

# Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

From: Palomar College  
2022-2023 General Catalog, Semester

## Computer Science, B.S.

### COMPUTER SCIENCE

The degree program for the Bachelor of Science in Computer Science assumes that students have already obtained a working knowledge of personal computing fundamentals and applications, including word processing, spreadsheets, database systems, e-mail systems and presentation graphics.

The curriculum begins with a three-course sequence covering concepts of programming and data structures. If students have knowledge of these topics, but do not have the courses to transfer, nor AP scores to submit, they may take the Computer Science Placement Examination to waive one or more of these courses. The test may be taken only once, and scores are valid for two consecutive semesters.

#### General Education

All students at Cal State Fullerton are expected to complete prescribed units of General Education that are made up of courses outside of their chosen disciplines. Students seeking a degree in Engineering have been provided exceptions from some of the General Education requirements. For this reason, it is important that students take the approved G.E. courses for Engineering majors that are found in their Titan Degree Audit (TDA). Additionally, they should confirm the G.E. courses that are required within their specific programs with their respective advisers.

### LOWER DIVISION CORE

#### Select 15 Semester Unit(s) from the following

<b>CPSC 120</b> - Introduction to Programming (3.00)	←	<b>CSCI 112</b> - Programming Fundamentals I (4.00)
<b>CPSC 121</b> - Object-Oriented Programming (3.00)	←	<b>CSCI 222</b> - C++ and Object-Oriented Programming (4.00)
<b>CPSC 131</b> - Data Structures (3.00)	←	<b>CSCI 210</b> - Data Structures (4.00)
<b>CPSC 240</b> - Computer Organization & Assembly Language (3.00)	←	<b>CSCI 212</b> - Machine Organization and Assembly Language (4.00)
<b>CPSC 253</b> - Cybersecurity Foundations and Principles (3.00)	←	<b>CSNT 181</b> - Hacker Prevention/Security (3.00)

#### --- And ---

#### Select 1 Course(s) from the following

<b>CPSC 223C</b> - C Programming (3.00)	←	Course(s) Denied: CSCI 112;CSCI 114;
<b>CPSC 223J</b> - Java Programming (3.00)	←	Course(s) Denied: CSCI 112;
<b>CPSC 223N</b> - Visual C# Programming (3.00)	←	No Course Articulated
<b>CPSC 223P</b> - Python Programming (3.00)	←	No Course Articulated

### MATHEMATICS REQUIREMENTS

#### Select 18 Semester Unit(s) from the following

<b>MATH 150A</b> - Calculus I (4.00)	←	<b>MATH 140</b> - Calculus with Analytic Geometry, First Course (5.00)
<b>MATH 150B</b> - Calculus II (4.00)	←	<b>MATH 141</b> - Calculus with Analytic Geometry, Second Course (4.00)

<b>MATH 170A</b> - Mathematical Structures I (3.00)	←	<b>MATH 245</b> - Discrete Mathematics (3.00)
<b>MATH 170B</b> - Mathematical Structure II (3.00)	←	No Course Articulated
<b>MATH 338</b> - Stat Appl to Natural Sci (4.00)	←	No Course Articulated

### MATH AND SCIENCE (WITH CORRESPONDING LAB) ELECTIVES- SEE ADDITIONAL INFORMATION UNDER ARTICULATION DETAILS

#### Select 12 Semester Unit(s) from the following

<b>BIOL 101</b> - Elements of Biology (3.00)	←	<b>BIOL 101</b> - General Biology - Lecture (3.00)
<b>BIOL 101L</b> - Elements of Biology Laboratory (1.00)	←	<b>BIOL 101L</b> - Introductory Biology: General Biology (Laboratory) (1.00)
<b>BIOL 151</b> - Cellular & Molecular Biology (4.00)	←	<b>BIOL 200</b> - Foundations of Biology I (5.00)
<b>BIOL 152</b> - Evolution & Organismal Biology (4.00)	←	<b>BIOL 201</b> - Foundations of Biology II (5.00)

<b>CHEM 120A</b> - General Chemistry (5.00)	←	<div><b>CHEM 110</b> - General Chemistry (3.00)</div> <div>--- And ---</div> <div><b>CHEM 110L</b> - General Chemistry Laboratory (2.00)</div>
<b>CHEM 120B</b> - General Chemistry (5.00)	←	<div><b>CHEM 115</b> - General Chemistry (3.00)</div> <div>--- And ---</div> <div><b>CHEM 115L</b> - General Chemistry Laboratory (2.00)</div>
<b>CHEM 123</b> - Chemistry for Engineers (3.00)	←	No Course Articulated
<b>CHEM 125</b> - Gen Chemistry B Lecture (3.00)	←	No Course Articulated

<b>GEOL 101</b> - Introduction to Geology (3.00)	←	<b>GEOL 100</b> - Physical Geology (3.00)
<b>GEOL 101L</b> - Introduction to Geology Laboratory (1.00)	←	<b>GEOL 100L</b> - Geology Laboratory (1.00)
<b>GEOL 201</b> - Earth History (3.00)	←	<div><b>GEOL 150</b> - Dinosaurs and Earth History (3.00)</div> <div>--- And ---</div> <div><b>GEOL 150L</b> - Dinosaurs and Earth History Laboratory (1.00)</div>
<b>GEOL 201L</b> - Earth History Supplemental Lab (1.00)	←	No Course Articulated

<b>MATH 250A</b> - Calculus III (4.00)	←	<b>MATH 205</b> - Calculus with Analytic Geometry, Third Course (4.00)
<b>MATH 250B</b> - Intro to Linear Algebra and Diff. Equations (4.00)	←	<div><b>MATH 200</b> - Introduction to Linear Algebra (3.00)</div> <div>--- And ---</div> <div><b>MATH 206</b> - Calculus with Differential Equations (4.00)</div>

<b>PHYS 225</b> - Fundamental Phys; Mechanics (3.00)	←	No Course Articulated
<b>PHYS 225L</b> - Fundamental Physics Lab (1.00)	←	No Course Articulated
<b>PHYS 226</b> - Fund Phys.Elect + Magnetism (3.00)	←	No Course Articulated
<b>PHYS 226L</b> - Fundamental Physics Lab (1.00)	←	No Course Articulated
<b>PHYS 227</b> - Fund Phys: Waves, Optics, & Mod Phys (1.00 - 3.00)	←	No Course Articulated
<b>PHYS 227L</b> - Fundamental Physics Lab (1.00)	←	No Course Articulated

## COMPUTER SCIENCE ELECTIVES

<b>CPSC 254</b> - Software Development with Open Source Systems (3.00)	←	No Course Articulated
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## REQUIRED FOR GRADUATION

<b>POSC 100</b> - American Government (3.00)	←	<div><b>POSC 101</b> - Introduction to Politics and American Political Institutions (3.00)</div> <div>--- And ---</div> <div><b>POSC 102</b> - Introduction to United States and California Governments (3.00)</div>
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## ARTICULATION DETAILS

**BIOL 101** - Elements of Biology (3.00)  
 --- And ---  
**BIOL 101L** - Elements of Biology Laboratory (1.00)

← **BIOL 100** - Introductory Biology: General Biology (4.00)

**BIOL 151** - Cellular & Molecular Biology (4.00)  
 --- And ---  
**BIOL 152** - Evolution & Organismal Biology (4.00)

←

**BIOL 200** - Foundations of Biology I (5.00)  
 --- And ---  
**BIOL 201** - Foundations of Biology II (5.00)

**CHEM 120A** - General Chemistry (5.00)  
 --- And ---  
**CHEM 120B** - General Chemistry (5.00)

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**CHEM 115** - General Chemistry (3.00)  
 --- And ---  
**CHEM 115L** - General Chemistry Laboratory (2.00)  
 --- And ---  
**CHEM 110** - General Chemistry (3.00)  
 --- And ---  
**CHEM 110L** - General Chemistry Laboratory (2.00)

**CHEM 120A** - General Chemistry (5.00)  
 --- And ---  
**CHEM 125** - Gen Chemistry B Lecture (3.00)

←

No Course Articulated

**CPSC 120** - Introduction to Programming (3.00)  
 --- And ---  
**CPSC 121** - Object-Oriented Programming (3.00)  
 --- And ---  
**CPSC 131** - Data Structures (3.00)

←

**CSCI 112** - Programming Fundamentals I (4.00)  
 --- And ---  
**CSCI 222** - C++ and Object-Oriented Programming (4.00)  
 --- And ---  
**CSCI 210** - Data Structures (4.00)

**CPSC 253U** - Workshop In Unix (1.00)  
 --- And ---  
**CPSC 254** - Software Development with Open Source Systems (3.00)

←

No Course Articulated

**GEOL 101** - Introduction to Geology (3.00)  
 --- And ---  
**GEOL 101L** - Introduction to Geology Laboratory (1.00)

←

**GEOL 100** - Physical Geology (3.00)  
 --- And ---  
**GEOL 100L** - Geology Laboratory (1.00)

**GEOL 201** - Earth History (3.00)  
 --- And ---  
**GEOL 201L** - Earth History Supplemental Lab (1.00)

←

No Course Articulated

**MATH 150A** - Calculus I (4.00)  
 --- And ---  
**MATH 150B** - Calculus II (4.00)

←

**MATH 140** - Calculus with Analytic Geometry, First Course (5.00)  
 --- And ---  
**MATH 141** - Calculus with Analytic Geometry, Second Course (4.00)

**MATH 150A** - Calculus I (4.00)

--- And ---

**MATH 150B** - Calculus II (4.00)

--- And ---

**MATH 250A** - Calculus III (4.00)



**MATH 140** - Calculus with Analytic Geometry, First Course (5.00)

--- And ---

**MATH 141** - Calculus with Analytic Geometry, Second Course (4.00)

--- And ---

**MATH 205** - Calculus with Analytic Geometry, Third Course (4.00)

**PHYS 225** - Fundamental Phys; Mechanics (3.00)

--- And ---

**PHYS 225L** - Fundamental Physics Lab (1.00)



**PHYS 230** - Principles of Physics (5.00)

**PHYS 226** - Fund Phys.Elect + Magnetism (3.00)

--- And ---

**PHYS 226L** - Fundamental Physics Lab (1.00)



**PHYS 231** - Principles of Physics (5.00)

**PHYS 227** - Fund Phys: Waves, Optics, & Mod Phys (1.00 - 3.00)

--- And ---

**PHYS 227L** - Fundamental Physics Lab (1.00)



**PHYS 232** - Principles of Physics (4.00)

**END OF AGREEMENT**