As a result of globalization and advances in technology during the 21st century, the complexity and variety of data have evolved, while the volume of data continues to increase daily. This phenomenon has been dubbed "The Data Revolution." The world is inundated with data, stemming from, but not limited to, social media platforms, business transactions, Internet sources, cellular data usage and file sharing.

Industry and government organizations collect, organize and analyze data and information for several reasons, from maintaining their competitive edge, to altering business strategies and increasing sales to enhancing national security. This program will train students as data scientists who will serve as key informants for decision makers in both the public and private sectors.

Data science is one of the most important disciplines of the future, and it will intersect with every area as the reservoir of the world’s data continues to grow. According to a McKinsey Global Institute report, "the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use the analysis of big data to make effective decisions." This program will serve as a cornerstone in cross-disciplinary learning. The comprehensive, challenging curriculum emphasizes programming, data visualization, machine learning, database skills and quantitative analysis to produce graduates who are innovators in producing, visualizing and communicating actionable new insights about the meaning of data for decision-makers in businesses, public agencies and nonprofits.

**LEARNING OUTCOMES**

This cross-disciplinary program is the first of its kind in the country, combining data science with applied intelligence.

- Assess, evaluate and respond to decision-maker needs and requirements.
- Collect, clean, store and query data from a variety of private and public data sources.
- Apply appropriate analytic techniques to provide estimates that support decision-making and action.
- Communicate actionable information and findings in easy-to-understand written, oral and visual formats.

**apply.**
Free application online at apply.mercyhurst.edu

**contact.**
814-824-2297
grad@mercyhurst.edu
mercyhurst.edu/graduate

**visit.**
ridgecollege.org
GRADUATE ADMISSIONS
Information about fees, financial facts, graduate assistantships and employment, veteran’s benefits, as well as student loans may be obtained through the Office of Graduate Admissions.

APPLICATION REQUIREMENTS
• An application form, which can be found online at apply.mercyhurst.edu.
• All official transcripts from accredited higher education institutions. (All documents and credentials submitted must be translated into English; Mercyhurst recommends that international students contact World Education Services at wes.org, the foremost organization specializing in transcript and credential evaluation, to provide such translations.)
• An essay of 300-500 words outlining the student’s personal, professional and educational goals.
• An official score report from the Graduate Record Exam (GRE) is suggested, but not required.
• A resume or curriculum vitae.
• International students from countries where English is not a native language must submit an official score report from the TOEFL or IELTS examination.

CORE COURSES
The Master of Science in Data Science is a 36-credit program. Students are required to take the following courses:

- DATA 500 Machine Learning Concepts I
- DATA 510 Data Wrangling
- DATA 515 Analytics for Decision-Making
- DATA 520 Introduction to Programming
- DATA 590 Machine Learning Concepts II
- INTL 501 Research Methods in Intelligence
- INTL 580 Intelligence Communications
- INTL 655 Managing Strategic Intelligence Analysis

ELECTIVE COURSES
Students will select two intelligence electives and two data science electives. Current electives include:

DATA SCIENCE ELECTIVE COURSES:
- DATA 550 Data Visualization
- DATA 562 Data Visualization with JavaScript
- DATA 570 Data Science Development Tools
- DATA 580 Data Science App Development
- DATA 620 Database Technologies
- DATA 670 Big Data Tools

INTELLIGENCE ELECTIVE COURSES:
- INTL 520 Advanced Analytical Techniques
- INTL 540 Competitive Intelligence
- INTL 548 Market Research and Primary Intelligence
- INTL 595 Geospatial Intelligence
- INTL 605 Data Analytics for the Private Sector
- INTL 612 Social Media Analysis
- INTL 625 Intelligence and Business Strategy
- INTL 626 Financial Intelligence Analysis
- INTL 638 Social Network Analysis
- INTL 650 Topics in Intelligence
- INTL 675 Internship
- DATA 650 Topics in Data Science
- DATA 675 Internship (3 credits)

BENEFITS
• Learn under the umbrella and reputation of the Ridge College of Intelligence Studies and Applied Sciences, which is internationally recognized for its academics, research, analysis and training.
• Graduates receive a comprehensive and diverse master’s education, which makes them employable in several job settings.
• Earn your two-year degree at the resident campus in Erie, Pa., which affords access to world-class facilities and resources.
• Through the Institute for Intelligence Studies and Applied Sciences, students will have an opportunity to gain work experience to build their resumes through grants and contracts held by the Institute.
• This program will emphasize an applied focus, ensuring that students are exposed to real-world experiences before graduation.
• Competitive admissions allow for small classes that cultivate individual engagement between faculty and students.
• This cross-disciplinary program is the first of its kind in the country, combining data science with applied intelligence.