

Data Science: Computational Analytics, Certificate

Learn more about the undergraduate certificate in Data Science: Computational Analytics.

The certificate in Data Science: Computational Analytics is designed to allow students with strong mathematical and programming backgrounds to develop expertise in big data analytics and machine learning. This certificate is available to all undergraduate students and professional non-degree-seeking students.

Undergraduate Contact Information:

Dr. Jamie Payton, Chair
Science Education and Research Center, Room 304
215-204-8450

Dr. Gene Kwatny, Vice Chair
Science Education and Research Center, Room 304
215-204-8450

Dr. Anthony Hughes, Faculty Advisor
Science Education and Research Center, Room 344
215-204-7910
anthony.hughes@temple.edu

Certificate Requirements

Prerequisites

Students desiring a Certificate in Data Science: Computational Analytics must have already completed the following or have equivalent industry experience:

Code	Title	Credit Hours
CIS 1068 or CIS 1968	Program Design and Abstraction Honors Program Design and Abstraction	4
CIS 1166 or CIS 1966	Mathematical Concepts in Computing I Honors Mathematical Concepts in Computing I	4
MATH 1041 or MATH 1941	Calculus I Honors Calculus I	4
MATH 1042 or MATH 1942	Calculus II Honors Calculus II	4
MATH 2043 or MATH 2943	Calculus III Honors Calculus III	4
Total Credit Hours		20

Required Courses

Students desiring a Certificate in Data Science: Computational Analytics must complete the following courses:

Code	Title	Credit Hours
Select one of the following:		3-4
CIS 2033	Computational Probability and Statistics	
MATH 3031	Probability Theory I	
STAT 2103	Statistical Business Analytics	
BIOL 3312	Biostatistics (F)	
Select one of the following:		3-4
CIS 2166	Mathematical Concepts in Computing II	
MATH 2045	Differential Equations with Linear Algebra	
MATH 2101	Linear Algebra	
MATH 2103	Linear Algebra with Computer Lab (F)	

CIS 3715	Principles of Data Science (S)	4
CIS 4526	Foundations of Machine Learning	3

Total Credit Hours **13-15**

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

Residency Requirements: At least 2 courses required for the certificate must be completed at Temple.