Bachelor of Science in Data Sciences for Justice, Law, and Criminology

FOUNDATIONAL DATA SCIENCE FOR JUSTICE, LAW, AND CRIMINOLOGY COURSES

Basic Statistics
Data presentation, display, and summary, averages, dispersion, simple linear regression, and correlation, probability, sampling distributions, confidence intervals, and tests of significance. Use of statistical software both to analyze real data and to demonstrate and explore concepts.

Intermediate Statistics
This course builds on the basic tools of data analysis and methods of statistical inference. The course analyzes data from designed experiments and observational studies, formulates questions and interprets the results in the context of the statistical problem of interest. Emphasis is placed on determining the appropriate statistical model, understanding the assumptions of the model, assessing whether the data satisfies the assumptions, and improving the model if necessary. Topics covered include two-sample t-tests, nonparametric procedures, analysis of variance, and linear and logistic regression. Statistical software is integrated into the course for exploration, analysis, and demonstration of concepts.

Introduction to Computer Science I
Problem solving and algorithm development. Structured programming, basic data types, and canonical structures; arrays and subprograms; recursion. Social implications of computing. Elementary applications from business and science.

Introduction to Data Mining
This course presents the main machine learning algorithms and evaluation methods developed to date in an intuitive way suitable for a non-specialized audience. It also introduces current research developments in the field and initiates students to the solving of applied programs in an innovative way, using existing machine learning tools.

Introduction to Systems of Justice
An overview of the formal mechanisms of social control as manifested by the components of the criminal justice system (legislatures, planning agencies, law enforcement, courts, and corrections), civil justice systems, and such other mechanisms as civil commitment. Alternatives to formal processing including diversion, pretrial screening and dispute-settlement programs.

Introduction to Criminology
Development of theories of criminology and criminal justice over the course of history with special attention to the period from 1700 to the present. Review and evaluation of contemporary knowledge and theories of crime.

Introduction to Justice Research
This course focuses on the study of people and their interactions, in particular questions related to crime, justice, and political violence. Researching these topics in a rigorous way is difficult, but also uniquely interesting and exciting. The courses gives students the tools to analyze and understand social science research (i.e., be a consumer of research). It also provides quantitative skills in game theory, probability, statistics, and programming to serve as a foundation to becoming a producer of social science research.

Introduction to Legal Studies Research
This course introduces a wide array of methodologies employed in legal studies related to the humanities and social sciences. It provides the knowledge and skills necessary to design, conduct, and present a scholarly research project. The research questions that motivate scholars in legal studies, as well as the different methods used to collect and analyze the evidence systematically and logically are discussed.

SPA's BS in Data Sciences for Justice, Law, & Criminology allows students to analyze the foundations, functions, and data at the heart of the policies and procedures of justice. With the explosive growth of large scale data sources in today's technology-driven world, data science can provide unique insights on the nature of crime, terrorism, law, and the workings of the justice system.

Graduates of the BS in Data Sciences for Justice, Law & Criminology Program usually work in cybersecurity, law enforcement, homeland security, and counterterrorism.

Read on to find out if this undergraduate major can help you work towards your career goals.

SCHOOL *of* PUBLIC AFFAIRS
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Students engage in meaningful discussions during class on a regular bases.

Study Abroad Opportunities

- Students may study abroad between their second semester of sophomore year through their senior year.
- BS in Justice, Law, & Criminology majors can count up to 6 credit hours of preapproved study abroad courses, toward their upper-level major course requirements.
- It is strongly recommended that students complete the majority of their university requirements before studying abroad.
- Some popular study abroad destinations are: » Australia » China » Denmark » England » Italy » Netherlands » New Zealand

Internship Opportunities

- Students can earn up to 12 credits from internships toward their degree.
- Students can apply a maximum of 6 credits to their major requirements.
- Students must complete at least 30 credit hours at AU before registering an internship for credit.
- Sample internships include: » National Institute of Justice » FBI » American Bar Association » D.C. Courts » U.S. Customs » Public Defender Service » Secret Service » Department of Homeland Security

Scholarly Research Opportunities

- Take introductory research methods courses before moving into more advanced upper-level courses.
- Students learn research design, quantitative analysis, and how to apply analytical and statistical techniques to contemporary problems.
- Students have opportunities to work with faculty mentors on their original research projects.
- Students will present their original research through research symposiums on campus or at national conferences.

WE KNOW SUCCESS

Graduates from Public Affairs have gone on to employers and graduate/ law schools like:

- » American Gaming Association
- » American University Washington College of Law
- » Campaign Legal Center
- » Columbia University
- » DC Public Schools
- » Fordham University
- » George Washington University
- » Georgetown University
- » Goldman Sachs
- » Harvard University
- » Johns Hopkins University
- » London School of Economics
- » National Republican Congressional Committee
- » National Wildlife Federation
- » NBCUniversal, Inc.
- » NJI Media
- » Pennsylvania State University
- » Public Defenders
- » The Washington Post
- » U.S. Department of Defense
- » U.S. Department of Justice
- » University of Chicago

QUESTIONS?

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Updated: June 2026