Approved by the Board of Trustees
May 7, 2015

Board Meeting
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ESTABLISH THE DOCTOR OF PHILOSOPHY IN BIOMEDICAL AND HEALTH INFORMATICS, COLLEGE OF APPLIED HEALTH SCIENCES, CHICAGO

Action: Establish the Doctor of Philosophy in Biomedical and Health Informatics, College of Applied Health Sciences

Funding: No New Funding Required

The Chancellor, University of Illinois at Chicago, and Vice President, University of Illinois with the advice of the Chicago Senate, College of Applied Health Sciences, and Graduate College recommends the establishment of the Doctor of Philosophy in Biomedical and Health Informatics.

The American Medical Informatics Association defines biomedical and health informatics (BHI) as "the interdisciplinary field that studies and pursues the effective uses of biomedical data, information, and knowledge for scientific inquiry, problem solving and decision making, motivated by efforts to improve human health." Over time, healthcare has become increasingly specialized and fragmented, resulting in a delivery system that is less efficient, more costly, with more patient dissatisfaction and posing higher risks. New patterns of care and models of health professions education are emerging with a focus on new paradigms of team-based, patient-centric care, where decision-making is grounded in data. Further, information systems are expected to reflect care occurring across multiple healthcare delivery systems, across the lifespan.

The Ph.D. in Biomedical and Health Informatics leverages Chicago's considerable resources in academic faculty and informatics professionals within its seven health sciences colleges; the colleges of Engineering, Business Administration, Liberal Arts and Sciences, Architecture, Design and the Arts, the Library of the Health Sciences; and, its academic medical center having a robust electronic medical record and growing clinical research data repository. The degree is intended to develop scholars to solve the complex knowledge management issues facing the healthcare industry, and with capacity and expertise to work comfortably in, across, and at the interstices of healthcare disciplines. Chicago is uniquely poised to build the Ph.D., as the College of Applied Health Sciences has offered masters-level education in health informatics since 1991 and post-masters certificates in the field since 2007.

The Ph.D. will require 96-hours beyond the baccalaureate. This is comprised of 36-hours of required courses covering the major biomedical and health informatics theories and methodologies; 12- to 20-hours of elective coursework in one of two tracks (systems science in BHI, and social and organizational sciences in BHI); and 40- to 48-hours of thesis research in a focus area selected in consultation with faculty advisors. The systems science track explores analyzing, developing, simulating, and rendering data and information, focusing on bridging healthcare research, clinical practice, and the healthcare enterprise. The social and organizational sciences track draws on social and behavioral sciences to inform the design of sociotechnical solutions and seeks to promote understanding, implementation, and evaluation of the impacts of

innovation on organizations, groups, and individuals in order to facilitate change to health and healthcare.

The Board action recommended in this item complies in all material respect with applicable State and federal laws, University of Illinois *Statutes*, *The General Rules Concerning University Organization and Procedure*, and Board of Trustees policies and directives.

The Vice President for Academic Affairs concurs with this recommendation. The University Senates Conference has indicated that no further Senate jurisdiction is involved.

The President of the University recommends approval. This action is subject to further review and approval by the Illinois Board of Higher Education.