

# BUSINESS: ANALYTICS, MS

Founded in 1900, the School of Business established one of the first five business programs in the nation. That entrepreneurial spirit remains strong.

As a student in the School of Business, you will find yourself inspired by peers, staff, alumni, business leaders, and world-renowned faculty who are focused, collaborative, and engaged in every aspect of the student experience. You will join a highly ranked program that equips you to meet both academic and career challenges. Employers value School of Business graduates because of the comprehensive preparation this learning environment provides. Graduates possess highly sought-after general management and specialized expertise in business.

Joining collaborative, inspiring, trustworthy, and progressive School of Business alumni, Business Badger graduates are prepared to lead their organizations to success and transform the world of business. Together Forward!

## MASTER OF SCIENCE IN BUSINESS: ANALYTICS

The ability to turn data into decisions is crucial in our fast-paced world, and with our accelerated, STEM-designated degree in Business Analytics, you can learn to leverage data to answer complex business questions.

The Business Analytics curriculum includes the following topics:

- Machine learning
- Data visualization
- Data technology
- Statistics
- Programming
- Experimental design
- Optimization
- Cloud computing
- Artificial Intelligence

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

## ADMISSIONS

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Requirements	Detail
Fall Deadline	This program does not admit in the fall.
Spring Deadline	This program does not admit in the spring.
Summer Deadline	See program webpage: <a href="https://business.wisc.edu/graduate/masters/business-analytics/admissions/">https://business.wisc.edu/graduate/masters/business-analytics/admissions/</a>

GRE (Graduate Record Examinations)	May be required in certain cases; consult program.
English Proficiency Test	Refer to the Graduate School: Minimum Requirements for Admission policy: <a href="https://policy.wisc.edu/library/UW-1241">https://policy.wisc.edu/library/UW-1241</a> ( <a href="https://policy.wisc.edu/library/UW-1241/">https://policy.wisc.edu/library/UW-1241/</a> ).
Other Test(s) (e.g., GMAT, MCAT)	GMAT may be required in certain cases; consult program.
Letters of Recommendation Required	0*

\* Submission of up to two letters of recommendation is optional.

The following will be required for admission to the Master of Science: Business: Analytics program:

- Undergraduate degree. Common majors interested in this program include business, computer science, economics, engineering, mathematics, statistics, or other quantitative fields. Any undergraduate university degree is acceptable. Expected completion of an undergraduate degree is required prior to starting the Master of Science: Business: Analytics program.
- Resume.
- Response to essay(s) question.
- Interview (by invitation only).
- TOEFL or IELTS test score

The English Proficiency test score requirement 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 Master of Science: Business: Analytics program.

All undergraduate and masters degree transcripts will be evaluated. Schools outside the United States may be verified by World Education Services at the individual class level.

## HOW TO APPLY

Students interested in business degrees do not apply through the Graduate School application system and should instead refer to the School of Business Admissions page. (<https://business.wisc.edu/graduate/masters/business-analytics/admissions/>)

## FUNDING

### FUNDING GRADUATE SCHOOL RESOURCES

The Bursar's Office provides information about tuition and fees associated with being a graduate student. Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM INFORMATION

Students enrolled in this program are not eligible to receive tuition remission from graduate assistantship appointments at this institution.

While tuition remission is not available, students are eligible to receive a stipend and health insurance should they accept a graduate assistantship appointment.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (<https://guide.wisc.edu/graduate/#requirements>) and policies (<https://guide.wisc.edu/graduate/#policies>), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

Face to Face	Evening/Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	Yes

Mode of Instruction Definitions

**Accelerated:** Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

**Evening/Weekend:** Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

**Face-to-Face:** Courses typically meet during weekdays on the UW–Madison Campus.

**Hybrid:** These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online:** These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirement Detail	
Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	24 credits
Minimum Graduate Coursework Requirement	15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: <a href="https://policy.wisc.edu/library/UW-1244">https://policy.wisc.edu/library/UW-1244</a> ( <a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a> ).

Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: <a href="https://policy.wisc.edu/library/UW-1203">https://policy.wisc.edu/library/UW-1203</a> ( <a href="https://policy.wisc.edu/library/UW-1203/">https://policy.wisc.edu/library/UW-1203/</a> ).
Other Grade Requirements	n/a
Assessments and Examinations	No formal examination is required.
Language Requirements	No language requirement.

REQUIRED COURSES

22 core credits, in addition to 8 credits of electives, are required for the Business: Analytics MS.

Code	Title	Credits
Core		
GEN BUS 656	Foundations of Statistical Learning for Business Analytics	2
GEN BUS 657	Machine Learning and Artificial Intelligence Models for Business Analytics	2
GEN BUS 705	Statistics and Programming for Business Analytics	3
GEN BUS 720	Data Visualization for Business Analytics	1
GEN BUS 730	Prescriptive Modeling and Optimization for Business Analytics	2
GEN BUS 740	Experiments and Causal Methods for Business Insights	2
GEN BUS 746	Advanced SQL & Data Warehousing	2
GEN BUS 760	Data Technology for Business Analytics	2
GEN BUS 777	Consulting Skills Bootcamp	1
GEN BUS 780	Cloud Technology for Business Analytics	1
GEN BUS 790	Consulting Project Capstone	3
GEN BUS 840	Current Topics in Business Analytics and Artificial Intelligence	1
Electives		
Choose 8 credits from the following.		8
ACT SCI 654	Regression and Time Series for Actuaries	
ACT SCI 655	Health Analytics	
ACT SCI 657	Risk Analytics	
FINANCE 635	Business Valuation	
GEN BUS 745	Robotic Process Automation	
INFO SYS 723	Text Analytics and Business Application	
MARKETNG 710	Marketing Research	
MARKETNG/OTM 727	Information Technology in Supply Chains	
MARKETNG 745	Digital Marketing Analytics	
MARKETNG 755	Marketing in a Digital Age	
MARKETNG 775	Social Media Marketing	

MARKETNG 779	Bayesian Machine Learning for Marketing	
MARKETNG 815	Marketing Analytics	
MARKETNG 840	Current Topics in Marketing	
M H R 610	Compensation: Theory and Administration	
M H R 614	People Analytics	
M H R 617	Diversity in Organizations	
M H R 640 & M H R 641	Creative Destruction Lab I and Creative Destruction Lab II	
M H R 723	Business Strategy	
OTM 701	Product Management	
OTM 714	Supply Chain Analytics	
OTM/ MARKETNG 727	Information Technology in Supply Chains	
OTM 752	Project Management	
REAL EST 710	Real Estate Finance	
REAL EST 715	Techniques of Real Estate Valuation	
R M I 660	Risk Analytics and Behavioral Science	
R M I 655	Risk Financing Techniques	
R M I 705	Risk Management and Technologies in a Digital Age	
<b>Total Credits</b>		<b>30</b>

In addition to the Approved Electives, students may request alternative business school elective courses based on their interests. These requests will need to be approved by the MSBA academic leadership team.

Students in this program may not take courses outside the prescribed curriculum without faculty advisor and program director approval. Students in this program cannot enroll concurrently in other undergraduate or graduate degree programs.

## POLICIES

### GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) serve as the official document of record for Graduate School academic and administrative policies and procedures and are updated continuously. Note some policies redirect to entries in the official UW-Madison Policy Library (<https://policy.wisc.edu/>). Programs may set more stringent policies than the Graduate School. Policies set by the academic degree program can be found below.

### MAJOR-SPECIFIC POLICIES

#### PRIOR COURSEWORK

##### Graduate Credits Earned at Other Institutions

With program approval, up to 6 credits of coursework at the graduate level from an AACSB-accredited school, and in which a grade of B or better was earned, may transfer toward the degree. Coursework earned seven or more years prior to admission to a master's degree is not allowed to satisfy requirements.

##### Undergraduate Credits Earned at Other Institutions or UW-Madison

Up to 6 credits from another institution or numbered 300 or above of required or elective courses from undergraduate work completed at UW-Madison in which a B or better was earned may transfer. Transfer credits from other institutions must be equivalent to the rigor of UW-Madison courses numbered 300 and above. These are not allowed to count toward the 50% graduate coursework minimum unless numbered 700 or above from UW-Madison. Coursework earned seven or more years prior to admission to a master's degree is not allowed to satisfy requirements.

##### Credits Earned as a Professional Student at UW-Madison (Law, Medicine, Pharmacy, and Veterinary careers)

Refer to the Graduate School: Transfer Credits for Prior Coursework (<https://policy.wisc.edu/library/UW-1216/>) policy.

##### Credits Earned as a University Special Student at UW-Madison

With program approval, students are allowed to transfer no more than 9 credits of coursework numbered 700 or above taken as a UW-Madison University Special student. Coursework earned seven or more years prior to the master's degree is not allowed to satisfy requirements.

### PROBATION

Refer to the Graduate School: Probation (<https://policy.wisc.edu/library/UW-1217/>) policy.

### ADVISOR / COMMITTEE

Refer to the Graduate School: Advisor (<https://policy.wisc.edu/library/UW-1232/>) policy.

### CREDITS PER TERM ALLOWED

15 credit maximum. Refer to the Graduate School: Maximum Credit Loads and Overload Requests (<https://policy.wisc.edu/library/UW-1228/>) policy.

### TIME LIMITS

Refer to the Graduate School: Time Limits (<https://policy.wisc.edu/library/UW-1221/>) policy.

### GRIEVANCES AND APPEALS

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (<https://doso.students.wisc.edu/bias-or-hate-reporting/>)
- Graduate Assistantship Policies and Procedures (<https://hr.wisc.edu/policies/gapp/#grievance-procedure>)
- Hostile and Intimidating Behavior Policies and Procedures (<https://hr.wisc.edu/hib/>)
  - Office of the Provost for Faculty and Staff Affairs (<https://facstaff.provost.wisc.edu/>)
- Employee Assistance (<http://www.eao.wisc.edu/>) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (<https://employee disabilities.wisc.edu/>) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (<https://grad.wisc.edu/>) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)

- Office of Compliance (<https://compliance.wisc.edu/>) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office Student Assistance and Support (OSAS) (<https://osas.wisc.edu/>) (for all students to seek grievance assistance and support)
- Office of Student Conduct and Community Standards (<https://conduct.students.wisc.edu/>) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (<http://www.ombuds.wisc.edu/>) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (<https://compliance.wisc.edu/titleix/>) (for concerns about discrimination)

**Any student who feels that they have been mistreated by a faculty or staff member has the right to lodge a complaint. Complaints may concern course grades, classroom treatment, program admission, or other issues. To ensure a prompt and fair hearing of any complaint and to protect both the student's rights and the person at whom the complaint is addressed, the grievance procedures below are used in the School of Business.**

The person against whom the complaint is directed must be an employee of the School of Business. Any student or potential student may use these procedures unless other campus rules or contracts cover the complaint:

1. If the student feels comfortable/safe doing so, the student should first talk with the person against whom the grievance is directed. Most issues can be settled at this level. If the complaint is directed against a teaching assistant (TA) and the student is not satisfied after discussion of the grievance with the TA, the next step would be to talk to the TA's supervisor, who is usually the course professor. If the complaint is still not resolved satisfactorily, the student may continue to step 2.
2. If the complaint involves an academic department, the student should contact the chair of the department. The chair will attempt to resolve the problem informally. If this cannot be done to the student's satisfaction, the student may submit the grievance to the chair in writing. This must be done within 60 calendar days of the alleged unfair treatment.
  - a. If the complaint does not involve an academic department, the procedure outlined in Step 4 below should be followed.
3. On receipt of a written complaint, the chair will refer the matter to a departmental committee, which will obtain a written response from the person at whom the complaint is directed. This response shall be shared with the person filing the grievance. The chair will provide a written decision within 30 days to the student on the action taken by the committee.
4. If either party is not satisfied with the decision, they have five working days from receipt of the decision to contact the dean's office (at the number below), indicating the intention to appeal. If the complaint does not involve an academic department in the school, the student must contact the dean's office within 60 calendar days of the alleged unfair treatment.
5. In either case, there will be an attempt to resolve the issue informally by the appropriate associate dean. If this cannot be done, the complaint can be filed in writing with the Office of the Dean. This must be done within 10 working days of the time the appealing party was notified that informal resolution was unsuccessful.
6. On receipt of such a written complaint, the Chief Engagement, Culture, and Organizational Effectiveness Officer will convene a subcommittee of relevant stakeholders pending the nature of the

issue. This subcommittee may ask for additional information from the parties involved and may hold a hearing at which both parties will be asked to speak separately. The subcommittee will then make a written recommendation to the dean of the School of Business who will render a decision. Unless a longer time is negotiated, this written decision shall be made within 20 working days from when the grievance was filed with the Office of the Dean.

*Questions about these procedures can be directed to the School of Business, Office of the Dean, 4339 Grainger, 975 University Avenue, 608-262-7867.*

*State law contains additional provisions regarding discrimination and harassment. Wisconsin Statutes 36.12 reads, in part: "No student may be denied admission to, participation in or the benefits of, or be discriminated against in any service, program, course or facility of the system or its institutions or center because of the student's race, color, creed, religion, sex, national origin, disability, ancestry, age, sexual orientation, pregnancy, marital status or parental status." In addition, the UW System prohibits discrimination based on gender identity or gender expression. Students have the right to file discrimination and harassment complaints with the Office of Compliance, 361 Bascom Hall, 608-265-6018, [uwcomplianceoffice@wisc.edu](mailto:uwcomplianceoffice@wisc.edu).*

The Graduate School has procedures for students wishing to appeal a grievance decision at the school/college level. These policies are described in the Graduate School's Academic Policies and Procedures: <https://grad.wisc.edu/documents/grievances-and-appeals/>

## OTHER

Not applicable.

## PROFESSIONAL DEVELOPMENT

### 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.

### PROGRAM 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.

## LEARNING OUTCOMES

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1. Apply business analytic tools and methods across various business functions (marketing, finance, supply chain, etc.) and industries (health care, finance, technology, etc.)
2. Leverage expertise in data management software (e.g., SQL) & statistical programming (e.g., R, Python) to go from data to decisions
3. Deliver insights and recommendations for organizations using cutting-edge descriptive, predictive, and prescriptive analytics techniques
4. Manage analytics projects, communicate professionally, and influence data-based changes within an organization

## ACCREDITATION

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AACSB International—The Association to Advance Collegiate Schools of Business (<http://www.aacsb.edu/>)

Accreditation status: Accredited. Next accreditation review: 2026–2027.