MULTIDISCIPLINARY STUDIES, B.S., DATA SCIENCE OPTION

Millersville University's new MDST concentration, Data Science, is a program of study that provides students with a solid foundation of skills in data science by combining knowledge and methodology from computer science, mathematics, and design. In addition, students are required to complete a minor of their choosing to acquire an area of domain knowledge to which they can apply their data science skills. Data Scientists finds success in a wide variety of industries due to their astute problem-solving skills. From engineering, aeronautics, and finance to criminal justice and information technology, the demand for data scientists continues to grow.

PROGRAM ADVISORS

Total Hours

Dr. Stephanie Schwartz, Computer Science

For more information visit: https://www.millersville.edu/mdst/approved-programs/data-science.php

Multidisciplinary Studies(BS)-SCTE Science & Tech

DATA SCIENCE - CORE 1 (COMPUTER SCIENCE) CSCI 161	Code	litle	Hours	
CSCI 162 Introduction to Programming 2 4 CSCI 362 Data Structures 4 CSCI 366 Database Systems 4 CSCI 450 Artificial Intelligence 4 CSCI 452 Data Mining 4 CSCI 453 Large-Scale Data Analytics and Visualization 4 DATA SCIENCE - CORE 2 (MATHEMATICS AND DESIGN) CSCI 140 Discrete Structures 4 MATH 161 Calculus 1 4 MATH 211 Calculus 2 4 MATH 235 Survey of Statistics 3 MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 498 Independent Study	DATA SCIENCE -	CORE 1 (COMPUTER SCIENCE)		
CSCI 362 Data Structures 4 CSCI 366 Database Systems 4 CSCI 450 Artificial Intelligence 4 CSCI 452 Data Mining 4 CSCI 453 Large-Scale Data Analytics and Visualization 4 DATA SCIENCE - CORE 2 (MATHEMATICS AND DESIGN) CSCI 140 Discrete Structures 4 MATH 161 Calculus 1 4 MATH 211 Calculus 2 4 MATH 235 Survey of Statistics 3 MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 161	Introduction to Programming 1	4	
CSCI 366 Database Systems 4 CSCI 450 Artificial Intelligence 4 CSCI 450 Data Mining 4 CSCI 452 Data Mining 4 CSCI 453 Large-Scale Data Analytics and Visualization 4 DATA SCIENCE - CORE 2 (MATHEMATICS AND DESIGN) CSCI 140 Discrete Structures 4 MATH 161 Calculus 1 4 MATH 211 Calculus 2 4 MATH 235 Survey of Statistics 3 MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 162	Introduction to Programming 2	4	
CSCI 450 Artificial Intelligence 4 CSCI 452 Data Mining 4 CSCI 453 Large-Scale Data Analytics and Visualization 4 DATA SCIENCE - CORE 2 (MATHEMATICS AND DESIGN) CSCI 140 Discrete Structures 4 MATH 161 Calculus 1 4 MATH 211 Calculus 2 4 MATH 235 Survey of Statistics 3 MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 490 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 362	Data Structures	4	
CSCI 452 Data Mining 4 CSCI 453 Large-Scale Data Analytics and Visualization 4 DATA SCIENCE - CORE 2 (MATHEMATICS AND DESIGN) CSCI 140 Discrete Structures 4 MATH 161 Calculus 1 4 MATH 211 Calculus 2 4 MATH 235 Survey of Statistics 3 MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 490 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 366	Database Systems	4	
CSCI 453 Large-Scale Data Analytics and Visualization 4 DATA SCIENCE - CORE 2 (MATHEMATICS AND DESIGN) CSCI 140 Discrete Structures 4 MATH 161 Calculus 1 4 MATH 211 Calculus 2 4 MATH 235 Survey of Statistics 3 MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 450	Artificial Intelligence	4	
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MATH 235 Survey of Statistics 2 3 MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 400 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	MATH 161	Calculus 1	4	
MATH 236 Elements of Statistics 2 3 MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 400 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	MATH 211	Calculus 2	4	
MATH 304 Matrix Algebra & Applications 4 DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 400 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	MATH 235	Survey of Statistics	3	
DESN 144 Digital Theory and Skills 3 DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 400 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	MATH 236	Elements of Statistics 2	3	
DESN 349 Information Design 3 REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 400 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	MATH 304	Matrix Algebra & Applications	4	
REQUIRED CAPSTONE A 2.0 GPA must be maintained in the overall major block and in each of the two Core areas Co-op/Research/Thesis - Choose 1 of the following: 3-12 CSCI 300 Co-Op Ed Experience in CSCI CSCI 400 Co-Op Ed Experience in CSCI CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	DESN 144	Digital Theory and Skills	3	
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CSCI 498 Independent Study CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 300	Co-Op Ed Experience in CSCI		
CSCI 499 Departmental Honors MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 400	Co-Op Ed Experience in CSCI		
MATH 300 Co-Op Ed Experience in Math MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 498	Independent Study		
MATH 400 Co-Op Ed Experience in Math MATH 498 Independent Study	CSCI 499	Departmental Honors		
MATH 498 Independent Study	MATH 300	Co-Op Ed Experience in Math		
y	MATH 400	Co-Op Ed Experience in Math		
MATH 499 Departmental Honors	MATH 498	Independent Study		
	MATH 499	Departmental Honors		

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Reg Related for Multidisciplinary Studies - SCTE

Code Title Hours

A Minor is Required. Please consult advisor

A minor in a field other than Mathematics or Computer Science is required. Discuss options with your academic advisor.

Minor Requirements - See separate block

Total Hours 0