Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Fullerton 2022-2023 General Catalog, Semester	From: Fullerton 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)	←	No Course Articulated
CPSC 121 - Object-Oriented Programming (3.00)	←	**CSCI 123 F** - Introduction to Programming Concepts in C++ (4.00)
CPSC 131 - Data Structures (3.00)	←	**CSCI 133 F** - Data Structures in C++ (4.00)
CPSC 240 - Computer Organization & Assembly Language (3.00)	←	**CSCI 241 F** - Computer Organization and Assembly Language Programming (4.00)
CPSC 253 - Cybersecurity Foundations and Principles (3.00)	←	**CIS 160 F** - Introduction to Cyber Security (3.00)

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Select 1 Course(s) from the following

CPSC 223C - C Programming (3.00)	←	**CSCI 223 F** - "C" Language for Mathematics and Science (4.00)
CPSC 223J - Java Programming (3.00)	←	**CIS 226 F** - Java Programming I (4.00)
CPSC 223N - Visual C# Programming (3.00)	←	**CIS 221 F** - Introduction to C# Programming (3.00)
CPSC 223P - Python Programming (3.00)	←	**CIS 201 F** - Introduction to Python Programming (3.00)

MATHEMATICS REQUIREMENTS

Select 18 Semester Unit(s) from the following

MATH 150A - Calculus I (4.00)	←	**MATH 151 F** - Calculus I (4.00) **--- Or ---** **MATH 151HF** - Honors Calculus I (4.00)
MATH 150B - Calculus II (4.00)	←	**MATH 152 F** - Calculus II (4.00) **--- Or ---** **MATH 152HF** - Honors Calculus II (4.00)

MATH 170A - Mathematical Structures I (3.00)	←	**MATH 171 F** - Discrete Mathematics (4.00)
MATH 170B - Mathematical Structure II (3.00)	←	**MATH 172 F** - Graph Theory and Linear Algebra (4.00)
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)	←	**BIOL 100 F** - Principles of Biology (4.00)
BIOL 101L - Elements of Biology Laboratory (1.00)	←	No Course Articulated
BIOL 151 - Cellular & Molecular Biology (4.00)	←	**BIOL 272 F** - Cell and Molecular Biology (4.00)
BIOL 152 - Evolution & Organismal Biology (4.00)	←	**BIOL 170 F** - Organismal Biology (5.00)

CHEM 120A - General Chemistry (5.00)	←	**CHEM 111AF** - General Chemistry I (5.00)
CHEM 120B - General Chemistry (5.00)	←	**CHEM 111BF** - General Chemistry II (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)	←	**ESC 100 F** - Physical Geology (3.00)
GEOL 101L - Introduction to Geology Laboratory (1.00)	←	**ESC 100LF** - Physical Geology Lab (1.00)
GEOL 201 - Earth History (3.00)	←	**ESC 103 F** - Historical Geology (4.00)
GEOL 201L - Earth History Supplemental Lab (1.00)	←	No Course Articulated

MATH 250A - Calculus III (4.00)	←	**MATH 251 F** - Multivariable Calculus (4.00)
MATH 250B - Intro to Linear Algebra and Diff. Equations (4.00)	←	**MATH 252 F** - Linear Algebra and Differential Equations (4.00) **--- And ---** **MATH 253 F** - Additional Topics in Linear Algebra (2.00) **--- Or ---** **MATH 260 F** - Ordinary Differential Equations (3.00) **--- And ---** **MATH 255 F** - Linear Algebra (3.00)

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)	←	No Course Articulated

REQUIRED FOR GRADUATION

POSC 100 - American Government (3.00)	←	**POSC 100 F** - American Government (3.00) **--- Or ---** **POSC 100HF** - Honors American Government (3.00)

ARTICULATION DETAILS

BIOL 101 - Elements of Biology (3.00) **--- And ---** **BIOL 101L** - Elements of Biology Laboratory (1.00)	←	**BIOL 101 F** - General Biology (5.00) **--- Or ---** **BIOL 101HF** - Honors General Biology (5.00)

BIOL 151 - Cellular & Molecular Biology (4.00) **--- And ---** **BIOL 152** - Evolution & Organismal Biology (4.00)	←	**BIOL 272 F** - Cell and Molecular Biology (4.00) **--- And ---** **BIOL 170 F** - Organismal Biology (5.00)
CHEM 120A - General Chemistry (5.00) **--- And ---** **CHEM 120B** - General Chemistry (5.00)	←	**CHEM 111AF** - General Chemistry I (5.00) **--- And ---** **CHEM 111BF** - General Chemistry II (5.00)
CHEM 120A - General Chemistry (5.00) **--- And ---** **CHEM 125** - Gen Chemistry B Lecture (3.00)	←	**CHEM 111AF** - General Chemistry I (5.00) **--- And ---** **CHEM 111BF** - General Chemistry II (5.00)
CPSC 120 - Introduction to Programming (3.00) **--- And ---** **CPSC 121** - Object-Oriented Programming (3.00) **--- And ---** **CPSC 131** - Data Structures (3.00)	←	No Course Articulated
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)	←	**ESC 100 F** - Physical Geology (3.00) **--- And ---** **ESC 100LF** - Physical Geology Lab (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 151HF** - Honors Calculus I (4.00) **--- And ---** **MATH 152HF** - Honors Calculus II (4.00) **--- Or ---** **MATH 151 F** - Calculus I (4.00) **--- And ---** **MATH 152 F** - 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 151 F** - Calculus I (4.00) **--- And ---** **MATH 152 F** - Calculus II (4.00) **--- And ---** **MATH 251 F** - Multivariable Calculus (4.00)
PHYS 225 - Fundamental Phys; Mechanics (3.00) **--- And ---** **PHYS 225L** - Fundamental Physics Lab (1.00)	←	**PHYS 221 F** - General Physics I (4.00)

PHYS 226 - Fund Phys.Elect + Magnetism (3.00) **--- And ---** **PHYS 226L** - Fundamental Physics Lab (1.00)	←	**PHYS 222 F** - General Physics II (4.00)
PHYS 227 - Fund Phys: Waves, Optics, & Mod Phys (1.00 - 3.00) **--- And ---** **PHYS 227L** - Fundamental Physics Lab (1.00)	←	**PHYS 223 F** - General Physics III (4.00)

END OF AGREEMENT