

DSS Foundations: What universities offer masters degrees in analytics and data science?

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Faculty entrepreneurs continue to respond to new business needs and trends in decision support technologies with revised and innovative academic programs. Innovative programs related to decision support are a response to the expanding amounts of data available in organizations and a desire by managers to analyze the data and make use of it as part of business operations. The terms analytics and data science have recently been used to label new masters degree and graduate certificate programs.

Analytics degree programs help students learn to use quantitative and statistical analysis tools with large data sets and then interpret the findings. The term is most often used in U.S. business schools. Data science programs place a greater emphasis on the technical knowledge associated with managing large data bases and less emphasis on how to analyze and interpret the data. Data science is a term used in Computer Science and Information Science programs.

The Michigan State University Broad College of Business Masters degree in Business Analytics provides a good example of a best-in-class curriculum. The program is 31.5 credit hours and it is designed to be completed in one calendar year (three full-time consecutive semesters) from January to December. There is an anchor class in Business Analytics in the first semester. The anchor course topic is strategic use of data management and business analytics and why such tools are important. There are also courses in the first semester on managing information systems projects, managing large databases, and communicating analytics results. The second semester focuses on applied statistics, marketing data collection and analysis, and a statistical problems course that involves data analysis. The final semester includes a technical course in knowledge discovery/data mining techniques and tools, an emerging topics class covering "big data", data marts, etc. with a project, a capstone course on predictive data analysis, and a 1.5 credit course titled "Ethics and Intellectual Property Issues".

What is the need? According to a Stevens Institute of Technology press release (12/2/2011), David Belanger, Chief Scientist of AT&T Labs, argued "most large companies today collect hundreds of trillions of characters of data. This data is used in many industries, from finance to marketing and advertising ... getting full business value from the data requires not only the ability to use the tools of data management, data analysis and visualization, but, at least as important, the ability to frame the right questions, understand the domain of use and clearly articulate the findings. This program will give students that training." Belanger took part in the creation of the Stevens Institute Master of Science in Business Intelligence and Analytics (BI&A) program.

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The following is a list of 34 programs selected and verified as at Universities with degrees in analytics, business analytics, business intelligence or data science. Please send me web links to additional programs and feedback on the programs listed. Based on emails also check [Henschen \(2013\)](#) and [Piatetsky \(2014\)](#)

- Arizona State University, MS in Business Analytics. [Click here](#)
- Boston University's Metropolitan College, Master of Science in Computer Information Systems concentration in Database Management & Business Intelligence. [Click here](#)
- Carnegie Mellon University, Master of Information Systems Management (MISM) degree with a Business Intelligence and Data Analytics (BIDA) concentration. [Click here](#)
- Central Connecticut State University, Master of Science in Data Mining. [Click here](#)
- DePaul University, Master of Science in Predictive Analytics. [Click here](#)
- Drexel University, Master of Science in Business Analytics. [Click here](#)
- Fordham University, Master of Science in Business Analytics. [Click here](#)
- Georgia Southern University, Master of Science in Computer Science degree program with a concentration in data and knowledge systems (online). [Click here](#)
- Kennesaw State University, MS in Applied Statistics (DSAS). [Click here](#)

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- Lewis University, Master of Science in Data Science (online). [Click here](#)
- Louisiana State University, Master of Science in Analytics (MSA). [Click here](#)
- Maryville University, Master of Science in Business Data Analytics (online). [Click here](#)
- Michigan State University, Master of Science in Business Analytics. [Click here](#)
- MIT Sloan School, Master of Business Analytics. [Click here](#)
- New York University, Master of Science in Business Analytics. [Click here](#)
- North Carolina State, Master of Science in Analytics (MSA). [Click here](#)
- Northwestern has both a Master of Science in Analytics and a Master of Science in Predictive Analytics (online). [Click here for Analytics](#) and [Click here for Predictive Analytics](#)
- Oakland University, Master of Science in IT Management - Business Analytics. [Click here](#)
- Rensselaer Polytechnic Institute, Lally School of Management, Master of Science in Business Analytics. [Click here](#)
- Villanova University Online Master of Science in Analytics. [Click here](#)
- Stevens Institute, Master of Science in Business Intelligence & Analytics. [Click here](#)
- St. Joseph's University, Master of Science in Business Intelligence. [Click here](#) and Online [Click here](#).
- Syracuse, Certificate of Advanced Study in Data Science. [Click here](#)

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- University College - Dublin, Master of Science in Business Analytics. [Click here](#)
- University of California -- Berkeley, professional Master of Information and Data Science (MIDS) . [Click here](#)
- University of Cincinnati, Master of Science in Business Analytics. [Click here](#)
- University of Michigan-Dearborn, Master of Science in Business Analytics. [Click here](#)
- University of San Francisco, Master of Science in Analytics/BI (online). [Click here](#)
- University of Sherbrooke (Quebec, Canada), Master of Business Administration with emphasis in Business Intelligence. [Click here](#)
- University of South Florida, Master of Science in Management Information Systems focused on Business Intelligence (online). [Click here](#)
- University of Texas at Austin McCombs School, Master of Science in Business Analytics. [Click here](#)
- University of Washington, Certificate in Data Science. [Click here](#)
- University of Wisconsin, Master of Science in Data Science (online). [Click here](#)
- Western Governors University, Master of Science in Data Analytics (online). [Click here](#)

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The following Universities may also have Masters degrees in analytics, business analytics, business intelligence, data science or decision support. Please help me verify the programs and find an appropriate web link.

USA -- Augusta State University (Augusta, GA), University of Denver (Denver, CO), Texas Tech University (Lubbock, TX), Loyola University (Chicago, IL), Xavier University (Cincinnati, OH), Virginia Commonwealth (Richmond, VA), Virginia Tech (Blacksburg, VA)

International -- Stuttgart Media University (Germany), Sophia University (Bulgaria), Singapore Management University, University Munster (Germany), Universidade Portucalense (Portugal), University of Ottawa (Canada)

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