

Biomedical Informatics Launches New PhD Program

Cincinnati Children's and the University of Cincinnati are teaming up to offer Ohio's first PhD-level program in biomedical informatics starting in Fall 2015. Together, the two institutions are aiming to educate the next generation of biomedical data scientists so that the academic healthcare enterprise can make better use of biomedical information and technology for new discoveries, innovative science, and improved healthcare.

The amount of data and sophistication of technology continues to increase at an accelerated pace, which has firmly placed biomedical research into the "big data" era. As biomedical research continues its transition to a data-driven discipline, academic biomedical institutions are now undergoing transformative changes in how research is conducted.

"This data avalanche has only just started reshaping biomedical research and health care delivery. We want to be at the forefront of this paradigm shift," says Jarek Meller, PhD, who has spearheaded efforts to develop the program. Meller is now associate chair for education in the department.



Informatics has become a central component of both clinical and translational research and the healthcare infrastructure as well as a necessary skill for many laboratory investigations. This has increased the demand for researchers and health professionals trained in data science.

Specialists in biomedical informatics are developing new ways to better understand the processes of many diseases so that we can more effectively diagnose, treat, and prevent these disorders. This work includes new data analysis methods and the development and application of novel technologies in many areas, including cancer, heart disease, psychiatric disorders, asthma, and rare disorders.

"This new PhD program in biomedical informatics will offer students an opportunity to engage in cutting-edge research while being embedded in one of the premier healthcare centers in the nation," says Peter White, PhD, chair of the Division of Biomedical Informatics at Cincinnati Children's and also chair of UC's new Department of Biomedical Informatics.

The program trains students in theory and applications of informatics and biomedical data science, ranging from the study of molecules to individuals to populations. The PhD program's curriculum reflects the interdisciplinary nature of data-driven biomedical sciences and takes advantage of the Department's strong and diverse faculty, staff, and research expertise. The course requirements are minimal, giving students plenty of opportunity to choose electives and start their research career as early as possible.

Three leading institutions—the UC College of Medicine, Cincinnati Children's, and the UC College of Engineering and Applied Sciences—are partnering to create this and other graduate-level programs in biomedical informatics. Students are currently being enrolled for the Fall of 2015. More information is available at med.uc.edu/bmi.