Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Fullerton 2022-2023 General Catalog, Semester	From: El Camino 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)	←	**COMP SCI 1** - Problem Solving and Program Design Using C++ (4.00)
CPSC 121 - Object-Oriented Programming (3.00)	←	No Course Articulated
CPSC 131 - Data Structures (3.00)	←	**COMP SCI 2** - Introduction to Data Structures (5.00)
CPSC 240 - Computer Organization & Assembly Language (3.00)	←	**COMP SCI 16** - Assembly Language Programming for the x86 (IBM PC) Processors (4.00)
CPSC 253 - Cybersecurity Foundations and Principles (3.00)	←	No Course Articulated

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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)	←	**COMP SCI 3** - Computer Object-Oriented Programming in Java (4.00)
CPSC 223N - Visual C# Programming (3.00)	←	No Course Articulated
CPSC 223P - Python Programming (3.00)	←	No Course Articulated

MATHEMATICS REQUIREMENTS

Select 18 Semester Unit(s) from the following

MATH 150A - Calculus I (4.00)	←	**MATH 190** - Single Variable Calculus and Analytic Geometry I (5.00)
MATH 150B - Calculus II (4.00)	←	**MATH 191** - Single Variable Calculus and Analytic Geometry II (5.00)

MATH 170A - Mathematical Structures I (3.00)	←	**MATH 210** - Introduction to Discrete Structures (5.00)
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)	←	**BIOL 10H** - Honors Fundamentals of Biology (4.00)
BIOL 101L - Elements of Biology Laboratory (1.00)	←	No Course Articulated
BIOL 151 - Cellular & Molecular Biology (4.00)	←	**BIOL 110** - Cell and Molecular Biology (5.00) **--- Or ---** **BIOL 110H** - Honors Cell and Molecular Biology (5.00)
BIOL 152 - Evolution & Organismal Biology (4.00)	←	**BIOL 120** - Ecology Evolution, Diversity, and Physiology (5.00) **--- Or ---** **BIOL 120H** - Honors Ecology, Evolution, Diversity, and Physiology (5.00)

CHEM 120A - General Chemistry (5.00)	←	**CHEM 1A** - General Chemistry I (5.00)
CHEM 120B - General Chemistry (5.00)	←	**CHEM 1B** - 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)	←	**GEOL 1** - Physical Geology (3.00)
GEOL 101L - Introduction to Geology Laboratory (1.00)	←	**GEOL 3** - Physical Geology Laboratory (1.00)
GEOL 201 - Earth History (3.00)	←	**GEOL 2** - History of Planet Earth (3.00) **--- And ---** **GEOL 4** - History of Planet Earth Laboratory (1.00)
GEOL 201L - Earth History Supplemental Lab (1.00)	←	No Course Articulated

MATH 250A - Calculus III (4.00)	←	**MATH 220** - Multi-Variable Calculus (5.00)
MATH 250B - Intro to Linear Algebra and Diff. Equations (4.00)	←	**MATH 270** - Differential Equations with Linear Algebra (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)	←	**COMP SCI 40** - Introduction to UNIX and LINUX Operating Systems (4.00)

REQUIRED FOR GRADUATION

POSC 100 - American Government (3.00)	←	**P S 1** - Governments of the United States and California (3.00)

ARTICULATION DETAILS

BIOL 101 - Elements of Biology (3.00) **--- And ---** **BIOL 101L** - Elements of Biology Laboratory (1.00)	←	**BIOL 10** - Fundamentals of Biology (4.00)

BIOL 151 - Cellular & Molecular Biology (4.00) **--- And ---** **BIOL 152** - Evolution & Organismal Biology (4.00)	←	**BIOL 110** - Cell and Molecular Biology (5.00) **--- And ---** **BIOL 120** - Ecology Evolution, Diversity, and Physiology (5.00) **--- Or ---** **BIOL 110H** - Honors Cell and Molecular Biology (5.00) **--- And ---** **BIOL 120H** - Honors Ecology, Evolution, Diversity, and Physiology (5.00)
CHEM 120A - General Chemistry (5.00) **--- And ---** **CHEM 120B** - General Chemistry (5.00)	←	**CHEM 1A** - General Chemistry I (5.00) **--- And ---** **CHEM 1B** - General Chemistry II (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)	←	**COMP SCI 1** - Problem Solving and Program Design Using C++ (4.00) **--- And ---** **COMP SCI 2** - Introduction to Data Structures (5.00)
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 1** - Physical Geology (3.00) **--- And ---** **GEOL 3** - 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 190** - Single Variable Calculus and Analytic Geometry I (5.00) **--- And ---** **MATH 191** - Single Variable Calculus and Analytic Geometry II (5.00)
MATH 150A - Calculus I (4.00) **--- And ---** **MATH 150B** - Calculus II (4.00) **--- And ---** **MATH 250A** - Calculus III (4.00)	←	**MATH 190** - Single Variable Calculus and Analytic Geometry I (5.00) **--- And ---** **MATH 191** - Single Variable Calculus and Analytic Geometry II (5.00) **--- And ---** **MATH 220** - Multi-Variable Calculus (5.00)

PHYS 225 - Fundamental Phys; Mechanics (3.00) **--- And ---** **PHYS 225L** - Fundamental Physics Lab (1.00)	←	**PHYS 1A** - Mechanics of Solids (4.00) **--- And ---** **PHYS 1B** - Fluids, Heat and Sound (3.00)
PHYS 226 - Fund Phys.Elect + Magnetism (3.00) **--- And ---** **PHYS 226L** - Fundamental Physics Lab (1.00)	←	**PHYS 1C** - Electricity and Magnetism (4.00)
PHYS 227 - Fund Phys: Waves, Optics, & Mod Phys (1.00 - 3.00) **--- And ---** **PHYS 227L** - Fundamental Physics Lab (1.00)	←	**PHYS 1D** - Optics and Modern Physics (4.00)

END OF AGREEMENT