# Articulation Agreement by Major

*Effective during the 2022-2023 Academic Year*

| To: University of California, Los Angeles<br>2022-2023 General Catalog, Quarter | From: De Anza College<br>2022-2023 General Catalog, Quarter |
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## Chemistry/B.S.

## IMPORTANT MAJOR INFORMATION

Listed below are the lower division preparation courses for the major. **To be considered for this major, you must complete one year of general chemistry with lab; one and a half years of calculus through multivariable; one course in organic chemistry with lab; one course in calculus based physics (for Engineering majors) with lab by the end of spring before transfer. Effective fall 2021 admission, *Linear Algebra* will be a required preparation course for all Chemistry majors.** All courses must be taken for a letter grade. **For more information regarding this major and UCLA's 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 RECOMMENDED COURSES

**Additional recommended course prior to transfer:**

- **A second semester of calculus-based physics with lab and a second semester of organic chemistry with lab**
- **UCLA's Chem 153A and 153L are upper division major courses that are recommended, but NOT required for admission into the pre-major which means transfer credit for these courses will be processed via petition by the Chemistry department.**

## LOWER DIVISION MAJOR REQUIREMENTS

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| **CHEM 20A** - Chemical Structure (4.00)<br>**--- And ---**<br>**CHEM 20B** - Chemical Energetics and Change (4.00)<br>**--- And ---**<br>**CHEM 20L** - General Chemistry Laboratory (3.00)<br>**--- And ---**<br>**CHEM 30AL** - General Chemistry Laboratory II (4.00) | ← | **CHEM 1A** - General Chemistry (5.00)<br>**--- And ---**<br>**CHEM 1B** - General Chemistry (5.00)<br>**--- And ---**<br>**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)<br>**--- And ---**<br>**MATH 1C** - Calculus (5.00)<br>**--- Or ---**<br>**MATH 1B** - Calculus (5.00)<br>**--- And ---**<br>**MATH 1CH** - Calculus - HONORS (5.00)<br>**--- Or ---**<br>**MATH 1BH** - Calculus - HONORS (5.00)<br>**--- And ---**<br>**MATH 1C** - Calculus (5.00)<br>**--- Or ---**<br>**MATH 1BH** - Calculus - HONORS (5.00)<br>**--- And ---**<br>**MATH 1CH** - Calculus - HONORS (5.00) |
| **MATH 32A** - Calculus of Several Variables (4.00)<br>**--- And ---**<br>**MATH 32B** - Calculus of Several Variables (4.00) | ← | **MATH 1C** - Calculus (5.00)<br>**--- And ---**<br>**MATH 1D** - Calculus (5.00) |

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| **MATH 33A** - Linear Algebra and Applications (4.00) | ← | **MATH 2B** - Linear Algebra (5.00) |

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| **PHYSICS 1A** - Physics for Scientists and Engineers: Mechanics (5.00)<br>**--- And ---**<br>**PHYSICS 1B** - Physics for Scientists and Engineers: Oscillations, Waves, Electric and Magnetic Fields (5.00)<br>**--- And ---**<br>**PHYSICS 1C** - Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity (5.00)<br>**--- And ---**<br>**PHYSICS 4BL** - Physics Laboratory for Scientists and Engineers: Electricity and Magnetism (2.00) | ← | **PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)<br>**--- And ---**<br>**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)<br>**--- And ---**<br>**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00) |

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

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

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| **CHEM 153A** - Biochemistry: Introduction to Structure, Enzymes, and Metabolism (4.00)<br>**--- And ---**<br>**CHEM 153L** - Biochemical Methods I (4.00) | ← | No Course Articulated |

## END OF AGREEMENT