Analytics, MPS (Boston)

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 them now and in the future.

- 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 so that you may leverage your Northeastern education long after your 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
Note: ITC 6000 is for students without prior educational or professional experience with data and database structures.		
Students who do not complete ITC 6000 must complete a third elective course to reach 45 quarter hours.		
ALY 6000	Introduction to Analytics	3
ALY 6010	Probability Theory and Introductory Statistics	3
ALY 6015	Intermediate Analytics	3
ALY 6050	Introduction to Enterprise Analytics	3
ALY 6070	Communication and Visualization for Data Analytics	3
ITC 6000	Database Management Systems	3

Experiential Learning Course

Code	Title	Hours
ALY 6080	Integrated Experiential Learning	3

Experiential Capstone Course

Code	Title	Hours
ALY 6980	Capstone	3

The remaining quarter hours of the program may be completed by a combination of completing a concentration and additional electives or selecting any courses listed in the concentrations and elective list.

Concentrations

- Applied Machine Intelligence (p. 2)
- Evidence-Based Management (p. 2)
- Statistical Modeling (p. 2)

Electives

Code	Title	Hours
ALY 6020	Predictive Analytics	
ALY 6030	Data Warehousing and SQL	
ALY 6060	Decision Support and Business Intelligence	
ALY 6110	Data Management and Big Data	

ALY 6120	Leadership in Analytics
ALY 6130	Risk Management for Analytics
ALY 6140	Python and Analytics Systems Technology
ALY 6150	Healthcare/Pharmaceutical Data and Applications
ALY 6160	
ALY 6983	Topics
CED 6230	Quantitative Methods
CMN 6005	Foundations of Professional Communication
COP 6940	
EAI 6000	Fundamentals of Artificial Intelligence
EAI 6010	Applications of Artificial Intelligence
EAI 6020	AI System Technologies
EAI 6400	Data Governance and Responsible AI
EDU 6184	
GIS 5201	Advanced Spatial Analysis
ITC 6020	Information Systems Design and Development
ITC 6045	Information Technology Policy, Ethics, and Social Responsibility
ITC 6310	
LDR 6110	Leading Teams Strategically in a Global Environment
LDR 6135	Ethical Leadership
PJM 6015	Project Risk Management
PJM 6125	Project Evaluation and Assessment
PJM 6180	Project Stakeholder Management

Program Credit/GPA Requirements

45 total quarter hours required
Minimum 3.000 GPA required

APPLIED MACHINE INTELLIGENCE

Code	Title	Hours
ALY 6040	Data Mining Applications	3
ALY 6110	Data Management and Big Data	3
EAI 6000	Fundamentals of Artificial Intelligence	3
EAI 6010	Applications of Artificial Intelligence	3
EAI 6020	AI System Technologies	3

EVIDENCE-BASED MANAGEMENT

Code	Title	Hours
ALY 6040	Data Mining Applications	3
ALY 6060	Decision Support and Business Intelligence	3
ALY 6120	Leadership in Analytics	3
ALY 6130	Risk Management for Analytics	3
PJM 6005	Project Scope Management	3

STATISTICAL MODELING

Code	Title	Hours
ALY 6020	Predictive Analytics	3
ALY 6030	Data Warehousing and SQL	3
ALY 6040	Data Mining Applications	3
ALY 6110	Data Management and Big Data	3
ALY 6140	Python and Analytics Systems Technology	3