BIOMEDICAL INFORMATICS (MS)

Curriculum

Graduate Committee

Dr. Jenenne Geske (Interim Chair & Graduate Program Director), Dr. Babu Guda (Bioinformatics Track Director), Dr. James Campbell, Dr. Scott Campbell, Dr. Martina Clarke, Dr. Jane Meza (or designee), Dr. Ann Fruhling (University of Nebraska - Omaha representative), and Dr. Dele Davies (Senior Vice Chancellor for Academic Affairs).

The mission of the Biomedical Informatics Graduate Program is to develop the next generation of biomedical informaticians who will advance research and practice in contemporary information and knowledge management using innovative evidence-based approaches to improve human health. The Biomedical Informatics Graduate Program was formally approved by the Regents of the University and the State of Nebraska in the Spring of 2013. This program brings together experts and resources from multiple campuses including the University of Nebraska Medical Center (UNMC (http://unmc.edu/)), the University of Nebraska - Omaha (UNO (http://www.unomaha.edu/college-of-information-science-and-technology/academics/bioinformatics.php)) and the University of Nebraska Lincoln (UNL).

This joint program involving UNMC & UNO leverages expertise across campuses to provide an educational and research program with strengths in biologic, health care and technological aspects of biomedical informatics. It is a multidisciplinary, interprofessional effort integrating the theory and practice of information technology management, computer science, decision support systems, and applied computing with clinical science, biological science, bio-imaging, and public health.

General Requirements

- Completion of coursework
- Completion of comprehensive examination
- Completion of a research project consistent with a master's level achievement
- Completion and successful defense of a master's thesis

Code	Title	Credit Hours
Biomedical Sciences Core: Select one (1) course from the following		
GCBA 823	FUNDAMENTALS IN GENETICS AND GENOMICS	2
HPRO 830	FOUNDATIONS OF PUBLIC HEALTH	3
HSRA 810	U.S. HEALTH CARE SYSTEM: AN OVERVIEW	3
PAMM 940		3
Research & Quantitative Methods Core:		
BIOS 806	BIOSTATISTICS	3
Computing Core: CSCI 8010 and one (1) additional course selected from the following		
CSCI 8010	(FOUNDATIONS OF COMPUTER SCIENCE - This course is offered at the University of Nebraska - Omaha)	3
CIST 9080	(RESEARCH DIRECTIONS IN IT - This course is offered at the University of Nebraska - Omaha)	3
CSCI 8080	(DESIGN AND ANALYSIS OF ALGORITHMS - This course is offered at the University of Nebraska - Omaha)	3
CSCI 8325	(DATA STRUCTURES - This course is offered at the University of Nebraska - Omaha)	3
Informatics Core: Select two (2) courses from the following		
BMI 970	SEMINAR - HEALTH INFORMATICS (each semester)	1
ISQA 8570	(INFORMATION SECURITY POLICY AND ETHICS - This course is offered at the University of Nebraska - Omaha)	3
Electives (2 graded courses)		
Each student will work with his/her Advisory Committee to determine the appropriate graduate-level elective courses		
Other Requirements		
BMI 899	MASTERS THESIS (6 credits)	1-9