BUSINESS ANALYTICS - M.S.

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

Contact Information
• Program Coordinator: Rouzbeh Razavi | rrazavi@kent.edu | 330-672-2282
• Director, Graduate Programs Office: Roberto Chavez | rechavez@kent.edu | 330-672-2817

Fully Offered
• Online
• Kent Campus

Admission Terms
• Fall
• Spring

Examples of Possible Careers*

Chief executives
• -10.0% decline
• 287,900 number of jobs
• $185,950 potential earnings

Data scientists and mathematical science occupations, all other
• 30.9% much faster than the average
• 33,200 number of jobs
• $98,230 potential earnings

General and operations managers
• 5.8% faster than the average
• 2,486,400 number of jobs
• $103,650 potential earnings

Management analysts
• 10.7% much faster than the average
• 876,300 number of jobs
• $87,560 potential earnings

Operations research analysts
• 24.8% much faster than the average
• 105,100 number of jobs
• $86,200 potential earnings

Statisticians
• 34.6% much faster than the average
• 42,700 number of jobs
• $92,270 potential earnings

*Note
Source of occupation titles and labor data is from the U.S. Bureau of Labor Statistics’ Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

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.

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 3.000 undergraduate GPA on a 4.000 point scale for unconditional admission
• Official transcript(s)
• GMAT 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
  • Minimum 110 Duolingo English Test 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.

- 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.

- Students must have completed a minimum 3 credit hours of mathematics with a 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).

- 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.

- Students who have at least three years of experience working in industry may have the academic business requirement waived.

- 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.

GMAT or GRE requirement will be waived for (1) applicants who earned a Kent State bachelor's degree within the past five years and had a minimum 3.500 overall GPA and (2) applicants with three or more years of relevant work experience.

Program Learning Outcomes

Graduates of the program will be able to:

1. Identify key characteristics of the business problem
2. Identify opportunities and constraints of various data analytical frameworks and tools.
3. Formulate appropriate data analytic techniques to solve the business problem.
4. Perform necessary data preparation steps (retrieve, clean and manipulate data).
5. Demonstrate necessary theoretical knowledge and practical skills to implement several data-analytic frameworks using different tools.
6. Lead and work with teams to frame the business problem.
7. Convey in writing the outcomes of analytics for stakeholders.
8. Use visual outcomes of analytics to communicate orally effective messages for stakeholders

Program Requirements

Major Requirements

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<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>
</tr>
<tr>
<td>MIS 64036</td>
<td>BUSINESS ANALYTICS</td>
<td>3</td>
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<tr>
<td>MIS 64057</td>
<td>ADVANCED DATA MINING AND PREDICTIVE ANALYTICS</td>
<td>3</td>
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MIS 64038 ANALYTICS IN PRACTICE 3
MIS 64060 FUNDAMENTALS OF MACHINE LEARNING 3
MIS 64061 ADVANCED MACHINE LEARNING 3
MIS 64082 DATABASE MANAGEMENT AND DATABASE ANALYTICS 3
MIS 64092 INTERNSHIP IN BUSINESS ANALYTICS 3

Major Electives, choose from the following: 6

- CS 63015 DATA MINING TECHNIQUES
- CS 63016 BIG DATA ANALYTICS
- ECON 62054 ECONOMETRICS I
- EMAT 61010 ENTERPRISE ARCHITECTURE
- EMAT 64210 DATA SCIENCE
- HI 60411 CLINICAL ANALYTICS
- KM 60370 SEMANTIC ANALYSIS METHODS AND TECHNOLOGIES
- MIS 54011 SYSTEMS SIMULATION
- MIS 54050 DATA VISUALIZATION
- MIS 64028 GLOBAL SUPPLY CHAIN BUSINESS MODELS
- MIS 64099 CAPSTONE PROJECT IN BUSINESS ANALYTICS
- MIS 64160 LEADERSHIP AND ORGANIZATIONAL CHANGE
- 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.