

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

Computer Science and Engineering/B.S.

IMPORTANT MAJOR DETAILS

Admission to the Henry Samueli School of Engineering and Applied Science (HSEAS) at UCLA is highly competitive. **The most important selection criteria are completion of the required preparatory courses and academic performance. Listed below are the lower division preparation courses for the major. All applicants must have a minimum transferable cumulative GPA of 3.4. Preparatory courses should be completed by the end of the spring prior to Fall enrollment. All major prep courses must be taken for a letter grade. HSEAS admits students by major and does NOT consider applicants for alternate majors.**

Applicants are not required to complete the HSEAS General Education Requirements in order to be admitted, although it is beneficial for students to complete 1 course from each of the following areas: arts, humanities, social sciences, and life sciences. Applicants can fulfill the lower division General Education requirements by completion of the Intersegmental General Education Transfer Curriculum (IGETC). **Partial IGETC is NOT accepted. For more information regarding this major and UCLA's transfer selection process, visit <https://admission.ucla.edu>.** If you still have specific questions, you may email the HSEAS admissions office at erkki@seas.ucla.edu.

PLEASE NOTE: The community college courses listed on this major agreement have been approved as substitutes to satisfy the admission preparation requirements for this major, but they may not be exact equivalents of the UCLA courses listed. In addition, upper division requirements for the major may be satisfied by lower division community college course(s) listed below, however, credit will be determined by the department after transfer.

PROGRAMMING REQUIREMENT

C++ is the **PREFERRED LANGUAGE** for this major, however (Java, & C) are also acceptable programming courses.

NOTE: A course equivalent to UCLA's CS 31 is acceptable to meet the programming requirement for this major.

LOWER DIVISION MAJOR REQUIREMENTS

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)

MATH 32B - Calculus of Several Variables (4.00)



MATH 1D - Calculus (5.00)

MATH 33A - Linear Algebra and Applications (4.00)



MATH 2B - Linear Algebra (5.00)

MATH 33B - Differential Equations (4.00)



MATH 2A - Differential Equations (5.00)

PHYSICS 1A+ 1B+1C+ 4AL or 4BL



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)

ENGCOMP 3 - English Composition, Rhetoric, and Language (5.00)



EWRT 1A - Composition and Reading (5.00)

--- Or ---

EWRT 1AH - Composition and Reading - HONORS (5.00)

--- And ---

Select 1 Course(s) from the following

One additional course in English composition



COMM 9 - Argumentation: Analysis of Oral and Written Communication (5.00)

--- Or ---

EWRT 1B - Reading, Writing and Research (5.00)

--- Or ---

EWRT 1BH - Reading, Writing and Research - HONORS (5.00)

--- Or ---

EWRT 1C - Literature and Composition (5.00)

--- Or ---

EWRT 2 - Critical Reading, Writing and Thinking (5.00)

--- Or ---

PHIL 3 - Critical Thinking and Writing (5.00)

--- And ---

Select 1 Course(s) from the following

One course in computer programming: C++ preferred



CIS 27 - Programming in C++ for C/Java Programmers (4.50)

--- Or ---

CIS 29 - Advanced C++ Programming (4.50)

--- Or ---

CIS 22A - Beginning Programming Methodologies in C++ (4.50)

--- And ---

CIS 22BH - Intermediate Programming Methodologies in C++ - HONORS (4.50)

--- Or ---

CIS 22B - Intermediate Programming Methodologies in C++ (4.50)

STRONGLY RECOMMENDED COURSES

COM SCI 31 - Introduction to Computer Science I (4.00)



CIS 22A - Beginning Programming Methodologies in C++ (4.50)

--- Or ---

CIS 22BH - Intermediate Programming Methodologies in C++ - HONORS (4.50)

--- Or ---

CIS 27 - Programming in C++ for C/Java Programmers (4.50)

--- Or ---

CIS 22B - Intermediate Programming Methodologies in C++ (4.50)

--- Or ---

CIS 29 - Advanced C++ Programming (4.50)

COM SCI 32 - Introduction to Computer Science II (4.00)	←	CIS 22C - Data Abstraction and Structures (4.50)
		--- Or ---
		CIS 22CH - Data Abstraction and Structures - HONORS (4.50)
COM SCI 33 - Introduction to Computer Organization (5.00)	←	CIS 21JA - Introduction to x86 Processor Assembly Language and Computer Architecture (4.50)
COM SCI M51A - Logic Design of Digital Systems (4.00)	←	No Course Articulated
EC ENGR 100 - Electrical and Electronic Circuits (4.00)	←	ENGR 37 - Introduction to Circuit Analysis (5.00)
MATH 61 - Introduction to Discrete Structures (4.00)	←	MATH 22 - Discrete Mathematics (5.00)

END OF AGREEMENT