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

Applied Mathematics 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

APPLIED MATHEMATICS 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 Applied Mathematics B.S. major, transfer students must complete the following courses or their equivalents with a grade of C (2.0) or better:

AM 10: Mathematical Methods for Engineers I

AM 20: Mathematical Methods for Engineers II

AM 30: Multivariate Calculus for Engineers

CSE 16: Discrete Mathematics

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

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

Transfer students should have completed as many general education requirements as possible if they wish to graduate in two years.

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

AM 10 - Mathematical Methods for Engineers I (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)
AM 30 - Multivariate Calculus for Engineers (5.00)	←	**MATH 1D** - Calculus (5.00) **--- Or ---** **MATH 1DH** - Calculus - HONORS (5.00)
CSE 16 - APPLIED DISCRETE MATHEMATICS (5.00)	←	**MATH 22** - Discrete Mathematics (5.00) **--- Or ---** **MATH 22H** - Discrete Mathematics - HONORS (5.00)
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)

ADDITIONAL MAJOR PREPARATION COURSES

Select 1 Course from the following

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 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

Select 2 Course(s) from the following

PHYS 5A - Introduction to Physics I (5.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)
--- Or ---		
PHYS 6A - Introductory Physics I (5.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00) **--- Or ---** **PHYS 2A** - General Introductory Physics (5.00)
PHYS 5B - Introduction to Physics II (5.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
--- Or ---		
PHYS 6B - Introductory Physics II (5.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00) **--- Or ---** **PHYS 2C** - General Introductory Physics (5.00)
PHYS 5C - Introduction to Physics III (5.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
--- Or ---		
PHYS 6C - Introductory Physics III (5.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00) **--- Or ---** **PHYS 2B** - General Introductory Physics (5.00)
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*
ECE 9 - Statics and Mechanics of Materials (5.00)	←	No Course Articulated

ECON 1 - Introductory Microeconomics: Resource Allocation and Market Structure (5.00)	←	**ECON 2** - Principles of Microeconomics (4.00) **--- Or ---** **ECON 2H** - Principles of Microeconomics - HONORS (4.00)
ECON 2 - Introductory Macroeconomics: Aggregate Economic Activity (5.00)	←	**ECON 1** - Principles of Macroeconomics (4.00) **--- Or ---** **ECON 1H** - Principles of Macroeconomics - HONORS (4.00)
STAT 5 - Statistics (5.00)	←	**MATH 10** - Introductory Statistics (5.00) **--- Or ---** **MATH 10H** - Introductory Statistics - HONORS (5.00) **--- Or ---** **PSYC 15** - Statistics and Research Methods in Social Science (4.00) Same-As: SOC 15 **--- Or ---** **SOC 15** - Statistics and Research Methods in Social Science (4.00) Same-As: PSYC 15
BIOL 20A - Cell and Molecular Biology (5.00)	←	**BIOL 6B** - Cell and Molecular Biology (6.00)
BIOE 20C - Ecology and Evolution (5.00)	←	**BIOL 6C** - Ecology and Evolution (6.00) **--- Or ---** **BIOL 6CH** - Ecology and Evolution - HONORS (6.00)

END OF AGREEMENT