Data Science & Analytics - Option, Associate in Science

The Associate of Science in Mathematics with an Option in Data Science & Analytics is designed to transform students into analytical thinkers capable of managing the entire data lifecycle—from acquiring structured and unstructured data to cleaning, analyzing, and modeling complex datasets. The program emphasizes the identification of patterns and relationships to facilitate data-driven decision-making across diverse fields. By applying both the statistical logic and the technical tools used in industry today, graduates are prepared for transfer to four-year institutions.

For more information, contact faculty advisor, Claude Fortune, at (609) 343-5011 or cfortune@atlanticcape.edu or contact area coordinator, Michele Leacott, at (609) 343-5044 or mleacott@atlanticcape.edu.

Upon completion of this program students will be able to:

- Employ the data lifecycle to effectively collect, clean and prepare data from various sources for analysis, ensuring accuracy and integrity;
- Synthesize datasets into visual formats that differentiate key patterns and facilitate data-driven decision-making through clear, impactful data visualizations;
- Apply descriptive and inferential statistical techniques to summarize complex datasets and draw valid conclusions, utilizing hypothesis testing and probability distributions to inform data-driven decision-making;
- Use mathematical tools and statistical software to analyze large datasets, identify significant relationships and implement statistical modeling and machine learning techniques to develop predictive models for real-world applications;
- Evaluate the ethical use of data, emphasizing the importance of data integrity, privacy and security in modern organizations.

(DASC-FALL 2026)

General Education Courses

When a course is not specified, refer to the list of approved General Education courses.

Communication

Course #	Title	Credits
ENGL101	Composition I	3
ENGL102	Composition II	3
COMM120	Public Speaking	3

Mathematics-Science-Technology

Course #	Title	Credits
MATH155	Calculus I	4
MATH254	Calculus II	4
PHYS225	General Physics I	4

Social Science

Course #	Title	Credits
	Choose: PSYC101 or SOCL101 (3 credits)	3
	Choose: ANTH103 or GEOG102 (3 credits)	3

Humanities

Course #	Title	Credits
	Choose: ARTS103, DANC170, ENGL220 or MUSC100 (3 credits)	3

Program Requirements

Course #	Title	Credits
CISM148	Problem Solving Using Python	4
DASC101	Introduction to Data Science	4
DASC110	Data Wrangling	3
DASC210	Data Visualization	3
DASC220	Exploratory Data Analysis	4
MATH153	Discrete Mathematics	4
MATH252	Linear Algebra	4

Program Electives

*Students should consider taking CISM125, CISM129, or CISM132 to meet the Technological Competency Graduation requirement.

Course #	Title	Credits
	Choose a minimum of 4 credits from the following: CHEM110, CISM125*, CISM129*, CISM132*, ECON110 or Liberal Arts Elective	4

Technological Competency Graduation Requirement

(Is fulfilled with CISM125, CISM129, or CISM132, which may be taken as a Program Elective, testing or reviewed departmental portfolio.)

	Total Credits	60

Recommended Sequence of Courses

First Semester

Course #	Title	Credits
DASC101	Introduction to Data Science	4
ENGL101	Composition I	3
MATH153	Discrete Mathematics	4
	Choose a minimum of 4 credits from the following: CHEM110, CISM125*, CISM129*, CISM132*, ECON110 or Liberal Arts Elective	4

Second Semester

Course #	Title	Credits
CISM148	Problem Solving Using Python	4
ENGL102	Composition II	3
MATH155	Calculus I	4
	Choose: PSYC101 or SOCL101 (3 credits)	3

Third Semester

Course #	Title	Credits
COMM120	Public Speaking	3
DASC110	Data Wrangling	3
DASC210	Data Visualization	3
MATH254	Calculus II	4
PHYS225	General Physics I	4

Fourth Semester

Course #	Title	Credits
DASC210	Data Visualization	3
MATH252	Linear Algebra	4
	Choose: ANTH103 or GEOG102 (3 credits)	3
	Choose: ARTS103, DANC170, ENGL220 or MUSC100 (3 credits)	3