Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Santa Cruz 2022-2023 General Catalog, Quarter	From: De Anza College 2022-2023 General Catalog, Quarter

Computer Science Minor

GENERAL INFORMATION FOR ALL MINORS

UC Santa Cruz students have the option to complete one or more minors, provided they complete all of the required coursework for the minor(s). The sponsoring department establishes the course requirements for a minor. The minor involves substantial work in the discipline and requires no fewer than 25 upper-division or graduate credits. The minor appears on the student's official transcript but not on the diploma.

Students do not apply for admission into a minor when applying to UC Santa Cruz. If interested in completing a minor, transfer students must contact the department sponsoring the minor after enrolling at UCSC.

COMPUTER SCIENCE MINOR

Please visit the department's website to learn more about this minor: https://undergrad.soe.ucsc.edu/

PREPARATION FOR THE MINOR

CSE 12: Computer Systems and Assembly Language and Lab

CSE 13S: Computer Systems and C Programming **OR** ECE 13: Computer Systems and C Programming

CSE 16: Applied Discrete Mathematics

CSE 20: Beginning Programming in Python

CSE 30: Programming Abstractions: Python

AM 10: Mathematical Methods for Engineers I **OR** MATH 21: Linear Algebra

One of the following calculus series:

MATH 11A: Calculus with Applications **AND** MATH 11B: Calculus with Applications

MATH 19A: Calculus for Science, Engineering, and Mathematics **AND** MATH 19B: Calculus for Science, Engineering, and Mathematics

PREPARATION FOR THE MINOR

CSE 12 - Computer Systems and Assembly Language and Lab (7.00)	←	**CIS 21JA** - Introduction to x86 Processor Assembly Language and Computer Architecture (4.50) **--- Or ---** **CIS 21JB** - Advanced x86 Processor Assembly Programming (4.50)
CSE 13S - Computer Systems and C Programming (7.00)	←	**CIS 22B** - Intermediate Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 22BH** - Intermediate Programming Methodologies in C++ - HONORS (4.50) **--- Or ---** **CIS 26A** - C as a Second Programming Language (4.50)
--- Or ---		
ECE 13 - Computer Systems and C Programming (7.00)	←	No Course Articulated
CSE 16 - APPLIED DISCRETE MATHEMATICS (5.00)	←	**MATH 22** - Discrete Mathematics (5.00) **--- Or ---** **MATH 22H** - Discrete Mathematics - HONORS (5.00)
CSE 20 - Beginning Programming in Python (5.00)	←	**CIS 40** - Introduction to Programming in Python (4.50) **--- Or ---** **CIS 41A** - Python Programming (4.50)

CSE 30 - Programming Abstractions: Python (7.00) ← **CIS 22C** - Data Abstraction and Structures (4.50)

- *Minimum grade required: B or better*

--- Or ---

CIS 22CH - Data Abstraction and Structures - HONORS (4.50)

- *Minimum grade required: B or better*

AM 10 - Mathematical Methods for Engineers I (5.00) ← **MATH 2B** - Linear Algebra (5.00)

--- Or ---

MATH 2BH - Linear Algebra - HONORS (5.00)

--- Or ---

MATH 21 - Linear Algebra (5.00) ← **MATH 2B** - Linear Algebra (5.00)

--- Or ---

MATH 2BH - Linear Algebra - HONORS (5.00)

Select 1 Series from the following

MATH 11A - Calculus with Applications (5.00) ← **MATH 1A** - Calculus (5.00)

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)

--- And ---

MATH 11B - Calculus with Applications (5.00) ←

MATH 1B - Calculus (5.00)

--- And ---

MATH 1C - Calculus (5.00)

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

--- And ---

MATH 1CH - Calculus - HONORS (5.00)

--- Or ---

MATH 19A - Calculus for Science, Engineering, and Mathematics (5.00) ← **MATH 1A** - Calculus (5.00)

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)

--- And ---

MATH 19B - Calculus for Science, Engineering, and Mathematics (5.00) ←

MATH 1B - Calculus (5.00)

--- And ---

MATH 1C - Calculus (5.00)

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

--- And ---

MATH 1CH - Calculus - HONORS (5.00)

END OF AGREEMENT