

Memorandum

To: Faculty Senate
Seton Hall University

From: Karen E. Boroff, Ph.D. 
Interim Provost and Executive Vice President

Re: M.S. in Data Science Program
2019-FS-04

Date: April 3, 2019

The Office of the Provost is in receipt of the Senate's approval of the proposed M.S. in Data Science which was passed at the meeting on March 8, 2019.

The proposal from the Department of Mathematics and Computer Science is to create an online program which is thirty credits (10 courses of 3 credits each) and can be completed in 16 months. At this time most of the curriculum is ready and some courses are already existing as online courses in the Data Analysis and Visualization Program. The program consists of two tracks – one requiring a capstone project and another involving a thesis. The target audience includes recent graduates with B.S./B.A. degrees in computer science, mathematics, engineering, physics, economics, business, psychology, sociology, political science, and diplomacy.

Much of the data presented in the proposal and underscored by EAB Global data, shows that this is an excellent time to develop a master's level data science program. In two years' time, regional demand for employees with this skill set has increased 242%. National employment figures show a 252% increase. Benchmarks for the proposed program against competitors show this program is cheaper per credit and can be completed more quickly than many. The online nature also helps it to reach a wider audience of working professional who may value the flexibility. This program will be the first online program in Data Science in NJ.

The proposal indicates there is an established assessment committee, and program evaluation and assessment follows the procedures laid out by the Accreditation Board for Engineering and Technology (ABET). There is a well-developed list of defined competencies, and a table explaining where these competencies are encountered.

This program is interdisciplinary in that PSMA 7800, Ethical; Challenges of Big Data, and PSYC 7214, Cognition for Visualization are already offered in the Master's in Public Administration Program and the Master's in Experimental Psychology Program respectively. There have been discussions on the M.S. in Business Analytics with Dr. David Rosenthal regarding opportunities for collaboration. The M.S. in Business Analytics is focused on business management, however there may be some interest in using courses, such as Text Mining, for electives in Business Analytics. The

M.S. in Data Science curriculum might include some business courses as electives, for example Project Management. This kind of consideration is helpful to both programs.

The M.S. in Data Science has been proposed with a sunset clause. Under this proposal, the Office of the Provost will provide a funding for a contract hire for three years. The proposed program begins in fall 2019 with a cohort of 6 students, and the incoming cohort reaches 18 in year 3. Overall, the expected total enrollment in year three is 28, assuming a retention rate of 80%. The program should be contributing a margin to the College in year 3.

Based on the documentation provided and the vitality evident of this program, I feel that this could be a highly successful program. I will expect the program to meet its indicated goals in year 3, and if not, it will sunset. With this noted, I approve the M.S. in Data Science.