

MINOR IN COMPUTING APPLICATIONS

² Recommended for life science majors.

Applications of computing have become all-pervasive, impacting every aspect of our lives and our society. As a result, the demand for computational skills has skyrocketed in non-computational fields ranging from agriculture to biology. To meet this demand, the Computing Application Minor offers a curriculum specifically designed for non-CS majors. Through this minor, students will learn the fundamentals of computer programming and receive hands-on experience in applying computing skills to real-life problems from diverse fields.

Please review course descriptions for prerequisite courses and consult a computer science department advisor for further information.

Admission to the minor is open to all students with upper-division standing. Courses are three units unless otherwise indicated.

CSC 408, CSC 411, and CSC 509 must be completed with a letter grade. Credit/No Credit (CR/NC) grading option is not acceptable for these courses to complete the minor.

Program Learning Outcomes

1. Students will demonstrate foundational knowledge of computational skills and their application to multidisciplinary problems.
2. Students will demonstrate functional knowledge of machine learning concepts, tools, and techniques.
3. Students will demonstrate the ability to synthesize computational and machine learning basic skills around the big questions in diverse fields (e.g. biotechnology) to develop solutions to real-life problems.

Computing Applications Minor – 15 units minimum

A minimum of 6 upper-division units are required to complete the minor.

All coursework used to satisfy the requirements of the minor must be completed with a minimum grade point average of 2.0.

CSC 408, CSC 411, and CSC 509 must be taken for a letter grade.

Code	Title	Units
Select One:		3-6
CSC 101 & CSC 215	Introduction to Computing and Intermediate Computer Programming ¹	
CSC 306	An Interdisciplinary Approach to Computer Programming ²	
Select One:		3
CSC 220	Data Structures ¹	
CSC 311	Data Structures for Data Science Application Development ²	
CSC 408	Machine Learning and Data Science for Personalized Medicine	3
CSC 411	Intermediate Machine Learning for Interdisciplinary Data Scientists	3
CSC 509	Data Science and Machine Learning for Medical Image Analysis	3

¹ Recommended for non-life science majors.