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QuickTakes!

Stockton is Responding to Big Data in a Big Way – a New Master’s in Data Science and Strategic Analytics

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Harnessing “Big Data” – the vast sea of digital information generated daily by business, science, entertainment and education – is a challenge but also an opportunity, and Stockton University is launching a new degree program this fall to prepare graduates for this fast-growing field.

The first classes for the Master of Science in Data Science and Strategic Analytics within the School of Natural Sciences and Mathematics (NAMS) will be held in September with approximately 12 students to start and enrollment is expected to grow to a maximum of 25 in future years.

“This new program is an excellent example of how Stockton is staying current to best serve our students and prepare them for the world in which we live,” said Lori Vermeulen, provost and vice president for Academic Affairs. “Big data is everywhere and knowing how to use massive amounts of data in meaningful ways is a vital skill.”

In 2013, IBM estimated that 2.5 million terabytes of data are created every day. For the layman, this is the equivalent of over 300 million high-definition movies.

“Big Data science is the application of computer software and code to large data sets with the intention of answering questions in business, industry or science,” said Physics Professor J. Russell Manson, who will serve as graduate director of the program.

There is strong demand for employees with these skills, and the field pays well.

A McKinsey Report suggests that by 2018 in the United States, the data science industry “... faces a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts to analyze big data and make decisions based on their findings.”

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A Data Science Salary Study done in 2014 by Burtch Works Executive Recruiting showed salaries ranging from \$80,000 to \$150,000 for workers, depending on experience; manager's pay ranged from \$140,000 for a level-1 manager to \$232,500 for a level-3 manager. All those employees also were eligible for bonuses.

Dean Peter F. Straub, of NAMS, explained that the new degree program was developed to meet changing demands in the field. NAMS had offered Computational Science on the master's level for a number of years. The Computational Science master's is sunsetting (admissions were suspended last year) with existing students given the opportunity to finish the program or transition to the new degree, he said.

"The field is changing rapidly with a focus on analysis and modeling of 'Big Data' sources that pervade modern professions. Stockton is changing and adapting to this reality by offering a degree that is more flexible and will develop the skills that are needed now to analyze problems where large data sets can be mined to improve modeling and forecasts in such areas as weather, climate change, flight safety, disease susceptibility, manufacturing and economics," Straub continued.

"The new degree program will be offered in an accelerated format so full-time students can complete a master's primarily online in a full year, including a capstone project," he said. Capstone research projects allow students to apply their course work and experience to real world problems.

Instruction will be primarily online but students will meet with their instructors on one evening a week at the university's Kramer Hall site in Hammonton, N.J.

This will be an interdisciplinary degree, and may draw on faculty from NAMS, Arts and Humanities, Business, Education and Social and Behavioral Sciences, and programs including science, business, computer science, education, mathematics, digital humanities and psychology.

For more information, visit: https://stockton.edu/graduate/data-science_strategic-analytics.html