Certificate in Computational Data Science

Admission

Students seeking this certificate must be admitted to the Graduate School in one of the degree programs offered by the School of Computing or in nondegree status.

Students admitted to the program typically have a BS degree in computer science, computer engineering, electrical engineering or other related fields. These degrees typically offer the prerequisite material: CS 400 Data Structures, IME 254 Engineering Probability and Statistics I, and CS 560 Design and Analysis of Algorithms. The program is also available to students with other degrees that have experience in computer fields and these prerequisite courses.

All Graduate School policies relative to admissions apply.

Program Requirements

Students pursuing a graduate certificate must file a plan of study for the certificate program with the graduate coordinator before half of the required credit hours are completed. Students may apply certificate coursework toward a degree program.

The certificate requires the completion of 12 credit hours from a selected list of courses.

A cumulative graduate grade point average of at least 3.000 must be maintained for all courses comprising the certificate program and no grades below *C*. In addition to these requirements, students must meet the Graduate School's requirements (http://catalog.wichita.edu/graduate/academic-information/types-programs-courses/certificate-residency-badge-programs/) in order to earn this certificate.

The earned certificate cannot be used towards a master's degree 10 years after the completion of the certificate.

Course	Title	Hours
Required Courses		
CS 746	Perspectives on Data Science	3
CS 797T	Data Cleaning	3
CS 770	Machine Learning	3
Electives		
Select at least 3 credit hours from the following		3
CS 665	Introduction to Database Systems	
CS 697AR	Power Business Intelligence	
CS 750F	Career Pathways in Data Science	
CS 771	Artificial Intelligence	
CS 775	Information Retrieval	
CS 797O	Neural Networks and Deep Learning	
CS 870	Spoken Language Processing	
CS 898AW	Artificial Intelligence for Robotics	
CS 898BA	Image Analysis and Computer Vision	
CS 898BD	Deep Learning	
CS 898BE	Advanced Topics in Machine Learning	
CS 898BG	Reinforcement Learning	
CS 898CA	Introduction to Intelligent Robotics	
Total Credit Hours		**12**

Courses must be taken at the graduate level. Students who have taken any of the above courses at the undergraduate level cannot use those credits towards this graduate certificate. Thus, if a student has taken any of the required courses at the undergraduate level, then the student will have to take additional courses from among the electives so that they have 12 credit hours total of the above courses at the graduate level. Alternatively, Wichita State undergraduate students who have a future intention of pursuing this graduate certificate should look into the accelerated MS programs and/or the "Senior Rule" so that they can take the above courses at the graduate level.