Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Long Beach 2022-2023 General Catalog, Semester	From: De Anza College 2022-2023 General Catalog, Quarter

Computer Science

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

GENERAL INFORMATION 2022-23

Important Admissions Information for Fall 2023

ALL MAJORS ARE IMPACTED AT CSU, LONG BEACH. As a result, incoming students must complete a series of major specific preparation coursework and meet GPA requirements. Please visit our Major Specific Degree Requirements webpage for more information and to find the correct path and year for your major.

Review the following for information related to transfer admissions to CSULB:

- Transfer Admission Eligibility Overview
- Transfer Application Process
- Lower Division Requirements Information for Major Agreements

GENERAL INFORMATION - DEGREE NOTES

Degree Progress: Transfer students must complete the following requirements within one calendar year of declaring the major: A grade of C or better must be achieved in MATH 123 (Calculus II) and PHYS 151 (Mechanics and Heat) within one calendar year after transfer to CSULB (if the equivalent was not taken before transfer). Questions can be directed to the College of Engineering Recruitment and Retention Center at (562) 985-1800 or coe-admit@csulb.edu.

ENGR 101 and 102 are substituted for transfer students who have three units of CSU GE Area E.

Special Notes: A grade of "C" or better is required in all required and elective courses.

LOWER DIVISION CORE REQUIREMENTS, TAKE ALL OF THE FOLLOWING COURSES:

Minimum grade required: C or better
Please refer to additional important General Information section above

CECS 105 - Introduction to Computer Engineering and Computer Science (1.00)	←	No Course Articulated
CECS 174 - Introduction to Programming and Problem Solving (3.00)	←	**CIS 22A** - Beginning Programming Methodologies in C++ (4.50) **--- Or ---** **CIS 35A** - Java Programming (4.50) **--- Or ---** **CIS 36A** - Introduction to Computer Programming Using Java (4.50) **--- Or ---** **CIS 40** - Introduction to Programming in Python (4.50)
CECS 225 - Digital Logic and Assembly Programming (3.00)	←	No Course Articulated
CECS 228 - Discrete Structures with Computing Applications (3.00)	←	**MATH 22** - Discrete Mathematics (5.00)
CECS 229 - Discrete Structures with Computing Applications II (3.00)	←	No Course Articulated
CECS 274 - Data Structures (3.00)	←	**CIS 22B** - Intermediate Programming Methodologies in C++ (4.50) **--- And ---** **CIS 22C** - Data Abstraction and Structures (4.50)
CECS 277 - Object Oriented Application Development (3.00)	←	**CIS 28** - Object Oriented Analysis and Design (4.50)
ENGR 101 - Introduction to Engineering Profession (1.00) Same-As: ENGR 101H • *Please refer to additional important General Information section above*	←	**ENGR 10** - Introduction to Engineering (4.50)

ENGR 102 - Academic Success Skills (1.00) Same-As: ENGR 102H • *Please refer to additional important General Information section above*	←	No Course Articulated
MATH 122 - Calculus I (4.00)	←	**MATH 1A** - Calculus (5.00) **--- And ---** **MATH 1B** - Calculus (5.00)
MATH 123 - Calculus II (4.00) • *Please refer to additional important General Information section above*	←	**MATH 1C** - Calculus (5.00)

APPROVED SCIENCES ELECTIVES (MINIMUM OF EIGHT UNITS), TAKE:

Please refer to additional important General Information section above

PHYS 151 - Mechanics and Heat (4.00) • *Please refer to additional important General Information section above*	←	**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)
--- Or ---		
CHEM 111A - General Chemistry (5.00)	←	**CHEM 1A** - General Chemistry (5.00) **--- And ---** **CHEM 1B** - General Chemistry (5.00) **--- And ---** **CHEM 1C** - General Chemistry and Qualitative Analysis (5.00)

REMAINING UNITS TO BE CHOSEN FROM THE FOLLOWING:

Please refer to additional important General Information section above

BIOL 200 - General Biology (4.00)	←	**BIOL 10** - Introductory Biology (5.00)
BIOL 205 - Human Biology (4.00)	←	**BIOL 11** - Human Biology (5.00)
BIOL 207 - Human Physiology (4.00)	←	**BIOL 40A** - Human Anatomy and Physiology (5.00) **--- And ---** **BIOL 40B** - Human Anatomy and Physiology (5.00) **--- And ---** **BIOL 40C** - Human Anatomy and Physiology (5.00)

END OF AGREEMENT