

BACHELOR *of* SCIENCE

DATA SCIENCE

Program Description

The BS in Data Science (BSDS) is a four-year undergraduate, interdisciplinary degree that combines the fundamentals of statistical modeling, machine learning, and computational sciences. The program is offered by the Zaven & Sonia Akian College of Science and Engineering (CSE) and is part of a liberal arts education at the American University of Armenia (AUA).

Students develop skills across several disciplines, acquiring the knowledge and tools to manage massive amounts of data emerging from new realms in business, engineering, biotechnology, and other areas involving big data. The program prepares graduates for positions in a wide range of sectors including data mining, technical marketing and business analytics, bioinformatics and pharmaceutical statistical research, as well as advanced studies in fields such as computer science, engineering, environmental science, and bioscience.

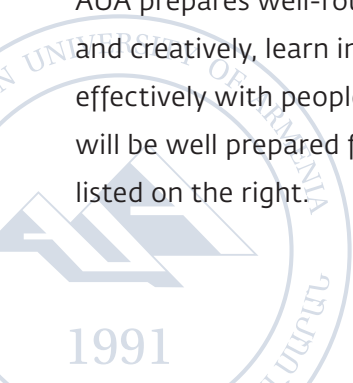
AUA prepares well-rounded specialists who are able to think critically and creatively, learn independently, work collaboratively, and interact effectively with people from different cultures and disciplines. Graduates will be well prepared for employment or graduate studies in the fields listed on the right.

CAREER OPPORTUNITIES

- Machine Learning/Artificial Intelligence Algorithms Development
- Large User Base and Big Data Infrastructure Management
- Data Analytics for Business
- Financial Forecasting
- Distributed Systems Software Development
- Biotechnology, Public Health, and Pharmaceutical Industries
- Robotics, Drones/Unmanned Vehicles Development

GRADUATE STUDY OPPORTUNITIES

- Computer Science
- Applied Mathematics
- Big Data Engineering
- Business Administration
- Bioinformatics
- Engineering Science





Curriculum

Students majoring in Data Science are required to take a set of core courses that provide the foundation for track course requirements. Core courses cover a range of topics from theoretical math and in-depth statistical methods, to computer programming and hands-on practical applications, including data visualization, machine learning and artificial intelligence. Students will then have the opportunity to choose a set of courses concentrating in one of two areas of specialized study to match their interests and advance their careers:

Bioinformatics

Students pursuing the Bioinformatics track learn how to use computers and equations to sort and make sense of biological data, including genetic data. Topics of study include bioinformatics and computational biology algorithms, systems biology, functional genomics, structural modeling, and more.

Business Analytics

Students who pursue this track learn how to think data-analytically and fully appreciate how data science methods support business decision-making. The acquired knowledge and practical skills for business applications range from data visualization and data mining, to cloud computing, data warehousing, and more.

General Education

An AUA undergraduate degree consists of two components: the Major requirements and the General Education requirements. While the Major gives students depth, specialization, and career preparation, General Education gives breadth and a foundation of general knowledge, perspectives, and skills for life. Both are carefully designed components to assure that graduates are ready for life-long learning, whether in the classroom, on the job, or on their own. For more information visit aua.am/gen-ed.

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