

Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Los Angeles
2022-2023 General Catalog, Semester

From: East Los Angeles College
2022-2023 General Catalog, Semester

Computer Science - B.S.

ADMISSIONS CRITERIA FOR MAJOR

[Major Specific Criteria for Transfer Admission](#)

GENERAL INFORMATION FOR ALL TRANSFER STUDENTS

[Cal State LA](#)

[General Education Lower Division Courses](#)

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[Department of Computer Science](#)

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[College of Engineering, Computer Science, and Technol](#)

COMPUTER SCIENCE - BS

The objective of the Bachelor of Science degree in Computer Science is to prepare qualified students for careers involving the design of computer systems and their applications to science and industry. The program provides an excellent foundation in all core areas of computer science with the opportunity to choose electives in a variety of specialized fields.

Requirements for the Major

- The total number of units required for the Bachelor of Science degree in Computer Science is 120 units, of which 93 units are in the major.
- Computer Science students are required to take 48 units of [General Education \(GE\)](#) of which 21 units are met by courses in the major. Consult with an advisor in the department for the specific number of units required in all areas of the degree, including GE and free electives.

LOWER DIVISION GENERAL EDUCATION REQUIREMENTS

Lower Division General Education Requirements (39 units)

Block A - English Language Communication and Critical Thinking Courses (9 units):

- A1 Oral Communication (3)
- A2 Written Communication (3) - Must take [ENGL 1010](#) (3)
- A3 Critical Thinking and Composition (3)
 - Critical Thinking - Met by [CS 2011](#) (4), [CS 3801](#) (3), [CS 3337](#) (3), [CS 3186](#) (3), [CS 4961](#) (3), and [CS 4962](#) (3)
 - 2nd Composition - Met by [ENGL 2030](#) (3)

Block B - Natural Science and Math/Quantitative Reasoning Courses (9 units):

- B1 Physical Science (3) - Met by [PHYS 2100](#) (5)
- B2 or B3 Biological science (3) or Interdisciplinary Science (3)
- B4 Quantitative Reasoning and Mathematical Concepts (3) - Met by [MATH 2110](#) (4)

Block C - Arts and Humanities Courses (9 units):

- American Institutions - US History (3)
- C1 Arts (3)
- C2 Humanities (3) - Met by [CS 3801](#) (3)

Block D - Social Science Courses (9 units):

- American Institutions - US Constitution and State/Local Govt. (3)
- Social Science (6 units)

Block E - Lifelong Understanding and Self-Development Courses (3 units):

- Met by [CS 1010](#) (3), also satisfied LD (c) and IHE

DIVERSITY REQUIREMENT FOR CAL STATE LA GRADUATION

The articulation information in Assist.org not only shows a link to the admission requirements (aka our [Major Specific Criteria](#) webpage) but also Cal State LA graduation requirements that may be completed at the lower-division level, prior to transferring to the University. The diversity requirement is a **graduation requirement**, not an admission requirement. The diversity requirement may be completed prior to, or after, transferring to the University.

For the Cal State LA degree, students will be required to complete **two courses (six units)** certified as diversity courses, at least one focusing on issues of race and ethnicity and their intersectionality with other social categories that structure inequality in society. These courses can be completed either at the lower division or upper-division level from among courses satisfying GE requirements.

Please see the **Requirement Information** sections below for the lower-division courses that will meet the Diversity and Race & Ethnicity Requirements.

LOWER DIVISION REQUIRED COURSES

Minimum grade required: C or better

CS 1222 - Introduction to Relational Databases (3.00)	←	CIS 120 - Introduction to Databases (3.00)
CS 2011 - Introduction to Programming I (3.00)	←	CS 113 - Programming in JAVA (3.00)
CS 2012 - Introduction to Programming II (3.00)	←	MATH 173 - Object-Oriented Programming and Design (4.00)
CS 2013 - Programming with Data Structures (3.00)	←	MATH 273 - Introduction to Data Structures and Algorithms (4.00)
CS 2148 - Discrete Structures (3.00)	←	CS 131 - Discrete Structures for Computer Science (3.00)
CS 2445 - Introduction to Computer Systems (3.00)	←	CS 130 - Introduction to Computer Architecture and Organization (3.00)
CS 2470 - Fundamentals of Network Systems and Cybersecurity (3.00)	←	CIS 162 - Cyber Security I (3.00)
ENGL 2030 - Introduction to Technical Writing (3.00)	←	No Course Articulated
MATH 2110 - Calculus I (4.00)	←	MATH 261 - Calculus I (5.00)
MATH 2120 - Calculus II (4.00)	←	MATH 262 - Calculus II (5.00)
MATH 2550 - Introduction to Linear Algebra (3.00)	←	MATH 270 - Linear Algebra (3.00)
PHYS 2100 - General Physics I: Mechanics (5.00)	←	PHYSICS 101 - Physics for Engineers and Scientists I (5.00)

DIVERSITY COURSES FOR CAL STATE LA GRADUATION REQUIREMENT

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

AAAS 1600 - History of Asia (3.00) Same-As: HIST 1600	←	No Course Articulated
AAAS 1700 - Understanding Contemporary Asia (3.00)	←	No Course Articulated
AAAS 2000 - Pacific Asian Culture, People, & Society (3.00)	←	ASIAN 003 - The Peoples and Cultures of Asia (3.00)
ANTH 1001 - Where in the World of Education at CSULA are You? (3.00)	←	No Course Articulated
ANTH 1500 - Introduction to Cultural Anthropology (3.00)	←	ANTHRO 102 - Human Ways of Life: Cultural Anthropology (3.00)
ANTH 2700 - Great Archaeological Discoveries of the Past (3.00)	←	No Course Articulated
ART 2090 - Perspectives on Art and Cultural Diversity (3.00)	←	ART 103 - Art Appreciation I (3.00) --- Or --- ARTHIST 100 - Introduction to Visual Culture and Cultural Studies (3.00)
ART 2400 - Art and Life Perspectives (3.00)	←	No Course Articulated
BUS 2500 - Diversity, Business and the Workplace (3.00)	←	No Course Articulated
CHDV 1200 - Intimate Relationships in our Diverse Society (3.00) Same-As: SOC 1200	←	FAM &CS 031 - Marriage and Family Life (3.00) --- Or --- SOC 012 - Marriage and Family Life (3.00)
CHDV 2250 - Ethnic Identity and Awareness in Children and Families (3.00)	←	CH DEV 042 - Teaching in a Diverse Society (3.00)
CLS 2200 - Chicanas and Latinas in Contemporary U.S. Society (3.00) Same-As: WGSS 2200	←	CHICANO 047 - The Mexican-American Woman in Society (3.00)
COMM 2500 - Communication, Identity and Culture (3.00)	←	No Course Articulated
COUN 2020 - Integration of Adults with Disabilities in the U.S. Society (3.00)	←	No Course Articulated

COUN 2250 - Diversity and Awareness of Self and Others for Helping Professionals (3.00)	←	No Course Articulated
ENGL 2600 - Literary Los Angeles (3.00)	←	No Course Articulated
GEOG 1550 - Cultural Geography (3.00)	←	GEOG 002 - Cultural Elements of Geography (3.00)
HIST 1010 - World History to 1500 CE (3.00)	←	HISTORY 086 - Introduction to World Civilization I (3.00) --- Or --- HISTORY 001 - Introduction to Western Civilization I (3.00)
HIST 1020 - World History since 1500 CE (3.00)	←	HISTORY 087 - Introduction to World Civilization II (3.00) --- Or --- HISTORY 002 - Introduction to Western Civilization II (3.00)
HIST 1600 - History of Asia (3.00) Same-As: AAAS 1600	←	No Course Articulated
HIST 2010 - Early American History (3.00)	←	HISTORY 011 - Political and Social History of the United States to 1877 (3.00)
HIST 2020 - Recent United States History (3.00)	←	HISTORY 012 - Political and Social History of the United States from 1865 (3.00)
HNRS 2210 - Reading Los Angeles: Engaging Cultural Expressions in a Global City (3.00)	←	No Course Articulated
LAS 1500 - Introduction to Latin American Studies (3.00)	←	No Course Articulated
LAS 2550 - Diverse Latin American Populations in Southern California (3.00) Same-As: CLS 2040	←	No Course Articulated
LBS 2400 - Introduction to Environmental Humanities (3.00)	←	No Course Articulated
LBS 2500 - Social Change and Social Movements in the U.S. (3.00)	←	No Course Articulated
LBS 2666 - Science Fiction Film and Television (3.00) Same-As: TVF 2666	←	No Course Articulated
PHIL 2000 - Introduction to Comparative Religions (3.00) Same-As: RELS 2000	←	PHILOS 033 - Comparative Survey of World Religions (3.00) HISTORY 007 - The World's Great Religions (3.00)
PHIL 2200 - Contemporary Moral and Social Issues: An Intersectional Approach (3.00)	←	No Course Articulated
HNRS 2210 - Reading Los Angeles: Engaging Cultural Expressions in a Global City (3.00)	←	No Course Articulated
PHIL 2300 - Meanings of Human Life: An Intersectional Approach (3.00)	←	No Course Articulated
PHIL 2400 - Philosophy of Film (3.00)	←	No Course Articulated
RELS 2000 - Introduction to Comparative Religions (3.00) Same-As: PHIL 2000	←	PHILOS 033 - Comparative Survey of World Religions (3.00) HISTORY 007 - The World's Great Religions (3.00)
SOC 1001 - Individual Development in Diverse Contexts (3.00) • <i>Minimum grade required: C or better</i>	←	No Course Articulated
SOC 1200 - Intimate Relationships in Our Diverse Society (3.00) Same-As: CHDV 1200	←	FAM &CS 031 - Marriage and Family Life (3.00) --- Or --- SOC 012 - Marriage and Family Life (3.00)
SOC 2010 - Introduction to Sociology (3.00)	←	SOC 001 - Introduction to Sociology (3.00)
TVF 1938 - History of Comic Books (3.00)	←	No Course Articulated
TVF 2500 - Media, Culture and Identity (3.00)	←	No Course Articulated
TVF 2666 - Science Fiction Film and Television (3.00) Same-As: LBS 2666	←	No Course Articulated
WGSS 1010 - Gender and Sexuality in College (3.00)	←	No Course Articulated
WGSS 2000 - Introduction to Women's, Gender, and Sexuality Studies (3.00)	←	No Course Articulated

RACE & ETHNICITY COURSES FOR CAL STATE LA GRADUATION REQUIREMENT

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

AAAS 1400 - Introduction to Globalization, Race and Place (3.00) Same-As: PAS 1400, LAS 1400	←	No Course Articulated
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AAAS 1500 - Asian-American History (3.00) Same-As: HIST 1500	← ASIAN 001 - Asian American History (3.00)
AAAS 2100 - Asian America: Culture, History, and Community (3.00)	← No Course Articulated
AAAS 2200 - Asia and Asian American in Literature, Arts, and Media (3.00)	← ASIAN 020 - Asian American Film and Media (3.00)
AAAS 2630 - Asian-American Experience (3.00)	← ASIAN 002 - Contemporary Asian American Issues (3.00)
CLS 1200 - Chicanas/os Latinas/os, Gender, and Class in the US Experience (3.00)	← CHICANO 050 - Gender and Sexuality in Chicano/Latino Communities (3.00)
CLS 1300 - The Constitution, Equity and Chicanas/os and Latinas/os (3.00)	← CHICANO 080 - Chicano Politics (3.00)
CLS 1500 - Cultural Diversity, Chicanas/os, and Latinas/os (3.00)	← CHICANO 002 - The Mexican-American in Contemporary Society (3.00)
CLS 1600 - Cultural Expressions in the Americas (3.00)	← CHICANO 052 - Mexican Art - Modern (3.00)
CLS 2010 - Modern Mexican Literature in Translation (3.00)	← SPANISH 012 - Survey of Mexican Literature (3.00)
CLS 2050 - Chicanas/os and Latinas/os in Film and Popular Culture (3.00)	← CHICANO 057 - Chicanas and Chicanos in Film (3.00)
CLS 2060 - Latina/o Images in Media, Social Media, and Digital Communication Systems (3.00)	← No Course Articulated
CLS 2100 - Chicana/o and Latino/a Political and Social Movements (3.00)	← No Course Articulated
CLS 2300 - Family Structure in the Americas (3.00)	← No Course Articulated
ENGL 2665 - Race and Ethnicity in Science Fiction (3.00) Same-As: LBS 2665	← No Course Articulated
HIST 1500 - Asian-American History (3.00) Same-As: AAAS 1500	← ASIAN 001 - Asian American History (3.00)
HIST 2050 - Race and Ethnicity in United States History (3.00)	← No Course Articulated
LAS 1020 - The African Diaspora in the Americas (3.00) Same-As: PAS 1020	← No Course Articulated
LAS 1400 - Introduction to Globalization, Race and Place (3.00) Same-As: PAS 1400, AAAS 1400	← No Course Articulated
LBS 2340 - Multicultural Arts, L.A. (3.00)	← No Course Articulated
LBS 2665 - Multicultural Science Fiction (3.00) Same-As: ENGL 2665	← No Course Articulated
PAS 1020 - The African Diaspora in the Americas (3.00) Same-As: LAS 1020	← No Course Articulated
PAS 1100 - Racial Equality, Government and the Constitution (3.00)	← No Course Articulated
PAS 1200 - Elementary African Language and Culture (3.00)	← No Course Articulated
PAS 1400 - Introduction to Globalization, Race and Place (3.00) Same-As: LAS 1400, AAAS 1400	← No Course Articulated
PAS 1500 - Black Oral Traditions and Communication (3.00)	← No Course Articulated
PAS 1510 - African American History (3.00)	← AFRO AM 004 - The African-American in the History of the U.S. I (3.00)
PAS 1800 - Critical Race Theory (3.00)	← No Course Articulated
PAS 2010 - Third World Literature (3.00)	← No Course Articulated
PAS 2020 - African American Religion as Civic Culture (3.00)	← No Course Articulated
PAS 2210 - African American Music as History and Criticism (3.00)	← No Course Articulated
PAS 2500 - African History (3.00)	← No Course Articulated
PAS 2600 - Third World Images in Film (3.00)	← No Course Articulated
PHIL 2230 - Diversity and Justice (3.00)	← No Course Articulated
SOC 2630 - Asian-American Experience (3.00)	← ASIAN 001 - Asian American History (3.00)
SPAN 2420 - Hispanic Societies through Literature (3.00)	← No Course Articulated
WGSS 2030 - Gender and Race in the United States (3.00)	← No Course Articulated
WGSS 2200 - Chicanas and Latinas in Contemporary U.S. Society (3.00) Same-As: CLS 2200	← CHICANO 047 - The Mexican-American Woman in Society (3.00)



END OF AGREEMENT