Business Data Analytics, M.S.

Degree Offered

- Master of Science in Business Data Analytics

Certificates Offered

- Business Data Analysis
- Business Data Science
- Business Data Technology Management
- Business Operations Research

Nature of the Program

This program is designed to provide students with the ability to perform data analytics in order to enhance business decision making and increase organizational value. The Business Data Analytics degree provides students with a set of tools applicable in every business and industry, for this reason the program is attractive to both recent graduates in entry-level positions and experienced professionals. The certificate programs allow students to dive deeply in a specific area over the course of one or two semesters. Both the M.S. and certificate programs are designed for working professionals with one-, one-and-a-half, and two-year plans of study, and many find they are able to apply the concepts learned to their work before graduation.

The M.S. and certificates in Business Data Analytics are delivered online and may be completed from anywhere in the world. The program is asynchronous, with the exception of one required presentation at the end of the Capstone project. Students may choose to come to Morgantown or participate virtually in this presentation. Capstone projects allow students to showcase and expand their skills by engaging in an experiential learning project provided by a sponsoring organization. Capstone sponsors represent a broad range of industries, including banking, government contracting, manufacturing, and healthcare. Capstone presentations are an opportunity to present the Capstone Project course findings to the sponsoring company's leadership, unifying the technical and organization value found in the program.

M.S. Business Data Analytics graduates will understand emerging technology trends in the job market and be well-positioned, by way of their strong technology and analytical and quantitative skills, for career and lifelong success. Data analytics is a rapidly emerging segment in business and industry, and all indications are that it represents one of the fastest growing job markets and has a sustainable future. This program seeks to provide students with the knowledge, skills, and tools to successfully compete for a variety of positions in the emerging job market.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
  - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their college, degree program and/or department. A student who violates the established professional standards may be placed on probation or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  - A student will be dismissed from their program if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment.
- A student will be dismissed from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
  - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/ permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Associate Dean for Graduate Programs **and** the Program Coordinator.

FACULTY

COORDINATOR

- Stephane Collignon - Ph.D. (Virginia Tech)
  Management Information Systems

ASSOCIATE PROFESSORS

- Stephane Collignon - Ph.D. (Virginia Tech)
  Management Information Systems
- Bin Liu - Ph.D. (Rutgers)
  Management Information Systems
- Brad Price - Ph.D. (University of Minnesota)
  Management Information Systems

ASSISTANT PROFESSORS

- Jeongsub Choi - Ph.D. (Rutgers)
  Management Information Systems

EXPERT INSTRUCTORS

- Hannah Bailey - M.S. (WVU)
  Data Analyst, Data Driven West Virginia
- Joshua Meadows - M.S. (WVU)
  Service Assistant Professor, Data Driven Director

Admissions for 2026-2027

The Admissions Committee is made up of faculty teaching in the M.S. in Business Data Analytics Program. The committee members are looking for individuals who have an interest and demonstrated aptitude in quantitative and analytical domains. The committee takes a holistic approach to the admission process and will consider the following factors:

- Undergraduate Degree: students can have an undergraduate degree in any field, but the Admissions Committee looks for strong undergraduate records in quantitative, analytical, and/or programming coursework. Successful students come from many academic backgrounds.
- Applicants must have had a minimum undergraduate grade point average of 2.75 to be considered for admission.
- Work or additional experience in the following areas – business intelligence, business analytics, data mining, data warehousing, database management, computer science, programming, web development, web analytics, risk management and related fields – are considered favorably.

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall or spring semester. Please visit this program's webpage (https://business.wvu.edu/academics/management-information-systems/business-data-analytics/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505.

* Note- International Students are required to submit a TOEFL, IELTS, or Duolingo score. Applicants must have a TOEFL-ibt score of 79. If you have taken the IELTS, the minimum score must be 6.5, and the minimum Duolingo score is a 105. English language exam scores should be sent to the Office of Admissions, West Virginia University, PO Box 6009, Morgantown, WV 26506-6009.

WVU cannot accept scans, uploads, faxes, or unverified photocopies of transcripts as official.

Graduate degree-seeking applicants must send their official transcript from the undergraduate institution that granted the bachelor's degree. It is preferred that official transcripts be sent via an online, secure service such as eScrip-Safe (https://escrip-safe.com/signup/), National Student Clearinghouse (https://studentclearinghouse.org/), or Parchment (https://www.parchment.com/) to graduateadmissions@mail.wvu.edu. Alternatively, sealed, untampered, physical official transcripts can be sent to:

WVU Hub
P.O. Box 6004
Morgantown, WV 26506

International Applicants and Express Mail

International applicants and applicants using express mail, use the address below:

WVU Hub
62 Morrill Way - Suite 220

Morgantown, WV 26506

Major Code: 2159

All graduate programs in the John Chambers College of Business and Economics require that enrolled students maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the specific academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from their respective program.

Degree Requirements

The 30-hour online program is comprised of ten courses that collectively expose students to data uses to facilitate business operations and decision making. The introductory course (BUDA 510) helps students understand the role of data analytics in the context of business. The next set of courses (BUDA 515 and BUDA 520) covers the collection of data as well as the building, manipulation and management of large databases. This is followed by a set of courses (BUDA 525, BUDA 530, BUDA 535, BUDA 540, BUDA 545 and BUDA 550) that cover analytical tools that can be applied to the large databases, including statistical, data mining, visualization, and simulation modeling tools. Formal coursework concludes with a capstone course (BUDA 555) that requires students to take the knowledge and skills built in the previous nine courses and apply them to a real-world business problem. Throughout all ten courses, there will be an overarching emphasis on 1) the application of data analytics to a business context, and 2) the ethical issues surrounding the collection and use of data. The MS in BUDA program also has two virtual residency requirements. The first residency will occur at the front-end of the program. Students will meet and interact with faculty and staff associated with the MS in BUDA program, as well as their fellow students. This will also provide an opportunity to cover the logistics of the program and build networking capacity. The second residency will occur at the end of the program. This residency will include presentations by student teams of their capstone project and a recognition/celebratory event surrounding completion of the program.

Code	Title	Hours
A program GPA of 3.0 is required by the Chambers College.		
BUDA 510	Overview of Business Intelligence	3
BUDA 515	Big Data Technologies for Business	3
BUDA 520	Data Management	3
BUDA 525	Business Statistical Methods 1	3
BUDA 530	Business Statistical Methods 2	3
BUDA 535	Business Data Mining	3
BUDA 540	Decision Sciences and Analytics	3
BUDA 545	Business Simulation Modeling	3
BUDA 550	Business Data Visualization	3
BUDA 555	Business Analytics Practicum	3
Total Hours		30

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Students whose cumulative GPA falls below 2.75 will be placed on academic probation. If the GPA is not brought up to 2.75 by the end of the following semester, the student will be suspended from the MS in Business Data Analytics program. Students who are suspended from the program will not be allowed to enroll in program courses for one year.

Suggested Plan of Study (1-year option)

Fall	Hours	Spring	Hours	Summer	Hours
BUDA 510		3 BUDA 530		3 BUDA 550	3
BUDA 515		3 BUDA 535		3 BUDA 555	3
BUDA 520		3 BUDA 540		3	
BUDA 525		3 BUDA 545		3	
		12		12	6

Total credit hours: 30

Suggested Plan of Study (2-year option)

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BUDA 515		3 BUDA 530		3 BUDA 550	3
BUDA 525		3 BUDA 535		3	
		6		6	3

Second Year						
Fall	**Hours**	**Spring**	**Hours**	**Summer**	**Hours**	
BUDA 510		3 BUDA 540		3 BUDA 555		3
BUDA 520		3 BUDA 545		3		
		6		6		3

Total credit hours: 30

Major Learning Outcomes

BUSINESS DATA ANALYTICS

The educational goals and objectives of the M.S. in Business Data Analytics are as follows:

- Students will be able to demonstrate expertise in statistical techniques, data mining, utilizing databases, and analytical tools.
- Students will be able to apply data analytics to enhance the decision-making of the firm in performance metrics and measurement, risk indicators, assessment and response, and compliance.
- Students will be able to use business analytics to synthesize data trends and competitive drivers.
- Students will be able to communicate the analysis and findings of an analytics initiative in moving an organization forward.