Central Maine
COMMUNITY COLLEGE

DATA SCIENCE

Associate in Science

The Associate in Science in Data Science is designed to prepare students for bachelor's degrees in actuarial science, data science, or mathematics with a data science focus. This comprehensive program provides a strong foundation in mathematics, science, and engineering principles, preparing students for a seamless transition to four-year degree programs.

Students who complete the program will be prepared to:

- Analyze data to identify patterns and trends.

- Apply industry-standard data science tools (e.g., Python, R, SQL) to process, analyze, and visualize data.

- Understand ethical, legal, and privacy considerations in data collection, analysis, and sharing, particularly in relation to handling personal or sensitive data.

- Design and conduct studies, gather data, and analyze results to draw valid conclusions.
- Collaborate effectively in multidisciplinary teams, contributing to projects and working within data-driven environments.
- Use data analysis tools and quality control methods across various sectors, such as healthcare, finance, marketing, and public policy, and be able to apply data science methods in different contexts.

Degree Requirements

Semester I

Course	Title	Credit Hours
COM 100	Public Speaking	3
ENG ___	Select <u>one</u> of the following:	3-4
	ENG 101 College Writing	
	ENG 105 College Writing Seminar	
MAT 135	Statistics	3
CPT 166	Fundamentals of Structured Query Language	3
_____	Elective: Social Science	3

Semester II

Course	Title	Credit Hours
ENG 201	Technical Writing	3
MAT 236	Statistics for STEM	4
CPT 127	Introduction to Python Programming	3
MAT___	Select one of the following:	3-4
	MAT 132 Pre-Calculus	
	MAT 163 Calculus I	
	MAT 164 Calculus II	
	MAT 291 Linear Algebra	
_____	Elective: Diversity/Ethical Reasoning (PHI 111) recommended	3

Semester III

Course	Title	Credit Hours
MAT___	Select one of the following:	3-4
	MAT 132 Pre-Calculus	
	MAT 163 Calculus I	
	MAT 164 Calculus II	
	MAT 291 Linear Algebra	
_____	Science with Lab (BIO/CHY/PHY)	4
_____	Elective: Creative Arts/Humanities	3
_____	Elective: Advising Pathway	3-4
CPT 254	Data Structures and Algorithms	3

Semester IV

Course	Title	Credit Hours
_____	Elective: Advising Pathway	3
MAT___	Select one of the following:	3-4
	MAT 132 Pre-Calculus	
	MAT 163 Calculus I	
	MAT 164 Calculus II	
	MAT 291 Linear Algebra	
_____	ECO 201 Intro to Macroeconomics or ECO 202 Intro to Microeconomics	3
_____	Elective: Advising Pathway	3-4
_____	Elective: Advising Pathway	3-4

Total Credit Hour Requirements		**62-69**

*Placement determined by assessment test scores and/or prior college course-work

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