Approved by the Board of Trustees

July 22, 2021

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Board Meeting

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ESTABLISH THE BACHELOR OF SCIENCE IN INFORMATION SCIENCES + DATA SCIENCE, SCHOOL OF INFORMATION SCIENCES, URBANA

**Action:** Establish the Bachelor of Science in Information Sciences + Data Science,

School of Information Sciences

**Funding:** No increase in faculty within the School of Information Sciences is required, as the college currently has the capacity to accommodate the expected minor increases in enrollments resulting from this program. Students will utilize existing career and advising services. No additional financial resources are needed.

The Chancellor, University of Illinois Urbana-Champaign, and Vice President, University of Illinois System with the advice of the Urbana-Champaign Senate recommends approval of a proposal from the School of Information Sciences to establish the Bachelor of Science in Information Sciences + Data Science (B.S. in INFO + DS).

Along with three companion action items, the proposal to establish the B.S. in INFO + DS is part of the University of Illinois Urbana-Champaign’s “X + DS Degree” initiative, with plans for future undergraduate “X + DS” programs in the works.

In 2017, the College of Liberal Arts and Sciences, Grainger College of Engineering, School of Information Sciences, and Gies College of Business formed a collaborative task force to explore opportunities for an undergraduate data science education at the University of Illinois Urbana-Champaign. In 2019, based on recommendations from this task force, the deans of these four academic units agreed to support a shared framework for these “X + DS” programs. The framework includes a set of core competencies with a reference standard set of courses and activities that fulfill the data science portion of these programs. A Data Science Education Committee was formed to review how proposed majors provide the expected competencies and features of “X + DS” programs in a manner that is appropriate for their students. This committee will also keep track of offerings related to data science to facilitate collaboration and reduce redundancy, connect undergraduate data science education resources across the university, advise colleges on matters related to undergraduate data science education, and review “X + DS” degree proposals to provide comment on how they meet expectations for and engage collaboratively and strategically with the university’s resources in data science education.

Specific to the INFO + DS program, organizations in the private sector, non-profit sector, local and national government, academia, and other sectors are employing data science approaches across the full range of their activities. These organizations are increasingly recognizing human-centered aspects of data science as critical to improve stakeholder satisfaction and organizational efficiency, to proactively anticipate and mitigate potential harm to data subjects, and to ensure fairness and equitable access to services and products. There is demand for data scientists who can work collaboratively in application domains in the private and public sectors. A 2017 report by PricewaterhouseCoopers and Business-Higher Education Forum stated that 69 percent of employers surveyed expressed a desire for job applicants skilled in data science and analytics, with job openings expected to rise to 2.7 million roles by 2020. The report found that the demand for candidates with data science and analytical skills was greatest “in finance and insurance, information technology, and professional, scientific, and technical services.” Through the B.S. in INFO + DS, the School of Information Sciences’ human-centered perspective on the building and deployment of systems for information management is well-positioned to provide students with the education and skills to meet these needs.

Based on enrollment projections, the courses required for the INFO + DS program have capacity to absorb additional students who enroll in this program. No new or additional facilities, significant improvements to existing facilities, or additional resources from the University Library are needed.

The Board action recommended in this item complies in all material respects 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 Interim Executive Vice President and 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. The action is subject to further review by the Illinois Board of Higher Education.