identify the presence and/or absence of evidence-based theories and strategies in their specific work and learning environments. Students will use neuroscience-informed theories, principles and strategies to critique and improve their curriculum plans that were produced in the Curriculum Development for HPE course.

Prerequisite: Must be enrolled in Master of Science in Health Professions Education or have instructor approval.

HLTH_PRF 430-1 Statistical Methods for Health Professions Educators (1 Unit)

This course will be an introduction to the statistical methods and data analysis required for medical education research. The key topics will cover uses and abuses of medical statistics including common pitfalls and mistakes, descriptive statistics, probability, sampling and hypothesis testing, regression models, and graphical presentations of data. Students will have access to a statistical software program (SPSSX) and do assignments/problem sets in this program to become familiar with it and the statistical concepts covered including interpretation of research paper analyses. The course will focus less on the computational details of a statistical analysis and more on understanding and interpreting analyses.

Prerequisites: Must be enrolled in Master of Science in Health Professions Education or have instructor approval.

HLTH_PRF 440-1 Assessment for Health Professions Educators (1 Unit)

This course will provide a general overview of key concepts in assessment within health professions education. Learners will explore assessment systems and will critically appraise the validity evidence supporting assessment practices commonly employed in health professions education. Each week will focus on a different topic within the field of health professions education and instructional strategies will include readings (both from textbooks that provide helpful concept overviews and from articles demonstrating the specific application of principles to the field of health professions education), critical appraisal

of journal articles, weekly discussion sections, and guest lecture sessions. Students will work towards a final project in which they design either a specific assessment or an assessment system that will be used within each learner's individual teaching and learning context. Prerequisite: Must be enrolled in Master of Science in Health Professions Education or have instructor approval.

HLTH_PRF 450-1 Qualitative Research for Health Professions Educators (1 Unit)

Qualitative methods are increasingly common in applied research in the health professions. They are especially useful in addressing research questions on health professions education and training and the structures and practices shaping medical education and practice. Qualitative methods are essential in explaining the "why" and "how" behind phenomena and provide an essential complement to quantitative methods, which may empirically represent "reality" but are not designed to explain the processes leading to specific outcomes. This applied course will cover the essential frameworks and concepts underpinning qualitative methods in medical education research. In this course, students will learn the essential frameworks and concepts underpinning qualitative research and gain knowledge of when and how to apply qualitative methods. The course introduces students to techniques and approaches including grounded theory, ethnography, and phenomenology, which comprise the leading paradigms in qualitative methods. Students will learn how to design qualitative research studies by identifying a topic, formulating research questions and hypotheses, designing research studies, analyzing data, and presenting results. Students will also learn the fundamentals of mixed methods research and when to apply them. Students will work throughout the course to design a qualitative research project to explore a research question using qualitative methods. This is a course in applied qualitative methods and, as such, involves synchronous and asynchronous learning and practice. Each week, students will complete reading assignments, participate in class discussion, and engage in a hands-on assignment that may include critiquing a qualitative study, viewing a pre-recorded lecture, developing research questions, designing data collection tools, coding and analyzing data, and collaborating with the instructor and classmates in developing research proposals. The course will culminate with students presenting their research proposal to their classmates.

Prerequisite: Must be enrolled in Master of Science in Health Professions Education or have instructor approval.

HLTH_PRF 460-1 Education Technology for Health Professions Educators (1 Unit)

The educational environment is rapidly changing as technology advances, and as educators we must adapt to this advancing landscape for learning. This course will explore a range of education technologies tailored specifically to the healthcare field which allow educators to extend their teaching and enhance the students' learning. The course will cover technology that enhances learning in various educational settings, including in-person, hybrid or hyflex, and online (both synchronous and asynchronous). Participants will examine the applications of AR, VR, and simulation-based learning in healthcare education. The course will include discussion to understand AI's applications in health professions education, empowering them to incorporate cutting-edge AI technologies into their teaching. Attention will be given to how educational technology can be applied using learning theory and can enhance curriculum development. Participants will engage in hands-on activities, case studies, and discussions to apply their learning in real-world contexts and equip learners with the skills necessary to improve their educational programs.

Prerequisites: Must be enrolled in Master of Science in Health Professions Education or have instructor approval.

HLTH_PRF 501-1 Master of Science – Health Professions Education Capstone Course (0.5 Unit)

The Capstone Project serves as a culminating experience and summative product of students' experiences in the MS-HPE program. It provides an opportunity for students to demonstrate their research development, data gathering and management, analysis, interpretation, and dissemination skills. This research project will benefit from the materials presented in the other coursework. Each student will be assigned a primary mentor for the project. Capstone mentors will be drawn from program directors and faculty, as well as select outside Northwestern faculty, as appropriate. Students and primary mentors will meet weekly when enrolled in the Capstone courses, as well as during the in-person intensives that occur twice per year. The Capstone will culminate in a formal presentation of the project to fellow students and faculty prior to graduation. Ultimately, the final product should be a well-reviewed, polished piece of academic writing that can be turned into a published article.