

# Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Long Beach  
2022-2023 General Catalog, Semester

From: Gavilan College  
2022-2023 General Catalog, Semester

## 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

<b>CECS 105</b> - Introduction to Computer Engineering and Computer Science (1.00)	←	No Course Articulated
<b>CECS 174</b> - Introduction to Programming and Problem Solving (3.00)	←	<b>CSIS 24</b> - Java Programming I (3.00) --- Or --- <b>CSIS 42</b> - Python Programming (4.00) --- Or --- <b>CSIS 44</b> - C# Net Programming (4.00) --- Or --- <b>CSIS 45</b> - C++ Programming I (3.00) --- Or --- <b>ENGR 5</b> - Engineering Programming and Problem Solving (3.00)
<b>CECS 225</b> - Digital Logic and Assembly Programming (3.00)	←	No Course Articulated
<b>CECS 228</b> - Discrete Structures with Computing Applications (3.00)	←	<b>CSIS 26</b> - Discrete Structures (3.00)
<b>CECS 229</b> - Discrete Structures with Computing Applications II (3.00)	←	<b>MATH 2</b> - Linear Algebra (3.00)
<b>CECS 274</b> - Data Structures (3.00)	←	No Course Articulated
<b>CECS 277</b> - Object Oriented Application Development (3.00)	←	No Course Articulated
<b>ENGR 101</b> - Introduction to Engineering Profession (1.00) Same-As: ENGR 101H	←	<b>ENGR 10</b> - Introduction to Engineering (3.00)
• Please refer to additional important General Information section above		
<b>ENGR 102</b> - Academic Success Skills (1.00) Same-As: ENGR 102H	←	No Course Articulated
• Please refer to additional important General Information section above		

**MATH 122** - Calculus I (4.00)

← **MATH 1A** - Single-Variable Calculus and Analytic Geometry (4.00)

**MATH 123** - Calculus II (4.00)

← **MATH 1B** - Single-Variable Calculus and Analytic Geometry (4.00)

- *Please refer to additional important General Information section above*

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

Please refer to additional important General Information section above

**PHYS 151** - Mechanics and Heat (4.00)

← **PHYS 4A** - Physics for Scientists and Engineers - Mechanics (4.00)

- *Please refer to additional important General Information section above*

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**CHEM 111A** - General Chemistry (5.00)

← **CHEM 1A** - General Chemistry (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)

← **BIO 10** - Principles of Biology (4.00)

**BIOL 205** - Human Biology (4.00)

← **BIO 12** - Introduction to Human Biology (4.00)

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**AH 15** - Survey of Human Anatomy and Physiology (5.00)  
Same-As: BIO 15

**BIOL 207** - Human Physiology (4.00)

← **BIO 9** - Human Physiology (5.00)

**END OF AGREEMENT**