## **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

### **Statistics 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.

### **STATISTICS MINOR**

The statistics minor is available for students who wish to gain a quantitative understanding of how to (a) measure uncertainty and (b) make good decisions on the basis of incomplete or imperfect information, and to apply these skills to their interests in another field. This minor could also be combined with a major in mathematics as preparation for a graduate degree in statistics or biostatistics.

Please visit the department's website for more information about this minor: https://engineering.ucsc.edu/departments/statistics

### PREPARATION FOR THE MINOR

### One of the following calculus sequences:

AM 11A/ECON 11A: Mathematical Methods for Economists I AND

AM 11B/ECON 11B: Mathematical Methods for Economists II

### <u>OR</u>

MATH 11A: Calculus with Applications AND

MATH 11B: Calculus with Applications

### <u>OR</u>

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

MATH 19B: Calculus for Science, Engineering, and Mathematics

### Plus one course from each of the following four categories:

### **Statistical Concepts:**

STAT 5: Statistics OR

STAT 7: Statistical Methods for the Biological, Environmental, and Health Sciences **AND** STAT 7L: Statistical Methods for the Biological, Environmental, and Health Sciences

### **Computer Programming:**

CSE 20: Beginning Programming in Python OR

CSE 30: Programming Abstractions: Python

### Linear Algebra:

AM 10: Mathematical Methods for Engineers I OR

MATH 21: Linear Algebra

### **Multivariate Calculus:**

MATH 22: Introduction to Calculus of Several Variables OR

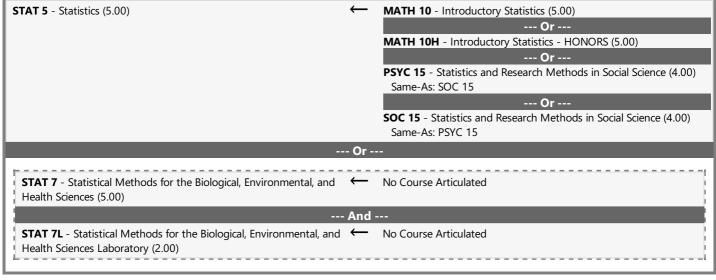
AM 30: Multivariate Calculus for Engineers OR

MATH 23A: Vector Calculus AND MATH 23B: Vector Calculus

### PREPARATION FOR THE MINOR

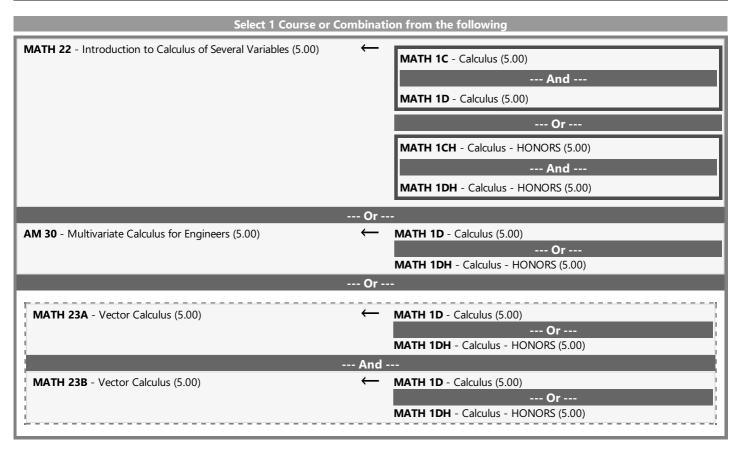
### Select 1 Sequence(s) from the following

AM 11A - Mathematical Methods for Economists I (5.00) MATH 12 - Introductory Calculus for Business and Social Science Same-As: ECON 11A --- And ---AM 11B - Mathematical Methods for Economists II (5.00) No Course Articulated Same-As: ECON 11B **MATH 1A** - Calculus (5.00) MATH 11A - Calculus with Applications (5.00) --- Or ---MATH 1AH - Calculus - HONORS (5.00) 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 **MATH 1A** - Calculus (5.00) (5.00)--- Or ---MATH 1AH - Calculus - HONORS (5.00) --- And --MATH 19B - Calculus for Science, Engineering, and Mathematics **MATH 1B** - Calculus (5.00) (5.00)--- And ---**MATH 1C** - Calculus (5.00) --- Or ---MATH 1BH - Calculus - HONORS (5.00) --- And ---MATH 1CH - Calculus - HONORS (5.00) **Select 1 Course or Combination from the following** STAT 5 - Statistics (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) --- Or -- 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 2BH - Linear Algebra (5.00) MATH 2BH - Linear Algebra - HONORS (5.00)



### **END OF AGREEMENT**