Business Analytics, M.S.

The digital revolution empowered by the Internet and computer technology in business and individual life during the last several decades has generated unimaginable amounts of data in the form of digital records stored in databases and file servers. The volume, velocity, and variety of these data have produced a new set of problems and challenges for businesses and organizations in their pursuit of competitiveness, effectiveness, and efficiency. These problems and challenges also have created unprecedented opportunities for businesses and organizations to discover, model, understand, and serve their customers and partners in ways never imagined and to supply details never possible before. Businesses and organizations that are able to master this volume of data will have a tremendous competitive advantage over their competition in the marketplace.

As the need for implementing data analytic solutions grows, demand for professionals who understand and are capable of working with and exploring this data has exploded in recent years. This program addresses the growing need to manage and analyze the rapidly increasing amount of data that is available to support business decision making.

Requirements

The Master of Science program in business analytics requires a minimum of 30 s.h. of graduate credit, of which 24 s.h. must be unique to the M.S. degree. The 24 s.h. can include 15 s.h. earned toward the Certificate in Business Analytics; the program is designed so that students can move into the M.S. program upon completion of the certificate. No thesis is required. A cumulative g.p.a. of at least 2.75 is required in all course work.

Students may be allowed to apply up to 6 s.h. of course work from another institution toward the M.S. with approval by petition to the director of the master's program.

The M.S. with a major in business analytics requires the following course work.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
<td>Core Courses</td>
<td>15</td>
</tr>
<tr>
<td>Experience Course/Project</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
<tr>
<td>Total Hours</td>
<td>30</td>
</tr>
</tbody>
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Core Courses

All of these:

- MSCI:6050 Data Management and Visual Analytics 3
- MSCI:6060 Data Programming in R 3
- MSCI:6070 Data Science 3
- MSCI:9100 Business Analytics 3
- MSCI:9110 Advanced Analytics 3

Experience Course/Project

The experience course consists of a group project that solves a semester-long business problem.

This course:

Electives

Elective course work allows students to deepen or broaden their skills.

12 s.h. from these:

- MSCI:6100 Text Analytics 3
- MSCI:6110 Big Data Management and Analytics 3
- MSCI:6130 Applied Optimization 3
- MSCI:6140 Information Visualization 3
- MSCI:6150 Financial Analytics 3
- MKTG:9165 Digital Marketing Analytics 3

Joint M.S./M.B.A.

The joint M.S. in business analytics/Professional M.B.A. Program allows students to pursue two degrees simultaneously, earning both more quickly than they would if the degrees were pursued separately. The Department of Management Sciences collaborates with the Master of Business Administration Program to offer a joint M.S./M.B.A. degree.

Separate application to each degree program is required. Applicants must be admitted to both programs before they may be admitted to the joint degree program. For information about the M.B.A., see the M.B.A. Professional Program in the Master of Business Administration section of the Catalog.

Admission

Applicants must meet the admission requirements of the Graduate College; see Manual of Rules and Regulations of the Graduate College.