Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

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LOWER DIVISION CORE

Select 15 Semester Unit(s) from the following

CPSC 120 - Introduction to Programming (3.00)	←	**CIS 180** - Programming in C/C++ (3.50)
CPSC 121 - Object-Oriented Programming (3.00)	←	**CIS 280X** - Object-Oriented Programming in C++ (3.50)
CPSC 131 - Data Structures (3.00)	←	**CIS 292** - Data Structures (3.00)
CPSC 240 - Computer Organization & Assembly Language (3.00)	←	**CIS 231** - Computer Organization and Assembly Language Programming (3.50)
CPSC 253 - Cybersecurity Foundations and Principles (3.00)	←	**CIS 170L** - Cybersecurity Fundamentals (3.50)

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Select 1 Course(s) from the following

CPSC 223C - C Programming (3.00)	←	No Course Articulated
CPSC 223J - Java Programming (3.00)	←	**CIS 183** - Java Programming (3.50)
CPSC 223N - Visual C# Programming (3.00)	←	No Course Articulated
CPSC 223P - Python Programming (3.00)	←	**CIS 181** - Python Programming (3.50)

MATHEMATICS REQUIREMENTS

Select 18 Semester Unit(s) from the following

MATH 150A - Calculus I (4.00)	←	**MATH 170** - Analytic Geometry and Calculus I (4.00)
MATH 150B - Calculus II (4.00)	←	**MATH 190** - Analytic Geometry and Calculus II (4.00)

MATH 170A - Mathematical Structures I (3.00)	←	**CIS 185** - Discrete Structures (3.00)
MATH 170B - Mathematical Structure II (3.00)	←	No Course Articulated
MATH 338 - 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

BIOL 101 - Elements of Biology (3.00)	←	No Course Articulated
BIOL 101L - Elements of Biology Laboratory (1.00)	←	No Course Articulated
BIOL 151 - Cellular & Molecular Biology (4.00)	←	**BIOL 201** - Principles of Biology (5.00)
BIOL 152 - Evolution & Organismal Biology (4.00)	←	**BIOL 200** - Principles of Biology (5.00)

CHEM 120A - General Chemistry (5.00)	←	**CHEM 111** - General Chemistry (5.00)
CHEM 120B - General Chemistry (5.00)	←	**CHEM 112** - General Chemistry (5.00)
CHEM 123 - Chemistry for Engineers (3.00)	←	No Course Articulated
CHEM 125 - Gen Chemistry B Lecture (3.00)	←	No Course Articulated

GEOL 101 - Introduction to Geology (3.00)	←	**GEOL 102** - Physical Geology Lecture (3.00)
GEOL 101L - Introduction to Geology Laboratory (1.00)	←	**GEOL 102L** - Physical Geology Laboratory (1.00)
GEOL 201 - Earth History (3.00)	←	**GEOL 201** - Earth History (4.00)
GEOL 201L - Earth History Supplemental Lab (1.00)	←	No Course Articulated

MATH 250A - Calculus III (4.00)	←	**MATH 225** - Calculus III (5.00)
MATH 250B - Intro to Linear Algebra and Diff. Equations (4.00)	←	**MATH 250** - Linear Algebra and Differential Equations (5.00)

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

COMPUTER SCIENCE ELECTIVES

CPSC 254 - Software Development with Open Source Systems (3.00)	←	**CIS 214** - UNIX and LINUX Operating Systems (3.50)

REQUIRED FOR GRADUATION

POSC 100 - American Government (3.00)	←	**POL 101** - American Political Institutions (3.00)

ARTICULATION DETAILS

BIOL 101 - Elements of Biology (3.00) **--- And ---** **BIOL 101L** - Elements of Biology Laboratory (1.00)	←	**BIOL 120** - Introduction to Biological Science (4.00)
BIOL 151 - Cellular & Molecular Biology (4.00) **--- And ---** **BIOL 152** - Evolution & Organismal Biology (4.00)	←	**BIOL 200** - Principles of Biology (5.00) **--- And ---** **BIOL 201** - Principles of Biology (5.00)

CHEM 120A - General Chemistry (5.00) **--- And ---** **CHEM 120B** - General Chemistry (5.00)	←	**CHEM 111** - General Chemistry (5.00) **--- And ---** **CHEM 112** - General Chemistry (5.00)

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)	←	**CIS 180** - Programming in C/C++ (3.50) **--- And ---** **CIS 280X** - Object-Oriented Programming in C++ (3.50) **--- And ---** **CIS 292** - Data Structures (3.00)
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 101** - Physical Geology (4.00) **--- Or ---** **GEOL 102** - Physical Geology Lecture (3.00) **--- And ---** **GEOL 102L** - Physical 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 170** - Analytic Geometry and Calculus I (4.00) **--- And ---** **MATH 190** - Analytic Geometry and Calculus II (4.00)
MATH 150A - Calculus I (4.00) **--- And ---** **MATH 150B** - Calculus II (4.00) **--- And ---** **MATH 250A** - Calculus III (4.00)	←	**MATH 170** - Analytic Geometry and Calculus I (4.00) **--- And ---** **MATH 190** - Analytic Geometry and Calculus II (4.00) **--- And ---** **MATH 225** - Calculus III (5.00)

PHYS 225 - Fundamental Phys; Mechanics (3.00) **--- And ---** **PHYS 225L** - Fundamental Physics Lab (1.00)	←	**PHYS 201** - Engineering Physics (4.00)
PHYS 226 - Fund Phys.Elect + Magnetism (3.00) **--- And ---** **PHYS 226L** - Fundamental Physics Lab (1.00)	←	**PHYS 202** - Engineering Physics (4.00)
PHYS 227 - Fund Phys: Waves, Optics, & Mod Phys (1.00 - 3.00) **--- And ---** **PHYS 227L** - Fundamental Physics Lab (1.00)	←	**PHYS 203** - Engineering Physics (4.00)

END OF AGREEMENT