Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

Biochemistry/B.S.

IMPORTANT MAJOR INFORMATION

Listed below are the lower division preparation courses for this major. **To be considered for this major, you *must* complete one year of calculus; one year of general chemistry with laboratory; one year of biology with lab for major (cellular, molecular and genetics) and one year of organic chemistry with lab by the end of spring before transfer.** Completion of two semesters/three quarters of calculus based physics with lab, multivariable calculus, and linear algebra are strongly recommended. **For more information regarding this major and UCLA's transfer selection process, visit** www.chemistry.ucla.edu and https://admission.ucla.edu.

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

ADDITIONAL NOTE:

The following courses are strongly recommended prior to transfer: two semesters/three quarters of calculus based physics with lab; Multivariable Calculus and Linear Algebra.

ADDITIONAL MAJOR INFORMATION

UCLA's Chem 153A and 153L are upper division major courses that are recommended, but NOT required for admission into the pre-major. Transfer credit for these courses will be awarded via petition by the Chemistry department post transfer.

LOWER DIVISION MAJOR REQUIREMENTS

CHEM 20A - Chemical Structure (4.00) **--- And ---** **CHEM 20B** - Chemical Energetics and Change (4.00) **--- And ---** **CHEM 20L** - General Chemistry Laboratory (3.00) **--- And ---** **CHEM 30AL** - General Chemistry Laboratory II (4.00)	←	**CHEM 1A** - General Chemistry (5.00) **--- And ---** **CHEM 1B** - General Chemistry (5.00) **--- And ---** **CHEM 1C** - General Chemistry and Qualitative Analysis (5.00)
MATH 31A - Differential and Integral Calculus (4.00)	←	**MATH 1A** - Calculus (5.00)
MATH 31B - Integration and Infinite Series (4.00)	←	**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)
MATH 32A - Calculus of Several Variables (4.00)	←	**MATH 1C** - Calculus (5.00)

LIFESCI 7A - Cell and Molecular Biology (5.00)	←	**BIOL 6B** - Cell and Molecular Biology (6.00)
LIFESCI 7B - Genetics, Evolution, and Ecology (5.00)	←	**BIOL 6C** - Ecology and Evolution (6.00) **--- Or ---** **BIOL 6CH** - Ecology and Evolution - HONORS (6.00)
LIFESCI 7C - Physiology and Human Biology (5.00)	←	**BIOL 6A** - Form and Function in the Biological World (6.00)
LIFESCI 23L - Introduction to Laboratory and Scientific Methodology (3.00)	←	**BIOL 6A** - Form and Function in the Biological World (6.00) **--- And ---** **BIOL 6B** - Cell and Molecular Biology (6.00) **--- And ---** **BIOL 6C** - Ecology and Evolution (6.00) **--- Or ---** **BIOL 6A** - Form and Function in the Biological World (6.00) **--- And ---** **BIOL 6B** - Cell and Molecular Biology (6.00) **--- And ---** **BIOL 6CH** - Ecology and Evolution - HONORS (6.00)

PHYSICS 5A - Physics for Life Sciences Majors: Mechanics, and Energy (5.00) **--- And ---** **PHYSICS 5B** - Physics for Life Sciences Majors: Thermodynamics, Fluids, Waves, Light, and Optics (5.00) **--- And ---** **PHYSICS 5C** - Physics for Life Sciences Majors: Electricity, Magnetism, and Modern Physics (5.00)	←	**PHYS 2A** - General Introductory Physics (5.00) **--- And ---** **PHYS 2B** - General Introductory Physics (5.00) **--- And ---** **PHYS 2C** - General Introductory Physics (5.00)
--- Or ---		
PHYSICS 1A - Physics for Scientists and Engineers: Mechanics (5.00) **--- And ---** **PHYSICS 1B** - Physics for Scientists and Engineers: Oscillations, Waves, Electric and Magnetic Fields (5.00) **--- And ---** **PHYSICS 1C** - Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity (5.00) **--- And ---** **PHYSICS 4BL** - Physics Laboratory for Scientists and Engineers: Electricity and Magnetism (2.00)	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00) **--- And ---** **PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00) **--- And ---** **PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)

CHEM 30A - Organic Chemistry I: Structure and Reactivity (4.00) **--- And ---** **CHEM 30B** - Organic Chemistry II: Reactivity, Synthesis, and Spectroscopy (4.00) **--- And ---** **CHEM 30BL** - Organic Chemistry Laboratory I (3.00) **--- And ---** **CHEM 30C** - Organic Chemistry III: Reactivity, Synthesis, and Biomolecules (4.00) **--- And ---** **CHEM 30CL** - Organic Chemistry Laboratory II (4.00)	←	**CHEM 12A** - Organic Chemistry (5.00) **--- And ---** **CHEM 12B** - Organic Chemistry (5.00) **--- And ---** **CHEM 12C** - Organic Chemistry (5.00)

Recommended
****REFER TO TOP OF AGREEMENT****

CHEM 153A - Biochemistry: Introduction to Structure, Enzymes, and Metabolism (4.00) **--- And ---** **CHEM 153L** - Biochemical Methods I (4.00) • *Petition department after transfer*	←	No Course Articulated

END OF AGREEMENT