ONLINE MASTER'S IN DATA SCIENCE AND ANALYTICS

BECOME A DATA-DRIVEN LEADER AND DECISION-MAKER.

DELIVERY FORMAT 100% Online	**TIME TO COMPLETE** 24+ Months (full time student)	**CREDIT HOURS** 33
TIME COMMITMENT 10 to 20 Hours Weekly	**START DATES** Fall, Spring, Summer	**COST** The Master of Science in Data Science and Analytics delivers a strong return on investment. You will build the expertise to lead at the highest levels and position yourself for increased earning potential in a rapidly growing field. Tuition and fees total $33,495, based on $1,015 per credit hour. This cost does not include books or additional materials.

AT A GLANCE

The online Master of Science in Data Science and Analytics from OU Online equips you with high-demand skills in advanced programming, statistical modeling, data mining, data

visualization, and systems thinking. You will learn to harness data to drive smarter decisions and improve performance across industries.

Through the Data Science and Analytics Institute, you will access hands-on training and collaborate with industry leaders. These real-world experiences help you transition seamlessly from the classroom to your career.

WHAT CAN I DO WITH A DATA SCIENCE DEGREE?

Earning your Data Science online degree from the University of Oklahoma positions you for career growth across industries that depend on data-driven decision-making. You will gain the expertise to lead in roles that demand advanced data analysis, strategic insight, and technical precision. Accelerate your career in these areas:

- Data Scientist
- Data Analyst
- Data Architect/Engineer
- Data Modeler or Visualization Designer
- Artificial Intelligence Engineer
- Business Intelligence Analyst
- Business Intelligence Developer
- Machine Learning Engineer
- Consultant
- Market Research Analyst

INDUSTRY INSIGHTS

- Median Pay: $112,590
- Job Outlook: Employment for data scientists is expected to grow by 36 percent by 2033
- Job Openings: 20,800 openings for data scientists are projected each year, on average, over the next decade

Source: U.S. Bureau of Labor Statistics

PROGRAM OUTCOMES: WHAT YOU'LL LEARN

Graduates of OU's online Master of Science in Data Science and Analytics program are prepared to:

- Apply advanced analytical skills to solve complex problems and interpret data with precision
- Design innovative solutions using data visualization tools to clearly communicate insights

- Master key areas including machine learning, artificial intelligence, big data, data mining, data engineering, statistical analysis, advanced analytics, and predictive modeling
- Build statistical models and apply machine learning and optimization techniques to drive strategic decision-making
- Gain both theoretical knowledge and hands-on experience in data collection and data-driven research
- Manage and analyze large-scale data sets to uncover actionable intelligence

TO APPLY: HTTPS://ONLINE.OU.EDU/ADMISSIONS/GRADUATE/

FOR MORE INFO: HTTPS://ONLINE.OU.EDU/PROGRAM/MS-IN-DATA-SCIENCE-AND-ANALYTICS/

COURSE DETAILS

The Data Science and Analytics program delivers a comprehensive foundation in extracting, integrating, and analyzing data. You will develop a versatile set of high-demand technical and analytical skills that prepare you to lead in today's data-driven economy.

*Students will take 3 hours of CS, ISE or DSA electives, and 6 additional hours of electives.

COMPUTING STRUCTURES

Credit Hours: 5
This course has three parts: discrete mathematics, object-oriented programming in C++, and data structures in C++. As part of discrete mathematics, students will be introduced to combinatorics, logic, relations, functions, computational complexity, automata, and graph theory. Students will be introduced to the fundamentals of object-oriented programming and learn to design, build, and analyze data structures using object-oriented principles and techniques.

DATABASE MANAGEMENT SYSTEMS

Credit Hours: 3
The design and implementation of a DBMS including data models, query languages, entity-relationship diagrams, functional dependencies, normalization, storage structures, access methods, query processing, security and transaction management, and applications. The impact of databases on individuals, organizations, and society, and legal and professional responsibilities including security and privacy will be discussed. A commercial DBMS is used. Students practice written communication skills.

ALGORITHM ANALYSIS

Credit Hours: 3
Design and analysis of algorithms and measurement of their complexity. This course introduces various algorithm design strategies — divide and conquer, greedy principle and dynamic programming — to solve a variety of problems using algorithms of various types, including deterministic and randomized, serial and parallel, centralized and decentralized, and program based and circuit based.

FUNDAMENTALS OF ENGINEERING STATISTICAL ANALYSIS

Credit Hours: 3
Introduction to probability, expectation, discrete and continuous distributions, sampling and descriptive statistics, parameter estimation, and statistical tests to aid decision making. The student will learn analysis techniques for verification of systems parameters.

INTELLIGENT DATA ANALYTICS

Credit Hours: 3
In our society, data is rapidly increasing in volume, velocity, and variety. At the same time computing power and the sophistication of data analysis techniques are increasing. However, even with the expanding capabilities, businesses and organizations often find themselves "data rich, but information poor." Intelligent Data Analysis is a holistic approach to addressing real-world data intensive problems that integrates human intuition with data analysis tools to best draw out meaningful insights. To this end, the course has four underlying themes: defining the Problem, understanding and coping with Data, selecting and using appropriate Analytical Tools, and discovering and communicating the Insight. Techniques covered include data cleansing and pre-processing, exploratory analysis and visualization, dimension reduction, linear and logistic regression, decision trees, and clustering. This course will introduce students to a powerful open-source statistical programming language (R) and include extensive hands-on data analysis and team projects.

ADVANCED ANALYTICS AND METAHEURISTICS

Credit Hours: 3
Explores advanced techniques for addressing complex optimization problems. Focus is on formulating mathematical models and developing problem solving strategies using methods in the context of Data Science and Analytics. Topics include continuous and combinatorial optimization with an emphasis on both traditional and modern heuristic techniques.

PROFESSIONAL PRACTICE

Credit Hours: 4
Participation in a professional experience with an approved project sponsor and topic. A written report detailing the responsibilities and results of the experience is required upon completion along with an oral presentation.

WHY EARNING YOUR MS IN DATA SCIENCE AND ANALYTICS AT OU ONLINE PAYS OFF

OU Online delivers high-quality, affordable undergraduate and graduate programs in a flexible, fully online format—backed by the reputation of a top-tier public university. In the Master of Science in Data Science and Analytics program, you will gain the skills to thrive in the fast-paced, ever-evolving world of data science.

FACULTY EXPERTISE

The Master of Science in Data Science and Analytics is powered by world-class University of Oklahoma faculty and seasoned professors of practice who bring real-world experience into every course. By connecting industry leaders with our online curriculum, OU Online delivers cutting-edge instruction that prepares you for long-term career success in the data science field.

ROBUST STUDENT SUPPORT

OU Online offers robust student support services, including academic support, online tutoring, mental health counseling, and an online career development center. The program accommodates the needs of working professionals, allowing you to expand your technical skills while maintaining full-time employment.

GLOBAL ALUMNI NETWORK

With more than 250,000 alumni across the world, becoming a Sooner means you'll have access to a strong network of data science professionals to accelerate your career. As a Sooner, you'll be part of a powerful network of leaders working in organizations across the world, helping you expand your data science career.

COST & FINANCIAL AID

Earning your Master of Science in Data Science and Analytics is a powerful investment in your future—and OU Online is committed to making that investment accessible and transparent.

Tuition and fees are $1,015 per credit hour, totaling $33,495 for the full program. This cost does not include books or additional materials.

Financial aid, scholarships, and employer tuition assistance may be available to help reduce your out-of-pocket expenses. Our dedicated financial services team will support you every step of the way, so you can stay focused on your education and career goals.

For questions about financial aid, contact the Online Aid office at onlineaid@ou.edu or call 405-325-2929.

A nonrefundable deposit of $350 is required upon admission to secure your place in the program. This deposit guarantees your spot in your first semester of courses and will be applied toward your first semester's tuition.

** Please be aware that tuition and fees may change, as determined by the Oklahoma State Regents for Higher Education.*

LEARN MORE ABOUT FINANCIAL AID: HTTPS://ONLINE.OU.EDU/COST-AND-AID/GRADUATE/

TAKE THE NEXT STEP

To apply to the online Data Science and Analytics program, you must:

- Hold a bachelor's degree from a regionally accredited college or university (or the international equivalent) with a 3.0 cumulative GPA
- Have completed coursework in calculus I, calculus II, linear algebra, and two semesters or a year of high language programming
- TOEFL exam (international students)

To apply, students must:

- Complete the online application at https://gograd.ou.edu/apply/
- Submit a current resume
- Provide official college transcripts from all institutions
- Submit a personal statement
- Three letters of recommendation

APPLICATION TIMELINE

The admissions committee reviews applications on a rolling basis, with decisions typically made within two weeks of receiving a completed application. While admissions may remain open until two weeks before classes begin, some programs may have earlier deadlines. Applying early ensures the best chance for consideration and timely enrollment.

A nonrefundable deposit of $350 is required upon admission to secure your place in the program. This deposit guarantees your spot in your first semester of courses and will be applied toward your first semester's tuition.

STEP 1	STEP 2	STEP 3
Contact an Enrollment Coach to discuss your qualifications and interest in the program.	Complete the online application at https://gograd.ou.edu/apply/	Provide supplemental materials, including a resume, personal statement, and undergraduate transcripts.

TO APPLY: HTTPS://GOGRAD.OU.EDU/APPLY/