Data Analytics & Applications

The Master of Data Analytics & Applications prepares modern learners to develop the practitioner and leadership skills, knowledge, and expertise needed to successfully manage and implement enterprise-wide data analytics and applications projects and initiatives.

Offered in collaboration between the McKelvey School of Engineering’s Sever Institute and the School of Continuing & Professional Studies, individuals will acquire relevant and practical knowledge of the data analytics and applications field; improve critical thinking and communication skills; expand capacity to tackle multidimensional, data-driven problems; and develop the leadership acumen needed to be successful in demanding senior management roles.

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Degree Requirements

The Master of Data Analytics & Applications program requires the successful completion of 30 units of graduate course work, including 21 units of required core courses and 9 units of electives. New students without evidence of math and programming proficiency will be required to take 6 units of bridge courses.*

Required Courses: 21 units
- Enterprise Data Management
- Analytics Applications
- Applied Data Analytics for Practitioners
- Data Engineering Foundations of Data Analytics
- Data Visualization and Storytelling
- Introduction to Relational Databases and SQL Programming
- Applied Machine Learning

Elective Courses: 9 units
Choose from options such as the following:
- Applied Natural Language Processing
- Applications of Deep Neural Networks
- Applied Simulation Modeling
- Architectural Data Analytics Applications
- Special Topics in Data Analytics and Applications
- Applied Research Study

* Proficiency in introductory statistics, linear algebra and Python are required for admittance into the program. The School of Continuing & Professional Studies and the McKelvey School of Engineering offer two introductory bridge courses covering these subject areas:

1. Foundations of Programming for Data Analytics & Applications (U71 DATA 5001).
   a. Students with proficiency in Python may have the requirement to take Foundations of Programming for Data Analytics & Applications waived. Proficiency is established with a B or better in an introductory Python programming course or relevant work experience (as evaluated by the program director or delegated evaluator).

2. Foundations of Mathematics for Data Analytics & Applications (U71 DATA 5002).
   a. Students with proficiency in introductory statistics and linear algebra may have the requirement to take Foundations of Mathematics for Data Analytics and Applications waived. Proficiency is demonstrated with a B or better in Introduction to Statistics and Linear Algebra courses.