Analytics, MPS (Online)

With the proliferation of data across all sectors of the global economy, there is an immediate need for individuals to be knowledgeable in how to harness this data for continuous analysis and study. This spectrum spans from commercial to nonprofit, from higher education to government, and is constantly expanding with new sectors as data mining becomes the standard for knowledge gathering in the digital age.

The Master of Professional Studies in Analytics helps to meet the demand from employers with a graduate program that provides students with an end-to-end analytics education through a core curriculum with integrated experiential learning opportunities. The program is designed to prepare students with a deep understanding of the mechanics of working with data (i.e., its collection, modeling, and structuring), along with the capacity to identify and communicate data-driven insights that ultimately influence decisions.

Not only will students graduate with a portfolio of work samples that demonstrate their range and depth of skill, they will be part of a larger network of analytics professionals who will serve now and in the future.

The program offers students opportunities to:

- Build portfolios of real-world projects demonstrating competency with key technologies, visualization and communication techniques, and the ability to translate information into recommended actions.
- Gain a core analytical skill set upon which to layer more specialized technical skill sets or industry-specific applications.
- Develop a relationship to industry leaders and peers to leverage the Northeastern University education long after the formal education ends.
- Choose from a host of flexible programming options—all of which share an industry-defined core curriculum and a required, credit-bearing experiential requirement.
- Anticipate and contribute to the future direction of data analytics.

Program Requirements

Complete all courses and requirements listed below unless otherwise indicated.

Required Courses

Code	Title	Hours
ALY 6105	Introduction to Applied Statistics	3
ALY 6115	Foundations of Data Analytics	3
ALY 6125	Intermediate Analytics	3
ALY 6135	Introduction to Enterprise Analytics	3
ALY 6145	Communication and Visualization with Data	3
Restricted Electives		
Complete 4 semester hours from the following:		4
ALY 6400	Integrated Experiential Learning	
ALY 6410	Healthcare Analytics: From Data to Decisions	
ALY 6420	Introduction to Queries	
ALY 6430	Machine Learning Operations	
ALY 6440	Text Analytics and Language Processing	
ALY 6983	Topics	
Capstone		
ALY 6980	Capstone	3

Concentrations or Electives Option

A concentration is not required. Students may complete the electives option in lieu of a concentration.

- Applied Machine Intelligence (p. 2)
- Evidence-Based Management (p. 2)
- Insurance Analytics (p. 2)
- Statistical Modeling (p. 2)
- Electives Option (p. 2)

Program Credit/GPA Requirements

34 total semester hours required
Minimum 3.000 GPA required

APPLIED MACHINE INTELLIGENCE CONCENTRATION

Code	Title	Hours
AAI 6600	Applied Artificial Intelligence	3
AAI 6620	Applied Natural Language Processing	3
AAI 6630	Applied Computer Vision	3
Complete 3 semester hours from the following:		3
AAI 6640	Applied Deep Learning	
AAI 6650	Recommender System	
AAI 6680	AI for Cybersecurity	

EVIDENCE-BASED MANAGEMENT CONCENTRATION

Code	Title	Hours
ALY 6400	Integrated Experiential Learning	3
ALY 6610	Data Mining Applications	3
ALY 6700	Decision Support and Business Intelligence	3
ALY 6710	Leadership in Analytics	3

INSURANCE ANALYTICS CONCENTRATION

Code	Title	Hours
INS 6100	Introduction to Insurance Data Analytics	3
INS 6150	Intermediate Insurance Analytics	3
INS 6250	Claims Management	3
INS 6300	Insurance Underwriting (Insurance Underwriting)	3

STATISTICAL MODELING CONCENTRATION

Code	Title	Hours
ALY 6600	Data Warehousing and Querying	3
ALY 6610	Data Mining Applications	3
ALY 6620	Big Data and Cloud Computing	3
ALY 6630	Programming for Data Science	3

ELECTIVES OPTION

Code	Title	Hours
Any College of Professional Studies graduate-level courses or unused courses in the program or a combination of both in lieu of a concentration.		12