Data science and analytics (DSA) is an evolving and expanding field that has seen a nearly 46% growth in hiring since 2019. This increase has heightened the demand for diverse skill sets across a variety of industries, including in roles such as:\(^2,^3\)

- Data scientist
- Data management analyst
- Financial analyst
- Business intelligence analyst
- Chief analytics officer
- IT project manager
- Marketing manager

1 Retrieved on January 4, 2019, from domo.com/learn/data-never-sleeps-5/\(id=ogm072517_1\&sfl100871281=1\)


Build Success With High-Demand Data Skills

While DSA job titles vary widely, most pull from a single suite of related skills and competencies. Your specific skill mix can indicate where you might find success, whether in advanced data analytics, analytic management, functional analytics or data-driven decision-making.

Regardless of the job title you desire, consider what skills you may need to grow and sharpen to advance your data and analytics career.

Which Skills Are in High Demand?

The last decade has seen a 650% increase in data science jobs, with high value placed on proficiency in:

- Programming languages, with Python, SQL, and R topping the list
- Machine learning
- Probability and statistics
- Data management
- Econometrics
- Statistical visualization

Refine your own data and analytics skills with the Online Master of Science in Business Analytics (MSBA) from William & Mary.

Ready to move forward with an MSBA?

Download an Application Checklist

Best Jobs in America!

Data scientist remained the top three jobs in America in 2021, with data analyst, business analyst, and other DSA roles making the top 50.


Retrieved on July 15, 2021 from towardsdatascience.com/is-data-science-still-a-rising-career-in-2021-722281f7074c

Retrieved on July 15, 2021 from towardsdatascience.com/the-most-in-demand-skills-for-data-scientists-in-2021-4b2a80840005

Retrieved on July 15, 2021 from coursera.org/articles/in-demand-data-analyst-skills-to-get-hired

The Next Move for Women in Business Analytics

AUDREY LOW, MSBA ’19

Read More

Apply Today
Program Highlights

- 32 credits
- 8 core courses
- 4 technical prerequisites*
- 2 pre-program courses
- Finish in as few as 15 months**
- 100% online

*At the discretion of the institution, students with documented expertise in mathematics, statistics, computer science, business and economics, and other quantitative subjects can waive the four prerequisite courses. Speak with an Admissions Advisor at 844-234-4075 to learn more.

**Students who are required to complete the prerequisite courses can graduate in as few as 18 months.

A Foundation for Sustained Success

To ensure all students possess the same baseline skills in math, statistics and programming, our Online MSBA program begins with a set of four technical prerequisites:

- Probability and Statistics I
- R Programming
- Python Programming
- Linear Algebra for Business Analytics

With your technical foundation set, it’s time to challenge your creative and analytical capabilities, and to start transforming mere facts and figures into strategic insights.

View Admissions FAQs

The Secret to Data Storytelling

“What do you do when you’re drowning in more information than the human brain can process?”

Read our blog to find out.

Download an Application Checklist
Built for Your Competitive Advantage

The Online MSBA has been crafted with an uncommon degree of care around the central program theme of business intelligence and analytics. This theme represents a two-pronged approach to a professional education in analytics, one that encompasses both the technical mastery of contemporary programming languages and digital tools and the business communication and strategy acumen required to lead in a data-driven role.

Technological Solutions to Complex Problems:
Throughout the Online MSBA program, you will receive hands-on experience working with powerful computing technologies used to tackle contemporary business’s most difficult analytical problems. Programming languages taught throughout the Online MSBA program include R, Python and SQL, and coursework covers best practices for database management, machine learning utilizing the Hadoop environment and Amazon Web Services, and more.

The Art of Persuasion, Backed by Data:
The Online MSBA has been built with the knowledge that even the most compelling conclusions reached through data analysis will fall flat if communicated poorly. Beginning with the introductory course “Competing Through Business Analytics,” the Online MSBA teaches students to use an array of data visualization tools and verbal and written communication strategies to make an impact on decision makers and stakeholders in any business setting.

The result? A robust, multifaceted skill set that can make you the data science and analytics professional that modern business demands.

View Our Curriculum
The 4 Pillars of Our Curriculum

Our rigorous **32-credit curriculum** is designed to give students a competitive advantage in high-growth, high-impact roles across multiple contemporary fields. To help set you up for sustained success as a data science professional, the Online MSBA curriculum centers around **four core pillars:**

**Business Acumen:**
Aspects of business analytics relating to marketing, finance, economics, operations, supply chain and human resources management, and more

**Math Modeling:**
Aspects of data analysis, including probability distributions, descriptive and inferential statistics, optimization, and experimental design

**Computing Technologies:**
Data management, data analytics tools (Excel, data mining, business intelligence, etc.), programming and more

**Communicating With Impact:**
Communicate data insights clearly, coherently and compellingly to audiences less familiar with such technical materials

---

**Meet the Online MSBA Faculty Director**

Dr. Joe Wilck, Ph.D., P.E., brings over a decade of experience teaching analytics, operations research and engineering to the Online MSBA at W&M. His research has been funded by the National Science Foundation, Department of Energy, Defense Advanced Research Projects Agency (DARPA) and North Carolina Department of Transportation, among others, and he is an active member of the Institute of Industrial and Systems Engineers (IISE), Institute for Operations Research and the Management Sciences (INFORMS), and Military Operations Research Society (MORS).

"It is not enough to just know business analytics methodologies. You and your organization need problem solvers who can take data from chaos to clarity."

**JOE WILCK, MSBA FACULTY DIRECTOR**

---

**View Our Courses**

**Download an Application Checklist**
It’s Time to Reimagine Business Education

An MSBA Accessible Anytime, Anywhere

Within the W&M Connect mobile app, you can:

- Access course content on the go
- Participate in discussions with your fellow students and instructors
- Track your grades
- Receive course announcements from instructors
- Keep your calendar and schedule organized
- Stay up to date with W&M news and events
- Contact your Student Success Coordinator for support and assistance

Discover the W&M Online Experience

“In Competing Through Business Analytics, we developed essential skills—the ability to visualize data and to use it to persuade clients—that would serve us in class, our eventual jobs and, more pertinently, our job interviews.”

AUDREY LOW, MSBA ’19

5 Ways Big Data is Creating Smarter Cities
Read Our Blog to Learn More

Apply Today
Support for Your Student Journey

W&M supports Online MSBA students with a network of individuals and resources that are dedicated to your success in the program, including faculty, peers and cutting-edge technology. As part of this network, your dedicated Student Success Coordinator will contact you prior to your first day of class and will serve as a source of one-on-one support throughout the duration of your program.

In addition, you’ll have access to 24/7 technology support, academic advising, career services, and other student support services offered by William & Mary and the Raymond A. Mason School of Business.

Shape the Future of Modern Business With Us

William & Mary is the Alma Mater of the Nation. With a 300-year history of distinguished alumni that have included four U.S. presidents as well as national diplomats, members of Congress and business pioneers, we have helped shape generations of leaders.

Now, we invite you to join our revolutionary Raymond A. Mason School of Business and explore with us how innovation, integrity and hard work, coupled with the power of emerging technologies, can empower you to reshape the future of business and transform the world at large.

Welcome to the Raymond A. Mason School of Business.

Discover the History of W&M
Why Choose William & Mary?

#5
Best Business Professors

#11
Top Public School

#18
Best College for Veterans

#39
National University

Who Chooses the Online MSBA?

Our Online MSBA cohorts represent varied sociocultural, geographic and professional contexts. While some students come from highly technical professional backgrounds, others come from financial, educational and government fields.

Our Cohorts at a Glance*

Demographics

11 undergraduate institutions represented
34% U.S. minority
66% ages 26-45
61% VA resident

Work and Educational Background

3.2 average GPA (on a 4.0 scale)
8.5 years of work experience on average
5% W&M alumni
45% from the technology, financial services and educational services sectors

* Data derived from surveys of 2018-2021 entrants to the Online MSBA program

Admissions Requirements

To qualify for admission to the Online MSBA program, applicants must have:

- A bachelor’s degree from a regionally accredited university
- Two years of professional work experience OR proof of business acumen

Qualified applicants must complete and submit the following:

- Online application, including:
  - Transcripts from all universities attended; unofficial transcripts are accepted as part of the application, and official transcripts are due before classes begin
  - Two letters of reference: Please select individuals who can provide specific and relevant information about your intellectual and quantitative abilities, performance and motivation; do not include an immediate family member
  - Personal essay
- Application fee of $100 (nonrefundable; a fee waiver may be available)
- A bachelor’s degree from a regionally accredited university with a GPA of 3.0 or higher (on a 4.0 scale)
- Proof of English language proficiency (for non-U.S. citizens)
- Personal admission interview: Qualified applicants who have submitted and completed their application will be invited to schedule a personal admission interview. Interviews can be conducted on campus, via video conference or by telephone

View Admissions FAQs  Download an Application Checklist

Become the Backbone to 21st Century Business Decisions

With the W&M Online Master of Science in Business Analytics, you can build and refine the data science and analytics skills needed to capitalize on today’s greatest business opportunities. To learn more, visit us online or contact an Admissions Advisor at 844-234-4075.

Apply Today

online.mason.wm.edu/msba
masononline@wm.edu
William & Mary
Raymond A. Mason School of Business
©2021 William & Mary