DATA ANALYTICS (MS)

Contacts

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Program Website (https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-data-analytics.html)

Program Description

- **STEM** designated program

The Master of Science in Data Analytics program at Thomas Jefferson University is designed to prepare students to develop advanced analytical techniques to analyze large datasets, extract valuable insights and leverage these insights to inform decision-making in various industries.

An applied, STEM-designated degree, the MS in Data Analytics is ideal for working professionals in or adjacent to the analytics/data field who want to grow their knowledge and skills, as well as those not associated with the field who want to break into the profession.

Current students are also welcome to apply, especially those majoring in engineering, mechanical engineering and business, along with science majors who plan to enter the analytics field.

Learning Outcomes

- Define problems, evaluate data-driven insights and propose solutions for decision making
- Recognize the importance of responsible data management and evaluate ethical and legal obligations when using data
- Coordinate and manage data projects within interdisciplinary teams, applying project management principles and fostering collaboration
- Analyze complex problems and evaluate solutions using critical thinking and problem-solving strategies
- Apply statistical methods and tests to analyze data and evaluate inferences drawn from results
- Develop predictive models and prescribe actionable insights to address business challenges
- Create effective visualizations of complex data and present findings to non-technical audiences clearly
- Apply advanced AI and machine learning techniques to real-world problems, customizing models, tuning parameters and optimizing algorithms to enhance performance
- Acquire raw data from diverse sources, clean and preprocess data and prepare it for analysis and decision-making
- Use common programming languages to develop and implement computational solutions for data analysis and problem-solving
- Examine and analyze emerging trends in data analytics, interpreting their implications

Curriculum: 30 credits; 18 months

Code	Title	Credits
CORE CURRICULUM		
Data Management & Ethics		3
Analytical Skills I		3
Analytical Skills II		3
Applied Analytics		3
ADVANCED COURSES		
Advanced Analytics		3
Current Topics in Data Analytics		3
Programming for Data Analytics		3
Data Visualization		3
Data Analytics Capstone		6