

UMB Master's Degree and Certificate Programs

UMB School	Masters of Science Program	Program Description
School of Graduate Studies	M.S. Health Science*	30-credit, Masters of Science program provides individuals with the education and training needed to engage with and respond to civic, social, environmental and economic challenges at the local, national and global levels.
School of Graduate Studies	M.S. Clinical Research	The 30 credit program is designed specifically to meet the needs of the clinician or clinician-in-training by providing a combination of course work and research experiences needed for a successful career in clinical investigation. The curriculum provides students with a thorough understanding of clinical research methodology, biostatistics, and research ethics and will provide participants with the necessary skills to conduct independent clinical research, to teach, and to mentor others.
School of Graduate Studies	M.S. Human Genetics & Genomic Medicine	The 30 credit MS program provides broad training in human genetics to understand human genetic variation and its relation to health and disease. The core curriculum provides a broad overview of the key areas of human genetics (molecular, biochemical, clinical, cytogenetics, and genetic epidemiology), and then each student specialize in their own particular areas of interest. The track utilizes a multidisciplinary team approach to research training that involves a diverse set of faculty from throughout the UMB campus.
School of Graduate Studies	MS in Health and Social Innovation	36 credits program challenges students to explore and apply principles of innovation, entrepreneurship, and design thinking to solve complex health and social challenges with concentrations in Health Science, User Experience (UX), and Biomedical Entrepreneurship. Each of the concentrations is offered as a certificate as well, ranging from 12 – 15 credit hrs
School of Pharmacy and School of Graduate Studies	M.S. Pharmaceutical Health Services Research	Pharmaceutical Health Services Research (PHSR) program is to provide graduates with the theory, practical experience, and decision-making skills needed to address a wide range of pharmacy related problems. Students select a concentration in Comparative Effectiveness and Patient-Centered Outcomes Research, Health Behavior Research, Pharmaceutical Policy Pharmacoeconomics, or Pharmacoepidemiology; 34 credits
School of Pharmacy and School of Graduate Studies	MS in Pharmacometrics*	MS in Pharmacometrics provides current professionals with skills and knowledge to plan, perform, and interpret pharmacometric analyses with the goal of influencing key drug development, regulatory, and therapeutic decisions. The program equips scientists to interact with interdisciplinary teams more effectively and provides them with the tool kit needed to perform independent research. 30 credits

School of Pharmacy and School of Graduate Studies	MS in Regulatory Science*	The MS in Regulatory Science program primarily focuses on drugs and biologics, although aspects of biologics, diagnostics, devices, and nutritional products are also addressed. The program covers all major areas of drug product regulatory science, including: Chemistry, Manufacturing, and Controls (CMC), Clinical Research, Pharmacovigilance, Phase IV Research (e.g., Pharmacoepidemiology), and Drug Discovery. The strength of the program is its science-driven understanding of drug product development and regulation. The program covers regulatory affairs in a global manner, including the application of regulatory principles worldwide. 30 credits
School of Medicine	The Master of Public Health (MPH)	The 42 credit Master of Public Health (MPH) provides students, some of whom are concurrently enrolled in professional schools, and health professionals with the opportunity for formal training in public health. Students have the option of specializing in one of three concentrations: Community and Population Health, Epidemiology, or Global Health.
School of Graduate Studies	Clinical Informatics	The 34-credit M.S. in Clinical Informatics was created for physicians, advanced practice providers, nurses, pharmacists, other healthcare professionals, biologists, and computer scientists who are committed to improving the quality of care provided to patients by analyzing information collected by healthcare organizations. The curriculum focuses on biomedical data, clinical processes, and computational systems, which students will apply to the practice of medicine, in order to enhance health outcomes, improve patient care, and strengthen the clinician-patient relationship. The program also covers the latest data science tools, machine learning techniques, and methods for big data processing. Coursework will also address leadership, professionalism, ethics, governance, bias, equity, and social determinants of health.
	<b>Certificate Programs</b>	
School of Graduate Studies	Clinical Informatics	The 12-credit post-baccalaureate Clinical Informatics certificate is created for physicians, nurses, pharmacists, other healthcare professionals, biologists, and other scientists committed to improving the quality of care provided to patients by analyzing information collected by healthcare organizations. Our curriculum focused on biomedical data, computational systems, and clinical process improvement, which students will apply to the practice of medicine, in order to enhance health outcomes, improve patient care, and strengthen the clinician-patient relationship. Coursework will also address bias, equity, and social determinants of health.
School of Graduate Studies	Clinical Research	The 12-credit certificate program provides training in the core competencies of clinical research including study design, biostatistics, data management, scientific communication and the ethical, legal and regulatory issues in clinical research.

School of Graduate Studies	Research Implementation and Dissemination*†	12-credit, four-course graduate certificate program to study methods that promote systematic uptake and translate the results of clinical and population research into everyday clinical practice and public health.
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\*Courses are 100% online for maximal flexibility for students

†Credits can be applied towards a M.S. Health Science