Data Science, BS

LADATSCIBS

The shortage of data analysts in the U.S. is growing. In this high-demand field, you'll be able to impact the world in areas such as predicting consumer behavior, detecting fraud, improving manufacturing processes and analyzing medical images. Data science has exciting applications to any industry.

Program description

Data science uses sophisticated mathematical, statistical and computational tools to extract patterns from large, complex and often unordered data sets. The BS program in data science prepares students to be critical analysts in a variety of areas, such as business, research and government.

With a mathematical core consisting of linear algebra, statistical inference and classification, data mining, machine learning and associated computer methods, students leave the program with a strong background in data-related skills that are useful in understanding and solving practical issues.

This transdisciplinary program allows students to choose a focus area in:

- behavioral sciences
- biosciences
- business analytics
- computer science
- mathematics
- social sciences
- spatial sciences

In addition to reviewing the guidelines in the Concurrent Program Options section below, students interested in pursuing concurrent or second baccalaureate degrees in The College of Liberal Arts and Sciences are advised to visit The College's website for more information and requirements.

At a glance

- **College/School:** The College of Liberal Arts and Sciences
- **Location:** Tempe or Online, ASU Local

- **Second language requirement:** No
- **First required math course:** MAT 270 - Calculus w/Analytic Geometry I
  or MAT 265 Calculus for Engineers I
- **Math intensity:** Substantial 

Required courses (Major Map)

2024 - 2025 Major Map (on-campus)
2024 - 2025 Major Map (online)
Major Map (Archives)

Concurrent program options

Students pursuing concurrent degrees (also known as a "double major") earn two distinct degrees and receive two diplomas. Working with their academic advisors, students can create their own concurrent degree combination. Some combinations are not possible due to high levels of overlap in curriculum.

Accelerated program options

This program allows students to obtain both a bachelor's and master's degree in as little as five years. It is offered as an accelerated bachelor's plus master's degree with:

Computational Life Sciences, MS

Acceptance to the graduate program requires a separate application. Students typically receive approval to pursue the accelerated master's during the junior year of their bachelor's degree program. Interested students can learn about eligibility requirements and how to apply.

Admission requirements

General university admission requirements:
All students are required to meet general university admission requirements.
First-year | Transfer | International | Readmission

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about ASU tuition and financial aid options to find out which will work best for them.

Change of Major Requirements

A current ASU student has no additional requirements for changing majors.

Students should visit the Change of Major form for information about how to change a major to this program.

Attend online

ASU Online

ASU offers this program in an online format with multiple enrollment sessions throughout the year. Applicants may view the program's ASU Online page for program descriptions and to request more information.

ASU Local

It is now possible to earn an ASU degree with ASU Local, an integrated college experience in which students take advantage of in-person success coaching and programming experiences on site while completing one of 130+ undergraduate online degree programs, all of which come with online faculty interaction and tutoring support.

Transfer options

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use MyPath2ASU® to outline a list of recommended courses to take prior to transfer.

ASU has transfer partnerships in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and they help students save time and money in their college journey.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Employ analysis of data sets in order to make action oriented, ethical recommendations for societal change.
- Engage critically with real world data problems involving chosen areas such as healthcare, education, and government.
- Develop team oriented skills related to civil discourse while utilizing diverse programming languages and statistical processes to interpret results of their own data collection.
- Write a critique of data interpretations provided by real world sources in which they make critical inferences regarding the validity of provided data.

Global opportunities

Global experience

With more than 300 Global Education program opportunities available to them, data science students are able to tailor their experience to their unique interests and skill sets. Whether in a foreign country, in the U.S. or online, students build communication skills, learn to adapt and persevere, and are exposed to research and internships across the world, increasing their professional network.

Career opportunities

Glassdoor.com ranks data scientist at No. 2 on its list of the 50 Best Jobs in America. The McKinsey Global Institute projects a shortage of qualified workers with deep analytical skills.

Graduates of the data science program possess skills related to data analysis, data prediction models and ethical uses of research data, helping them to meet the expressed needs of society. Graduates work in a variety of fields, including governmental research, education, health services, consumer behavior and business.

Example job titles and salaries listed below are not necessarily entry level, and students should take into consideration how years of experience and geographical location may affect pay scales. Some jobs also may require advanced degrees, certifications or state-specific licensure.

Career	*Growth	*Median salary
Bioinformatics Scientist	3.9%	$87,300
Bioinformatics Technician	6.2%	$71,700
Business Intelligence Analyst	35.2%	$103,500
Clinical Data Manager	35.2%	$103,500
Data Scientist	35.2%	$103,500
Financial Quantitative Analyst	6.1%	$73,810
Scientist/Biochemist	6.7%	$103,810
Software Developer	25.7%	$127,260
Statistician	31.6%	$98,920
Urban Planner	3.7%	$79,540

* Data obtained from the Occupational Information Network (O*NET) under sponsorship of the U.S. Department of Labor/Employment and Training Administration (USDOL/ETA).

Bright Outlook

Contact information

Schedule an advisor appointment
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