

BMI PhD Student Learning Outcomes 2020

By the end of the program, students will be able to:	OHSU core comp alignment
<ol style="list-style-type: none"> 1. Apply a broad knowledge of biomedical and health informatics, and related disciplines, to solve problems in research, clinical and educational settings. 2. Identify gaps in scientific knowledge; formulate a research question; design a research study; employ and apply appropriate methods or develop new methods as necessary; analyze, contextualize, and interpret results; and evaluate the internal and external validity of the research findings. 3. Identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence. 4. Appraise applicable informatics concepts, methods, and tools to solve challenging health informatics problems in their focus area. 5. Have experience and training utilizing modern frameworks for rapid prototyping, and how to extract information from a wide variety of databases. 	<p>1. PROFESSIONAL KNOWLEDGE AND SKILLS: Demonstrate competence in the core knowledge, skills, and practices as defined by degree programs and relevant professional licensing and credentialing boards. Demonstrate the ability to identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence. Demonstrate the ability to access, evaluate, and apply relevant science knowledge to support evidence-based health care, disease prevention, health promotion, and discovery. Demonstrate an appropriate understanding of evolving health care systems, health and science policy, and resource allocation in order to optimize human health and scientific discovery.</p>
<ol style="list-style-type: none"> 6. Apply fundamental knowledge of ethics in research and implement solutions that assure confidentiality, security and integrity while maximizing the availability of data, information, and knowledge. 	<p>2. PROFESSIONAL IDENTITY AND ETHICAL BEHAVIOR: Demonstrate integrity, honesty, knowledge of ethical principles and the standards of professional conduct, and the ability to apply ethical principles in clinical care, research, education, or community service.</p>
<ol style="list-style-type: none"> 7. Engage in lifelong learning through: finding, interpreting and critically appraising scientific literature in order to fill knowledge gaps and stay informed of scientific advances; synthesizing and applying new knowledge to their own research; and connecting with the larger scientific community through participating in scientific conferences and societies. 	<p>3. INFORMATION LITERACY: Demonstrate the ability to recognize gaps in knowledge and experience through informed self-assessment and reflective practices, and take actions to address those gaps.</p>
<ol style="list-style-type: none"> 8. Effectively communicate and disseminate scientific research in written and verbal form to both peers and non-experts. 9. Communicate professionally, including during interactions with others, and while giving and receiving feedback. 	<p>4. COMMUNICATION: Demonstrate active listening and oral and written communication skills with diverse individuals, communities, and colleagues to ensure effective, culturally appropriate exchange of information.</p>
<ol style="list-style-type: none"> 10. Function as a productive member of a multidisciplinary collaborative team of informatics, information technology, clinical, administrative, and other experts. 11. Solve complex health and health information problems by applying the principles of team science to the scope of practice and roles of different stakeholders (including health care professionals, researchers, and patients). 	<p>5. TEAMWORK: Demonstrate knowledge of team-based professional skills, roles, and responsibilities in order to ensure an environment for safe, efficient, effective, and equitable care and innovative research.</p>
<ol style="list-style-type: none"> 12. Integrate the culture and diversity of a population when carrying out research and/or professional practice in informatics. 	<p>6. COMMUNITY ENGAGEMENT, SOCIAL JUSTICE AND EQUITY: Integrate the culture and diversity of a population when carrying out research and/or professional practice in informatics.</p>

13. Demonstrate and promote informatics solutions that help to ensure patient safety within relevant clinical settings.

8. SAFETY AND QUALITY IMPROVEMENT: Demonstrate the ability to identify situations that compromise safety, and participate in risk reduction and continuous quality improvement.