Business: Operations and Technology Management: Business Analytics, M.S.

This is a named option in the Business: Operations and Technology Management M.S. (http://guide.wisc.edu/graduate/operations-information-management/business-operations-technology-management-ms)

Learn to leverage data to answer complex business questions in any industry with this STEM-designated M.S. Business: Operations and Technology Management: Business Analytics. Addressing all aspects of business, you’ll use cutting-edge tools to hone your analytical skills and business acumen. This one-year Wisconsin School of Business program prepares students to seize opportunities in the fast-growing world of turning data into decisions.

The MSB-OTM named option in Business Analytics curriculum includes the topics of:

• Data acquisition, analysis, and visualization
• Machine learning, experimental design, and optimization
• Descriptive, predictive, and prescriptive analytical approaches
• R/Python/SQL/Tableau

You will also benefit from experiential learning through real-world consulting projects, and choose electives from various industry-specific analytics courses.

Admissions

The following will be required for admission to the MS-Business: Operations and Technology Management program:

• Undergraduate university degree in business, computer science, economics, engineering, mathematics, statistics, or related field is preferred, but not required, or expected completion of such a degree prior to starting the M.S.-Business: Operations and Technology Management with a named option in Business Analytics,
• Demonstrated knowledge of business fundamentals (or specific plan for acquiring prior to the start of the program); some possible ways of satisfying this include:
  • Undergraduate degree with business major or minor, OR
  • Completion of Certificate in Business at UW-Madison, OR
  • Earning GPA >= 3.0 in intermediate college course work covering at least two core business disciplines (marketing, operations, finance, accounting, management); completion of GEN BUS 310 or GEN BUS 311 satisfies this requirement, and can be taken online during the summer prior to the start of the program, AND
  • Completion of one semester of Business Calculus or equivalent, AND
  • GMAT or GRE score, AND
  • Resume, AND
  • One professional letter of recommendation, AND
  • Response to essay(s) question, AND
• Interview (by invitation only)
• TOEFL score of at least 100, only for applications whose native language is not English

The TOEFL is waived for students who have completed a four-year undergraduate degree and/or master degree (minimum of eight semesters total) with instruction in English or who will complete such a degree prior to matriculation in the MS option Business Analytics program.

All undergraduate and master degree transcripts from schools outside the United States must be verified by WES at the individual class level.

All degree and additional coursework to be completed taken within five years of application.

Funding

Graduate School Resources

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding) is available from the Graduate School. Be sure to check with your program for individual policies and processes related to funding.

Requirements

Minimum Graduate School Requirements

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

Named Option Requirements

Mode of Instruction

<table>
<thead>
<tr>
<th>Mode of Instruction</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Mode of Instruction Definitions

Evening/Weekend: These programs are offered in an evening and/or weekend format to accommodate working schedules. Enjoy the advantages of on-campus courses and personal connections, while keeping your day job. For more information about the meeting schedule of a specific program, contact the program.

Online: These programs are offered primarily online. Many available online programs can be completed almost entirely online with all online programs offering at least 50 percent or more of the program work online. Some online programs have an on-campus component that is often designed to accommodate working schedules.

Take advantage of the convenience of online learning while participating in a rich, interactive learning environment. For more information about the online nature of a specific program, contact the program.

Hybrid: These programs have innovative curricula that combine on-campus and online formats. Most hybrid programs are completed on-campus with a partial or completely online semester. For more information about the hybrid schedule of a specific program, contact the program.
Accelerated: These on-campus programs are offered in an accelerated format that allows you to complete your program in a condensed time-frame. Enjoy the advantages of on-campus courses with minimal disruption to your career. For more information about the accelerated nature of a specific program, contact the program.

**CURRICULAR REQUIREMENTS**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Credit Requirement</td>
<td>30 credits</td>
</tr>
<tr>
<td>Minimum Residence Credit Requirement</td>
<td>16 credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework Requirement</td>
<td>Half of degree coursework (15 credits out of 30 total credits) must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university’s Course Guide (<a href="https://registrar.wisc.edu/course-guide/">https://registrar.wisc.edu/course-guide/</a>).</td>
</tr>
<tr>
<td>Overall Graduate GPA Requirement</td>
<td>3.00 GPA required.</td>
</tr>
<tr>
<td>Other Grade Requirements</td>
<td>The Graduate School requires an average grade of B or better in all coursework (300 or above, not including research credits) taken as a graduate student unless conditions for probationary status require higher grades. Grades of Incomplete are considered to be unsatisfactory if they are not removed during the next enrolled semester.</td>
</tr>
<tr>
<td>Assessments and Examinations</td>
<td>No formal examination is required.</td>
</tr>
<tr>
<td>Language Requirements</td>
<td>No language requirement.</td>
</tr>
</tbody>
</table>

**REQUIRED COURSES**

There are 21 credits in the required class list. The students will take an additional nine (9) credits from an approved electives list.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEN BUS 656</td>
<td>Machine Learning for Business Analytics</td>
<td>3</td>
</tr>
<tr>
<td>GEN BUS 705</td>
<td>Statistics and Programming for Business Analytics</td>
<td>3</td>
</tr>
<tr>
<td>GEN BUS 720</td>
<td>Data Visualization for Business Analytics</td>
<td>1</td>
</tr>
<tr>
<td>GEN BUS 730</td>
<td>Prescriptive Modeling and Optimization for Business Analytics</td>
<td>2</td>
</tr>
<tr>
<td>GEN BUS 740</td>
<td>Experiments and Causal Methods for Business Insights</td>
<td>2</td>
</tr>
<tr>
<td>GEN BUS 760</td>
<td>Data Technology for Business Analytics</td>
<td>3</td>
</tr>
<tr>
<td>GEN BUS 770</td>
<td>Analytics Consulting Practicum</td>
<td>4</td>
</tr>
<tr>
<td>GEN BUS 840</td>
<td>Current Topics in Business Analytics</td>
<td>2</td>
</tr>
<tr>
<td>OTM 752</td>
<td>Project Management</td>
<td>1</td>
</tr>
<tr>
<td>Three (3) Approved Electives for nine (9) additional credits. Approved Electives include:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACT SCI 655</td>
<td>Health Analytics</td>
<td>3</td>
</tr>
</tbody>
</table>

**FINANCE 635** Security Analysis 3
**M H R 610** Compensation: Theory and Administration 3
**MARKETNG 710** Marketing Research 3
**MARKETNG/OTM 727** Enterprise Systems and Supply Chain Management 3
**MARKETNG 815** Marketing Analytics 3
**OTM 714** Supply Chain Analytics 3
**R M I 655** Risk Financing Techniques 3
**R M I 660** Risk Analytics and Behavioral Science 3
**REAL EST 710** Real Estate Finance 3
**REAL EST 715** Techniques of Real Estate Valuation 3

**POLICIES**

**GRADUATE SCHOOL POLICIES**

The Graduate School’s Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

**NAMED OPTION-SPECIFIC POLICIES**

**GRADUATE PROGRAM HANDBOOK**

A Graduate Program Handbook containing all of the program’s policies and requirements is forthcoming from the program.

**PRIOR COURSEWORK**

**Graduate Work from Other Institutions**

With program approval, students are allowed to count no more than 9 credits of graduate coursework from other institutions.

**UW–Madison Undergraduate**

No credits from a UW–Madison undergraduate degree are allowed to count toward the degree.

**UW–Madison University Special**

With program approval and payment of the difference in tuition (between special and graduate tuition), students are allowed to count no more than 9 credits of coursework numbered 700 or above taken as a UW–Madison University Special student. Coursework earned five or more years prior to the master’s degree is not allowed to satisfy requirements.

**PROBATION**

The Graduate School regularly reviews the record of any student who earned grades of BC, C, D, F, or Incomplete in a graduate course (300 or above), or grade of U in research credits. This review could result in academic probation with a hold on future enrollment or in being suspended from the Graduate School.

**ADVISOR / COMMITTEE**

Every graduate student is required to have an advisor. To ensure that students are making satisfactory progress toward a degree,
the Graduate School expects them to meet with their advisor on a regular basis.

An advisor generally serves as the thesis advisor. In many cases, an advisor is assigned to incoming students. Students can be suspended from the Graduate School if they do not have an advisor. An advisor is a faculty member, or sometimes a committee, from the major department responsible for providing advice regarding graduate studies.

A committee often accomplishes advising for the students in the early stages of their studies.

**CREDITS PER TERM ALLOWED**

15 credits

**TIME CONSTRAINTS**

Master's degree students who have been absent for five or more consecutive years lose all credits that they have earned before their absence. Individual programs may count the coursework students completed prior to their absence for meeting program requirements; that coursework may not count toward Graduate School credit requirements.

**OTHER**

Students must be enrolled full-time.

**PROFESSIONAL DEVELOPMENT**

**GRADUATE SCHOOL RESOURCES**

Take advantage of the Graduate School's professional development resources (https://grad.wisc.edu/pd) to build skills, thrive academically, and launch your career.

**WISCONSIN SCHOOL OF BUSINESS RESOURCES**

During the program, you will have access to the Career Management Center and its services to help you develop your professional and career interests.

**PEOPLE**

**Faculty:** Professors Morris (chair), De Croix, Hausch, Kim, Siemsen, Veeramani, Wemmerlov; Associate Professors Lazimy; Assistant Professors Batt, Bavafa, Long, Tong