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

Astrophysics 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.

ASTROPHYSICS MINOR

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

PREPARATION FOR THE MINOR

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

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

MATH 23A: Vector Calculus

One of the following sequence options:

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

PHYS 5B: Introduction to Physics II **AND** PHYS 5M: Introduction to Physics II Laboratory

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

PHYS 5D: Introduction to Physics IV

OR

PHYS 6A: Introductory Physics I **AND** PHYS 6L: Introductory Physics I Laboratory

PHYS 6B: Introductory Physics II **AND** PHYS 6B: Introductory Physics II Laboratory

PHYS 6C: Introductory Physics III **AND** PHYS 6N: Introductory Physics III Laboratory

PHYS 5D: Introduction to Physics IV

PREPARATION FOR THE MINOR

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

Select 1 Sequence(s) from the following

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)
--- And ---		
PHYS 5B - Introduction to Physics II (5.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
--- And ---		
PHYS 5M - INTRODUCTION TO PHYSICS II LABORATORY (1.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
--- And ---		
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)
--- And ---		
PHYS 5D - Introduction to Physics IV (5.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00) **--- And ---** **PHYS 4D** - Physics for Scientists and Engineers: Modern Physics (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)
--- And ---		
PHYS 6L - Introductory Physics I Laboratory (1.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00) **--- Or ---** **PHYS 2A** - General Introductory Physics (5.00)
--- And ---		
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)
--- And ---		
PHYS 6M - INTRODUCTORY PHYSICS II LABORATORY (1.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00) **--- Or ---** **PHYS 2C** - General Introductory Physics (5.00)
--- And ---		
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)
--- And ---		
PHYS 6N - INTRODUCTORY PHYSICS III LABORATORY (1.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00) **--- Or ---** **PHYS 2B** - General Introductory Physics (5.00)
--- And ---		
PHYS 5D - Introduction to Physics IV (5.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00) **--- And ---** **PHYS 4D** - Physics for Scientists and Engineers: Modern Physics (6.00)

END OF AGREEMENT