

Memorandum

To: University Senate

From: Jennifer Higginbotham, Co-Chair, Council on Academic Affairs

Subject: Proposal to Establish the Professional Science Masters Degree Program in Translational Data Analytics

Date: September 19, 2019

A PROPOSAL FROM THE COUNCIL ON ACADEMIC AFFAIRS TO ESTABLISH THE PROFESSIONAL SCIENCE MASTERS (PSM) IN TRANSLATIONAL DATA ANALYTICS, TRANSLATIONAL DATA ANALYTICS INSTITUTE (TDAI); DEPARTMENT OF COMPUTER SCIENCE IN THE COLLEGE OF ENGINEERING, DEPARTMENT OF DESIGN, DEPARTMENT OF STATISTICS, AND THE ADVANCED COMPUTING CENTER FOR THE ARTS AND DESIGN (ACCAD) IN THE COLLEGE OF ARTS AND SCIENCES

Whereas this is a post-baccalaureate professional degree aimed at employees of local and regional businesses, with a title that conveys essential and applied skills in modern data analysis and computer science, with a target audience of mid-career professionals working in Data Science Analytics

Whereas the program addresses the increasing demand for deep analytical skills within business and redresses a skills gap identified by industry at the local and global level

Whereas the professional masters will begin with a track in Design and Visualization, adding additional tracks as the program grows in accordance with market need and contingent upon success of the pilot will consider the addition of tracks involving other academic units such as decision science and geographical information systems

Whereas the curriculum provides knowledge of fundamental principles of computer science; fundamental principles of data analysis, statistical inference, and machine learning; translational competency, enabling the transfer, application, and validation of analytical methods as well as understanding of data

governance obligations and ethics; and mastery of professional skills such as storytelling and translating technical solutions to audiences with varied backgrounds

Whereas it is a 33 semester credit hour program (foundational courses, core courses in data design and visualization, a two-semester capstone sequence emphasizing experiential learning, and three multi-disciplinary seminars on data management, research methods, and professional development)

Whereas the curriculum was designed by a dozen faculty representatives from the participating academic units, and the TDAI held two roundtables in 2017 and 2018 with stakeholders from industry, government agencies, and non-profits who offered feedback and expressed an urgent need for workers who know how to tell data stories. TDAI subsequently held a townhall in January 2019 to which all faculty affiliates were invited with over 100 in attendance, and they have distributed information about the PSM in the Institute's monthly newsletter.

Whereas following review by the combined Graduate School/Council on Academic Affairs subcommittee, the proposal was reviewed and approved by the Council on Academic Affairs at its meeting on June 13, 2019

Therefore be it resolved that the University Senate approve the proposal to establish the Professional Science Masters in Translational Data Analytics and respectfully request approval by the Board of Trustees.