

Data Analytics and Applications, BSIS

Data-related industries, such as the geospatial industry, are worth \$4.9 billion in St. Louis and are responsible for more than 27,000 jobs. Given the growth of these data-related industries, professionals in the field need to have a strong foundation in a variety of data. In the **Bachelor of Science in Integrated Studies: Data Analytics and Applications**, learners obtain the knowledge and skills necessary for success in the data analytics field, and develop relevant, data-related skills that will make them competitive in the market for jobs that center on working with a diversity of data. Students will complete required coursework and electives focused on Python, GIS, and R, along with relevant math and statistics courses. The curriculum aligns with area industry need; examples include fields like data scientist and GIS analyst. The experienced and talented faculty who will teach the courses within this degree come from a variety of professional backgrounds, such as government and private industry.

This program will meet the needs of modern learners, providing flexible, online course delivery. Through a focus on project-based learning, students complete coursework based on their own interests or the needs of a community partner. The program will focus on transparency in teaching and learning (TILT) to help learners understand the transferability—and meaningfulness—of classroom learning to their lives and careers.

Contact: CAPS
 Phone: 314-935-6700
 Email: caps@wustl.edu
 Website: <https://www.caps.wustl.edu>

Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements.

Learners in BSIS programs must complete a certificate, tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

Required Courses: 24 units

Code	Title	Units
CAPS - DATASTUDIES 1240	Introduction to (Statistical) Programming with R	3
CAPS - DATASTUDIES 1240	Programming With Python	3
CAPS - DATASTUDIES 1440	Fundamentals I	1.5
CAPS - DATASTUDIES 1440	Data Fundamentals II	1.5
CAPS - DATASTUDIES 2030	Introduction to Data Science With Python	3
CAPS - DATASTUDIES 2030	SQL and Data: Exploration and Analysis	3
CAPS-GIS 2000	Introduction to GIS	3
CAPS-MATH 1100	Calculus I	3
CAPS-MATH 2000	Applied Statistics (or CAPS-BIO XXXX Biostatistics [new course coming soon!])	3
Total Units		24

Electives: 9 units

Selections include the following:

Code	Title	Units
CAPS - DATASTUDIES 2006	Analysis and Visualization in Tableau	3
CAPS - DATASTUDIES 3250	Advanced Data Visualization (with R)	3
CAPS - DATASTUDIES 3250	Communicating, Leading, and Problem Solving With Data	3
CAPS-GIS 3000	Advanced GIS	3
CAPS-GIS 3005	Digital Cartography	3
CAPS-GIS 3010	GIS Programming	3
CAPS-GIS 4010	Spatial Data Modeling and Design	3
Other courses approved by CAPS		

Required Capstone: 3 units

Students must also complete a 3-unit capstone course.

This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The CAPS cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).