BUSINESS ANALYTICS - M.S.

College of Business Administration
Department of Management and Information Systems
A432 Business Administration Building
Kent Campus
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www.kent.edu/business/mis

Description
The Master of Science degree in Business Analytics provides students with a comprehensive knowledge of analytics that balances the technologies, analytical methods and business expertise needed to glean useful information from data to make strategic business decisions. The language of business today is dependent on information and data management, and the emergence of advanced technologies for capturing, preparing and analyzing data provides unprecedented opportunities for those with business analytics expertise that spans all industries and organizations.

Students in the Business Analytics major gain the technical, analytical, communication, decision-making and leadership skills needed to be successful business analysts. The curriculum includes integrative capstone analysis projects, and there is an internship option for additional professional development through the on-site College of Business Administration's Career Services Office.

The program starts with a boot camp two weeks before the regular semester to orient students with requirements and technologies.

Fully Offered At:
- Online
- Kent Campus

Accreditation
AACSB International - The Association to Advance Collegiate Schools of Business

Admission Requirements
- Bachelor's degree in business or in a science, technology, engineering or mathematics discipline from an accredited college or university for unconditional admission
- Minimum 3.00 undergraduate GPA on a 4.000 point scale for unconditional admission
- Official transcript(s)
- GMAT scores with minimum 500 overall (40th percentile in verbal and 60th percentile in quantitative sections minimum) or GRE scores
- Résumé
- Goal statement
- Three letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
  - Minimum 550 TOEFL PBT score (paper-based version)
  - Minimum 79 TOEFL IBT score (internet-based version)
  - Minimum 77 MELAB score
  - Minimum 6.5 IELTS score
  - Minimum 58 PTE score

For more information about graduate admissions, please visit the Graduate Studies admission website. For more information on international admission, visit the Office of Global Education's admission website.

Students entering the program are expected to have the requisite backgrounds in statistics, mathematics, information systems and business required for the program. At a minimum, students should have general knowledge of inferential statistics, adequate general business knowledge, basic knowledge of business information systems and technologies, and a solid understanding of algebra and general mathematics with some exposure to calculus.

1. Students who have not passed at least one undergraduate course (minimum B grade) that has substantial coverage of inferential statistics cannot be admitted into the program. Such students may fulfill that requirement by taking the graduate course MIS 64005 before they may be considered for admission.
2. Students must have completed a minimum 3 credit hours of mathematics that includes linear algebra (minimum B grade) before they can be admitted into the program. Deficiencies in mathematics must be met with appropriate undergraduate course(s) (e.g., MATH 21001).
3. Deficiencies in business information systems and technologies, as well as partial fulfillment of the business knowledge requirement, can be obtained by taking the graduate course MIS 64042.
4. Students who have at least three years of experience working in industry may have the academic business requirement waived.
5. Students entering without any business coursework or experience can fulfill that requirement by taking the undergraduate course MGMT 24163 and/or the graduate course MIS 64158.

Students must complete these requirements before they start on the related program curriculum. The Business Analytics program director may consider concurrent enrollment according to the strength of the student’s baccalaureate curriculum and preparedness, and the courses proposed to take concurrently with the prerequisite courses.

Program Learning Outcomes
Graduates of the program will be able to:

1. Develop proficiency in the framing of both the business problem and the analytics problem.
2. Provide leadership and decision-making abilities using analytics tools in different business contexts throughout the model lifecycle.
3. Develop competencies in identifying data needs and sources, data acquisition and the cleaning and refining of data for analytical processing.
4. Develop competencies in analytical model selection, software selection and model building.
5. Develop competencies in deploying, validating and interpreting analytical solutions.
6. Develop competencies in problem-solving skills and effective verbal and written communications of results to diverse audiences.
Program Requirements

Major Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MIS 64018</td>
<td>QUANTITATIVE MANAGEMENT MODELING</td>
<td>3</td>
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<tr>
<td>MIS 64036</td>
<td>BUSINESS ANALYTICS</td>
<td>3</td>
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<tr>
<td>MIS 64037</td>
<td>ADVANCED DATA MINING AND PREDICTIVE ANALYTICS</td>
<td>3</td>
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<tr>
<td>MIS 64038</td>
<td>ANALYTICS IN PRACTICE</td>
<td>3</td>
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<tr>
<td>MIS 64060</td>
<td>FUNDAMENTALS OF MACHINE LEARNING</td>
<td>3</td>
</tr>
<tr>
<td>MIS 64061</td>
<td>ADVANCED MACHINE LEARNING</td>
<td>3</td>
</tr>
<tr>
<td>MIS 64082</td>
<td>DATABASE MANAGEMENT AND DATABASE ANALYTICS</td>
<td>3</td>
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<tr>
<td>MIS 64099</td>
<td>CAPSTONE PROJECT IN BUSINESS ANALYTICS</td>
<td>3</td>
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Major Electives, choose from the following: 6

- CS 63015 DATA MINING TECHNIQUES
- CS 63016 BIG DATA ANALYTICS
- DSCI 61010 ENTERPRISE ARCHITECTURE
- DSCI 64210 DATA SCIENCE
- ECON 62054 ECONOMETRICS I
- HI 60411 CLINICAL ANALYTICS
- KM 60370 SEMANTIC ANALYSIS METHODS AND TECHNOLOGIES
- MIS 64011 SYSTEMS SIMULATION
- MIS 64028 GLOBAL SUPPLY CHAIN BUSINESS MODELS
- MIS 64160 LEADERSHIP AND ORGANIZATIONAL CHANGE
- MIS 64092 INTERNSHIP IN BUSINESS ANALYTICS
- MKTG 65057 MARKETING RESEARCH

Minimum Total Credit Hours: 30

Graduation Requirements

Minimum 30 credit hours required for the degree is the assumption that a student does not have any unmet requirements she/he needs to be successful in the program. The Business Analytics program coordinator may make further determination of a student’s preparedness for the program and what prerequisite courses, if any, may be required.