Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

Physics B.A. Secondary Education

GENERAL INFORMATION

DATED MATERIAL, SUBJECT TO CHANGE. PLEASE CONSULT CURRENT UCSD GENERAL CATALOG FOR ANY ADDITIONAL INFORMATION.

Effective Fall 2018, major preparation will be required for this major. Transfer major preparation will allow a student to complete the Physics 4 series in their first year at UC San Diego in preparation for the core upper division major program. For details, visit: http://admissions.ucsd.edu/MajorPrep and https://www.physics.ucsd.edu/Student/Prospective/Undergraduate/TransferAdmissions

Special Advising Note:
For more information about this major, see http://www.physics.ucsd.edu/ and send inquiries to advising@physics.ucsd.edu.

The B.A. program provides a broadly based education in the natural sciences. It is a solid preparation for employment in the technical fields as well as for teaching in secondary schools. As a liberal arts degree rooted in analytical rigor and intellectual curiosity, the Physics B.A. has also proven to be one stepping stone toward further education and careers in many diverse professions. (Students who wish to pursue the Ph.D. in Physics should enroll in the B.S. program.)

UC San Diego Advanced Placement (AP) and International Baccalaureate (IB) credit policies are detailed in the links below:

Advanced Placement (AP) https://www.ucsd.edu/catalog/pdf/APC-chart.pdf

International Baccalaureate (IB) https://catalog.ucsd.edu/_files/international-baccalaureate-credits-chart.pdf

LOWER DIVISION MAJOR REQUIREMENTS

PHYS 2A - Physics - Mechanics (4.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)
PHYS 2B - Physics - Electricity and Magnetism (4.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
PHYS 2C - Physics - Fluids, Waves, Thermodynamics, and Optics (4.00)	←	**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
PHYS 2CL - Physics Laboratory - Electricity and Magnetism (2.00)	←	**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
PHYS 2DL - Physics Laboratory-Modern Physics (2.00)	←	**PHYS 4D** - Physics for Scientists and Engineers: Modern Physics (6.00)

MATH 18 - Linear Algebra (4.00)	←	**MATH 2B** - Linear Algebra (5.00) **--- Or ---** **MATH 2BH** - Linear Algebra - HONORS (5.00)
MATH 20A - Calculus for Science and Engineering (4.00)	←	**MATH 1A** - Calculus (5.00) **--- Or ---** **MATH 1AH** - Calculus - HONORS (5.00)
MATH 20B - Calculus for Science and Engineering (4.00)	←	**MATH 1B** - Calculus (5.00) **--- Or ---** **MATH 1BH** - Calculus - HONORS (5.00)

MATH 20C - Calculus and Analytic Geometry for Science and Engineering (4.00)	←	**MATH 1C** - Calculus (5.00) **--- And ---** **MATH 1D** - Calculus (5.00) **--- Or ---** **MATH 1CH** - Calculus - HONORS (5.00) **--- And ---** **MATH 1DH** - Calculus - HONORS (5.00)
MATH 20D - Introduction to Differential Equations (4.00)	←	**MATH 2A** - Differential Equations (5.00) **--- Or ---** **MATH 2AH** - Differential Equations - HONORS (5.00)
MATH 20E - Vector Calculus (4.00) • *Articulation is subject to placement by proficiency exam* • *Petition department after transfer*	←	No Course Articulated

Select 1 Course(s) from the following

CENG 15 - Engineering Computation Using MATLAB (4.00)	←	No Course Articulated
NANO 15 - Engineering Computation Using MATLAB (4.00)	←	No Course Articulated
COGS 18 - Introduction to Python (4.00)	←	**CIS 40** - Introduction to Programming in Python (4.50)
CSE 8A - Introduction to Programming and Computational Problem Solving I (4.00)	←	**CIS 22A** - Beginning Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 36A** - Introduction to Computer Programming Using Java (4.50) **--- Or ---** **CIS 40** - Introduction to Programming in Python (4.50)
CSE 11 - Introduction to Programming and Computational Problem Solving - Accelerated Pace (4.00)	←	**CIS 35A** - Java Programming (4.50) **--- Or ---** **CIS 36A** - Introduction to Computer Programming Using Java (4.50) **--- And ---** **CIS 36B** - Intermediate Problem Solving in Java (4.50)
CSE 12 - Basic Data Structures and Object-Oriented Design (4.00)	←	**CIS 22C** - Data Abstraction and Structures (4.50) **--- And ---** **CIS 28** - Object Oriented Analysis and Design (4.50) **--- Or ---** **CIS 22CH** - Data Abstraction and Structures - HONORS (4.50) **--- And ---** **CIS 28** - Object Oriented Analysis and Design (4.50)
ECE 15 - Engineering Computation (4.00)	←	This course must be taken at the university after transfer
MAE 8 - MATLAB Programming for Engineering Analysis (4.00)	←	**CIS 35A** - Java Programming (4.50) **--- Or ---** **CIS 22A** - Beginning Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 40** - Introduction to Programming in Python (4.50) **--- Or ---** **CIS 41A** - Python Programming (4.50) **--- Or ---** **CIS 41B** - Advanced Python Programming (4.50)

END OF AGREEMENT