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

Chemistry/Materials Science/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.

ADDTIONAL RECOMMENDED COURSES

Additional recommended courses prior to transfer:

- **Two additional semesters of calculus based physics with lab. Completion of two additional semesters of calculus-based physics with lab are strongly recommended.**
- **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) **--- And ---** **MATH 31B** - Integration and Infinite Series (4.00)	←	**MATH 1A** - Calculus (5.00) **--- And ---** **MATH 1B** - Calculus (5.00)
MATH 32A - Calculus of Several Variables (4.00) **--- And ---** **MATH 32B** - Calculus of Several Variables (4.00)	←	**MATH 1C** - Calculus (5.00) **--- And ---** **MATH 1D** - Calculus (5.00)
MATH 33A - Linear Algebra and Applications (4.00)	←	**MATH 2B** - Linear Algebra (5.00)
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)	←	**CHEM 12A** - Organic Chemistry (5.00)

END OF AGREEMENT