# **Articulation Agreement by Major**

Effective during the 2022-2023 Academic Year

To: University of California, Los Angeles 2022-2023 General Catalog, Quarter

PHYSICS 1A - Physics for Scientists and Engineers: Mechanics (5.00)

From: De Anza College 2022-2023 General Catalog, Quarter

PHYS 4A - Physics for Scientists and Engineers: Mechanics (6.00)

### Mathematics for Teaching/B.S.

#### **IMPORTANT MAJOR INFORMATION**

Listed below are the lower division preparation courses for the major. To be considered for this major, you <u>must</u> complete four semesters/five quarters of calculus through multivariable and either linear algebra or differential equations by the end of spring before transfer. All courses must be taken for a letter grade. For more information regarding this major and UCLA's selection process, visit <u>www.math.ucla.edu</u> and <a href="https://admission.ucla.edu">https://admission.ucla.edu</a>.

PLEASE NOTE: the community college courses listed below have been approved to satisfy the preparation for this major at UCLA, but they may not be exact equivalents of the UCLA courses listed.

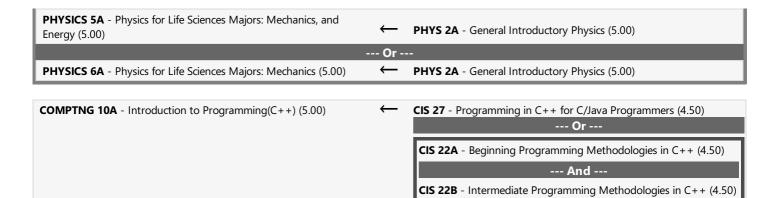
#### ADDITIONAL RECOMMENDED MAJOR PREPARATION

Additional recommended courses prior to transfer include: completion of the full calculus series (encompassing single variable, multivariable, linear algebra and differential equations) and one introductory course in C++.

#### **LOWER DIVISION MAJOR REQUIREMENTS**

MATH 31A - Differential and Integral Calculus (4.00)	$\leftarrow$	MATH 1A - Calculus (5.00)
	Or -	
MATH 31AL - Differential and Integral Calculus Laboratory (5.00)	<b>←</b>	No Course Articulated
MATH 31B - Integration and Infinite Series (4.00)	<b>←</b>	MATH 1B - Calculus (5.00)
		And
		MATH 1C - Calculus (5.00)
		Or
		MATH 1B - Calculus (5.00)
		And
		MATH 1CH - Calculus - HONORS (5.00)
		Or
		MATH 1BH - Calculus - HONORS (5.00)
		And
		MATH 1C - Calculus (5.00)
		Or
		MATH 1BH - Calculus - HONORS (5.00)
		And
		MATH 1CH - Calculus - HONORS (5.00)
	<b>←</b>	
MATH 32A - Calculus of Several Variables (4.00) And		MATH 1C - Calculus (5.00)
MATH 32B - Calculus of Several Variables (4.00)		And
		MATH 1D - Calculus (5.00)
MATH 33A - Linear Algebra and Applications (4.00)	$\leftarrow$	MATH 2B - Linear Algebra (5.00)
MATH 33B - Differential Equations (4.00)	$\leftarrow$	MATH 2A - Differential Equations (5.00)
MATH 61 - Introduction to Discrete Structures (4.00)	<b>←</b>	MATH 22 - Discrete Mathematics (5.00)

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## Select 2 Course(s) from the following

CHEM 20A - Chemical Structure (4.00) And CHEM 20B - Chemical Energetics and Change (4.00)	<b>←</b>	CHEM 1A - General Chemistry (5.00)  And CHEM 1B - General Chemistry (5.00)  And CHEM 1C - General Chemistry and Qualitative Analysis (5.00)
<b>PHYSICS 1B</b> - Physics for Scientists and Engineers: Oscillations, Waves, Electric and Magnetic Fields (5.00)	<b>←</b>	PHYS 4B - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)
<b>PHYSICS 1C</b> - Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity (5.00)	←	<b>PHYS 4C</b> - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)
<b>PHYSICS 5B</b> - Physics for Life Sciences Majors: Thermodynamics, Fluids, Waves, Light, and Optics (5.00)	←	PHYS 2B - General Introductory Physics (5.00)
<b>PHYSICS 5C</b> - Physics for Life Sciences Majors: Electricity, Magnetism, and Modern Physics (5.00)	←	PHYS 2C - General Introductory Physics (5.00)
<b>PHYSICS 6B</b> - Physics for Life Sciences Majors: Waves, Electricity, and Magnetism (5.00)	$\leftarrow$	PHYS 2B - General Introductory Physics (5.00)
<b>PHYSICS 6C</b> - Physics for Life Sciences Majors: Light, Fluids, Thermodynamics, Modern Physics (5.00)	<b>←</b>	PHYS 2C - General Introductory Physics (5.00)
COMPTNG 10B - Intermediate Programming(C++) (5.00)	$\leftarrow$	CIS 28 - Object Oriented Analysis and Design (4.50)
COMPTNG 10C - Advanced Programming (5.00)	$\leftarrow$	No Course Articulated
<b>COMPTNG 20A</b> - Principles of Java Language with Applications (5.00)	←	No Course Articulated
COMPTNG 40A - Introduction to Programming for Internet (5.00)	$\leftarrow$	No Course Articulated
<b>COMPTNG 40B</b> - Advanced Topics in Programming for Internet (5.00)	←	No Course Articulated

### **END OF AGREEMENT**