

# Associate of Science in Data Science

The Associate of Science in Data Science will cover foundational aspects of data science. Courses will cover functional coding and methods; analytical methods; descriptive, predictive and prescriptive analytics; and machine learning. Graduates will be able to deliver reproducible data analyses and solutions. Graduates will understand ethical, privacy, and security considerations in the conduct of data analyses. Graduates will be able to communicate the story in the data through the use of data visualization techniques.

This program has specific admission requirements.

## Program Learning Outcomes:

Upon completion of this program of study, students will be able to:

- In response to a specific challenge or problem, gather appropriate data.
- Pre-process data, as appropriate, for anticipated final processing and analyses.
- Evaluate a variety of methods used to conduct a data analysis for a specified situation and given data then generate and effectively communicate a comprehensive report on this evaluation including all aspects of the results.
- Deliver reproducible analyses and results.
- Effectively communicate technical results to both or either a technical or non-technical audience.
- Explain the ethical, privacy, and security issues related to data science analyses and communication.
- Obtain real-world experience through project-based coursework and the associate-level seminar.

## Programmatic Admission Requirements

For admission to the AS of Data Science, applicants must have completed preparation in mathematics equivalent to pre-calculus or higher. A review of high school or college transcripts showing completion of this requirement will be conducted during the admission process.

Please visit our AMU (<https://www.amu.apus.edu/admissions/undergraduate-requirements.html>) or APU (<https://www.apu.apus.edu/admissions/undergraduate-requirements.html>) undergraduate admission page for more information on institutional admission requirements.

## Need help?

If you have questions regarding a program's admission requirements, please contact an admissions representative at 877-755-2787 or [info@apus.edu](mailto:info@apus.edu).

## Degree at a Glance

Code	Title	Semester Hours
	General Education Requirements	30
	Major Required	27
	Final Program Requirements	3
Total Semester Hours		60

## Degree Program Requirements

### General Education Requirements (30 semester hours)

Code	Title	Semester Hours
<b>Arts and Humanities (6 semester hours)<sup>1</sup></b>		
Select 2 courses from the following:		6
ARAB100	Arabic I	
ARAB101	Arabic II	
ARTH200	Art Appreciation	
ARTH241	Film and Literature	
DSIN141	Image Enhancement using Adobe Photoshop	
FREN100	French I	
FREN101	French II	
GERM100	German I	
GERM101	German II	
JAPN100	Introduction to Japanese	
LITR215	Literature of American Encounters, Revolution, and Rebellion	
LITR218	From Abolition to #MeToo: Literature of the American Civil Rights Movement	
LITR222	Pivotal Figures in Early British Literature	
LITR225	British Literature from Wordsworth through the Wasteland	
LITR231	Leadership in World Literature: Antiquity to the Early Modern Period	
LITR233	Literature of the Newly Globalized World: The Individual's Struggle to Adapt	
MUSI200	Music Appreciation	

MUSI250	World Music and Cultures
PHIL101	Introduction to Philosophy
PHIL110	Critical Thinking
PHIL200	Introduction to Ethics
PHIL202	Philosophy of Science
PORT100	Introduction to Brazilian Portuguese
RELS201	Introduction to World Religions
RUSS100	Russian I
SPAN100	Spanish I
SPAN101	Spanish II
STEM270	Thinking and Acting Ethically

**Civics, Political and Social Sciences (6 semester hours)**

Select 2 courses from the following: 6

ANTH100	Introduction to Anthropology
ANTH202	Introduction to Cultural Anthropology
CHFD220	Human Sexuality
COMM211	Social Media and Society
COMM240	Intercultural Communication
ECON101	Microeconomics
ECON102	Macroeconomics
EDUC200	Humane Education: A Global Interdisciplinary Perspective
GEOG101	Introduction to Geography
HOSP110	Practical Food Safety and Awareness
IRLS210	International Relations I
LITR212	Forgotten America—Under Represented Cultures in American Literature
LITR235	Four Points of the Compass: Culture and Society Around the World
POLS101	Introduction to Political Science
POLS210	American Government I
PSYC101	Introduction to Psychology
SOCI111	Introduction to Sociology
SOCI212	Social Problems
SOCI220	American Popular Culture
STEM280	Exploring Society and Cultures via Science Fiction

**Communication: Writing, Oral, and Multimedia (9 semester hours)**

COMM120	Information and Digital Literacy	3
ENGL110	Making Writing Relevant	3
Select 1 course from the following:		3
COMM200	Public Speaking	
ENGL101	Proficiency in Writing	
ENGL115	Argumentation and Rhetoric	
ENGL210	Introduction to Literature	

ENGL220	Technical Writing
ENGL221	Scientific Writing
ENGL226	Effective Business Communication
HRMT101	Human Relations Communication
IRLS200	Information Literacy and Global Citizenship
ITCC231	Introduction to Information Technology Writing
MGMT100	Human Relations

**History (3 semester hours)**

Select 1 course from the following: 3

HIST101	American History to 1877
HIST102	American History since 1877
HIST111	World Civilization before 1650
HIST112	World Civilization since 1650
HIST121	Western Civilization before The Thirty Years War
HIST122	Western Civilization since The Thirty Years War
HIST221	African-American History before 1877
HIST222	African-American History since 1877
HIST223	History of the American Indian
HIST270	History of Science
STEM185	The History and Context of STEM

**Mathematics and Applied Reasoning (3 semester hours)**

MATH225 Calculus 3

**Natural Sciences (3 semester hours)**

Select 1 course from the following: 3

BIOL180	Introduction to Biology
BIOL181	Introduction to Human Anatomy and Physiology
CHEM180	Introduction to Chemistry
ERSC180	Introduction to Meteorology
ERSC181	Introduction to Geology
EVSP180	Introduction to Environmental Science
PHYS180	Introduction to Physics
SPST180	Introduction to Astronomy
STEM100	Introduction to STEM Disciplines

Total Semester Hours 30

<sup>1</sup> All literature courses require successful completion of ENGL101 - Proficiency in Writing or ENGL110 - Making Writing Relevant.

**Major Required (27 semester hours)**

Code	Title	Semester Hours
MATH220	Linear Algebra	3
MATH226	Calculus II	3
MATH302	Statistics	3
MATH227	Calculus III	3

DATS200	Functional Methods and Coding	3
DATS201	Analytical Methods I	3
DATS211	Introduction to Data Science	3
DATS221	Exploratory Data Analysis	3
DATS225	Data Visualization	3
Total Semester Hours		27

### Final Program Requirements (3 semester hours)

Code	Title	Semester Hours
DATS298	Associate Seminar	3
Total Semester Hours		3