ONLINE UNDERGRADUATE CERTIFICATE IN COMPUTER SCIENCE

Effectively using computers to solve problems is a key part of the modern, technology-driven workplace. Build your portfolio of career skills by completing the online undergraduate certificate in computer science. Featuring K-State's Computational Core of four programming courses, this 14-credit-hour certificate teaches you the skills you need to solve real-world problems by developing your own computer software. Each course is available 100 percent online and is self-paced, so you can move through the program as quickly or carefully as you'd like.

Courses include:

CC 210 – Fundamental Computer Programming Concepts

CC310 – Data Structures & Algorithms

CC315 – Data Structures & Algorithms 2

CC 410 – Advanced Programming

*CIS 115 or CIS 111 may be taken as optional pre-requisites for students with no background in computer programming

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KANSAS STATE UNIVERSITY | Global Campus

Course Requirements (14 Hours)

CC 210 - Fundamental Computer Programming Concepts
(4 credits, fall/spring/summer)
The course introduces students to computer programming using one of several programming languages. Interactive lessons and engaging projects reinforce new skills and concepts while relating programming fundamentals to the real world. This course covers the basic concepts of programming, from variables and control flow to functions, objects, and simple algorithms.

CC 310 - Data Structures & Algorithms 1
(3 credits, fall/spring/summer)
This course introduces simple data structures such as sets, lists, stacks, queues, and maps. Students learn how to create data structures and the algorithms that use them and are introduced to algorithm analysis to determine the efficiency of algorithms.

CC 315 - Data Structures & Algorithms 2
(3 credits, fall/spring/summer)
This course introduces advanced data structures, such as trees, graphs and heaps. Several new algorithms using these data structures are covered. Students also learn software development methods and software engineering fundamentals and use those skills to develop projects of increasing size and scope effectively.

CC 410 - Advanced Programming
(4 credits, fall/spring/summer)
Students gain experience writing programs using a variety of advanced programming techniques. Projects cover a variety of application domains and use a variety of technologies to help students master advanced computer programming concepts.

Additional Information

Concurrent Enrollment: Courses in the Computational Core program may be taken concurrently if desired. Contact the program coordinator for details.

For more information visit global.k-state.edu/engineering/computer-science

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COMPUTATIONAL CORE

K-State developed its Computational Core to provide computer programming skills to non-majors looking to enhance their career outlook after graduation and be more marketable to potential employers.