

# Analytics, MPS

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 |
|----------|--|-------|
| 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 6040 | Data Mining Applications   |       |
| ALY 6050 | Introduction to Enterprise Analytics                             |       |
| 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 | Analytics Systems Technology                                     |       |
| ALY 6150 | Healthcare/Pharmaceutical Data and Applications                  |       |
| ALY 6160 | Business Intelligence in Healthcare/Pharmaceutical               |       |
| ALY 6983 | Topics   |       |
| CMN 6005 | Foundations of Professional Communication                        |       |
| COP 6940 | Personal and Career Development                                  |       |
| EAI 6000 | Fundamentals of Artificial Intelligence                          |       |
| EAI 6010 | Applications of Artificial Intelligence                          |       |
| EAI 6020 | AI System Technologies   |       |
| EDU 6184 | Interdisciplinary Foundations                                    |       |
| GIS 5102 | Fundamentals of GIS Analysis                                     |       |
| GIS 5201 | Advanced Spatial Analysis  |       |
| ITC 6000 | Database Management Systems                                      |       |
| ITC 6020 | Information Systems Design and Development                       |       |
| ITC 6045 | Information Technology Policy, Ethics, and Social Responsibility |       |
| ITC 6310 | Information Security Governance                                  |       |
| 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

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### APPLIED MACHINE INTELLIGENCE

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

### EVIDENCE-BASED MANAGEMENT

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

### STATISTICAL MODELING

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