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

Robotics Engineering B.S.

GENERAL INFORMATION FOR ALL MAJORS

All transfer applicants must satisfy University of California admissions eligibility requirements as well as meet campus selection criteria. All admission requirements must be completed by the end of spring prior to transfer. For more information on UC admissions eligibility requirements and admission to UC Santa Cruz, please visit the Admissions website: https://admissions.ucsc.edu/attend-ucsc/transfer-students.

This articulation agreement lists course-to-course, sequence-to-sequence or requirement substitutions for preparation in the major. **Transfer students are strongly encouraged to complete as many major preparatory courses as possible prior to enrolling at UCSC. Completion of all major preparatory courses is not an admissions requirement, but some majors require certain courses to be completed prior to transfer with a specified GPA, and completion or near completion of major preparatory courses will help students move more efficiently toward graduation after transfer.**

UC Santa Cruz Advanced Placement (AP) and International Baccalaureate (IB) credit policies are detailed in the link below:

UC Santa Cruz AP/IB Chart 2022-2023

ROBOTICS ENGINEERING B.S.

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

ADMISSION SELECTION CRITERIA

To be considered for admission to the Robotics Engineering B.S. major, transfer students must complete the following courses or their equivalents by the end of spring term for students planning to enter in the fall with an overall GPA of 2.80 or higher in the courses:

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

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

PHYS 5A: Introduction to Physics I **AND** PHYS 5L: Introduction to Physics I Laboratory

PHYS 5C: Introduction to Physics III **AND** PHYS 5N: Introduction to Physics III Laboratory

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

AM 20: Mathematical Methods for Engineers II **OR** MATH 24: Ordinary Differential Equations

In addition, the following courses are recommended prior to transfer to ensure timely graduation:

CSE 12: Computer Systems and Assembly Language and Lab

MATH 23A: Vector Calculus

ECE 13: Computer Systems and C Programming

CSE 16: Applied Discrete Mathematics

CSE 20: Beginning Programming in Python

CSE 30: Programming Abstractions: Python

Prospective transfer students are encouraged to prioritize required and recommended major preparation prior to transfer, and may additionally complete courses that articulate to UC Santa Cruz general education requirements as time allows.

THIS IS A SCREENING MAJOR. For more information on screening major requirements please visit the Admissions website: https://admissions.ucsc.edu/posts/screening-major-selection-criteria

MAJOR PREPARATION COURSES REQUIRED FOR TRANSFER

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

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)
PHYS 5A - Introduction to Physics I (5.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)
--- And ---		
PHYS 5L - INTRODUCTION TO PHYSICS I LABORATORY (1.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)
PHYS 5C - Introduction to Physics III (5.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
--- And ---		
PHYS 5N - INTRODUCTION TO PHYSICS III LABORATORY (1.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
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)
AM 20 - Mathematical Methods for Engineers II (5.00)	←	**MATH 2A** - Differential Equations (5.00) **--- Or ---** **MATH 2AH** - Differential Equations - HONORS (5.00)
--- Or ---		
MATH 24 - Ordinary Differential Equations (5.00)	←	**MATH 2A** - Differential Equations (5.00) **--- Or ---** **MATH 2AH** - Differential Equations - HONORS (5.00)

STRONGLY RECOMMENDED ADVANCED PREPARATION COURSES

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)
MATH 23A - Vector Calculus (5.00)	←	**MATH 1D** - Calculus (5.00) **--- Or ---** **MATH 1DH** - Calculus - HONORS (5.00)
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*

END OF AGREEMENT