

# Data Analytics - B.S.

Data Analytics bachelor's degree program seeks to provide graduates with the knowledge, skills and tools necessary to obtain employment as a data analyst. Graduates learn to use specialized systems and software to collect and organize data, then use statistical methods to discover patterns, find correlations and predict outcomes in order to make better-informed decisions within their chosen field. Students in this program receive a firm foundation in mathematics, computer programming, and communications, along with gaining experience with database management systems and spreadsheet programs.

Upon completion of the program, graduates are expected to:

- Write reports and make presentations containing visual data or statistical results.
- Utilize database management systems and spreadsheet programs to collect, organize and display data.
- Use standard techniques of mathematics and statistics in order to address problems or explore phenomenon that are prevalent in various fields.
- Develop linkages between their interdisciplinary intellectual inquiries and their own ethical positions in terms of contemporary challenges facing individuals, communities and societies.

This program allows students to either directly enter the workforce or continue to a graduate-level education. The hybrid nature of data analysis in the workplace requires both analytical skills and domain specific knowledge. JWU's program prepares its graduates for this aspect of the profession by offering a selection of minors. Qualifying students will complete a 12-credit-hour internship to gain experience in the workforce. Students also have the opportunity to apply to the 4+1 Data Analytics master's degree program.

## Data Analytics

A four-year program leading to the bachelor of science degree

### Major Courses

CSIS1000	Problem Solving and Programming Concepts	3
CSIS1101	Computer Science I	3
CSIS2030	Database Concepts	3
CSIS2080	Database Design	3
FIT1040	Spreadsheet Design for Business Solutions	3
FIT2050	Spreadsheets for Data Analysis	3
MATH2220	Linear Algebra	3
MATH4900	Applied Statistics	3
SMW2025	Introduction to Data Visualization	3

### Major Electives or Minor

Choose 15 credits from the following courses or a minor listed below: \*

ITEC3050	Information Security with Cryptography	
CYB3038	HCI/Usable Security	
Choose three of the following:		
CSIS1112	Computer Science II	
ENG2010	Introduction to Technical Communication	
ENG3012	Report and Proposal Writing	
MATH2020	Discrete Mathematics	
PRMG2010	Introduction to Project Management & Project Membership	

Or

Minor in Economics \*\*

Or

Minor in Environmental Sustainability \*\*

Or

Minor in Public Health \*\*

### Applied/Experiential Learning

Choose 12 credits from the following: 12

ASCI4799	College of Arts & Sciences Internship	
DEE3999	Directed Experiential Education <sup>D</sup>	
RSCH3830	Undergraduate Research Experience	
RSCH4020	Honors Directed Academic Experience	
Study Abroad		

### Related Professional Studies

CAR0010	Career Management	1
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### A&S Core Experience

Communication Foundation Courses		9
ENG1020	Rhetoric & Composition I	
ENG1021	Rhetoric & Composition II	

ENG1030	Communication Skills	
Integrated Learning		6
Two ILS Courses, one at the 2000 level, one at the 4000 level		
Arts and Humanities		6
PHIL3240	Ethics: A Global Perspective	
One course from ART, HIST, HUM, LIT, or REL		
Mathematics		6
MATH1035	Quantitative Analysis I ***	
MATH2035	Quantitative Analysis II	
Science		3
One course from BIO, CHM, PHY or SCI		
Social Science		6
ECON1001	Macroeconomics	
One course from ANTH, LEAD, PSCI, PSYC or SOC		
A&S Electives		6
MATH2001	Statistics I	
or MATH2010 Introduction to Biostatistics		
MATH2002	Statistics II	
<b>Free Electives #</b>		
24 credits selected from 1000-4999 numbered offerings within the university		24
Total Credits		121.0

\* Students are responsible for meeting prerequisites.

\*\* Other minors may be considered with department chair approval.

\*\*\* Students that do not place in MATH1035 Quantitative Analysis I, will need to take an extra course, MATH1020 Fundamentals of Algebra, as a prerequisite. If needed this will count as a free elective.

<sup>D</sup> Directed Experiential Education (DEE) opportunities are based on project availability with community partners and student eligibility. For more information, visit Experiential Education & Career Services (EE&CS).

# In addition to classes, free elective credits may be applied to a number of options such as internship, study abroad, Directed Experiential Education courses and courses in a specialization or minor as relevant. For Accelerated Master's program students, up to three graduate-level courses may apply. Students are strongly encouraged to contact a faculty adviser before scheduling free elective credits.

NOTE: Students must pass MATH0010 Basic Mathematics or have equivalent placement scores to enroll in required math course(s).

Students who graduate with a bachelor's degree must leave Johnson & Wales University with effective writing skills to fulfill the graduation writing requirement. These writing skills are assessed in ENG1021 Rhetoric & Composition II. Students who have met the requirement of ENG1021 Rhetoric & Composition II or ENG1027 Honors Advanced Composition and Communications: Civic Discourse outside of Johnson & Wales University must fulfill the graduation writing requirement through successful completion of ENG0001 Writing Workshop.

In collaboration with academic colleges across all JWU campuses, JWU Global Study Abroad programs offer a variety of international options for major, minor, arts and sciences, and elective credit at many affordable price points for students during the academic year, break periods, and summer. Faculty-led, exchange, affiliate, and direct-enroll programs range in duration from one week to a full semester or full year. Financial aid may be applied and scholarships are available. Visit the study abroad website for information, program descriptions and online applications. Where will you go?