Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Fullerton 2022-2023 General Catalog, Semester	From: San Bernardino Valley 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)	←	**CS 110** - Fundamentals of Computer Science (3.00)
CPSC 121 - Object-Oriented Programming (3.00)	←	**CS 190** - Programming in C++ (4.00)
CPSC 131 - Data Structures (3.00)	←	**CS 265** - Data Structures and Algorithms with C++ (3.00)
CPSC 240 - Computer Organization & Assembly Language (3.00)	←	**CS 170** - Assembly Language (4.00)
CPSC 253 - Cybersecurity Foundations and Principles (3.00)	←	**CIT 160** - Introduction to Information Systems Security (3.00)

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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)	←	**CS 215** - Programming with 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 250** - Single Variable Calculus I (4.00)
MATH 150B - Calculus II (4.00)	←	**MATH 251** - Single Variable Calculus II (4.00)

MATH 170A - Mathematical Structures I (3.00)	←	**CS 130** - 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 205** - Cell and Molecular Biology (4.00)
BIOL 152 - Evolution & Organismal Biology (4.00)	←	**BIOL 206** - Organismal Biology (4.00)

CHEM 120A - General Chemistry (5.00)	←	**CHEM 150** - General Chemistry I (5.00)
CHEM 120B - General Chemistry (5.00)	←	**CHEM 151** - 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 101** - Introduction to Physical Geology (3.00)
GEOL 101L - Introduction to Geology Laboratory (1.00)	←	**GEOL 111** - Introduction to Physical Geology Laboratory (1.00)
GEOL 201 - Earth History (3.00)	←	**GEOL 112** - Historical Geology (4.00) **--- Or ---** **BIOL 109** - History of Life (4.00) **--- Or ---** **BIOL 109H** - History of Life - Honors (4.00)
GEOL 201L - Earth History Supplemental Lab (1.00)	←	No Course Articulated

MATH 250A - Calculus III (4.00)	←	**MATH 252** - Multivariable Calculus (5.00)
MATH 250B - Intro to Linear Algebra and Diff. Equations (4.00)	←	**MATH 265** - Linear Algebra (4.00) **--- And ---** **MATH 266** - Ordinary Differential Equations (4.00)

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)	←	**POLIT 100** - American Politics (3.00)

ARTICULATION DETAILS

BIOL 101 - Elements of Biology (3.00) **--- And ---** **BIOL 101L** - Elements of Biology Laboratory (1.00)	←	**BIOL 100** - General Biology (4.00)
BIOL 151 - Cellular & Molecular Biology (4.00) **--- And ---** **BIOL 152** - Evolution & Organismal Biology (4.00)	←	**BIOL 205** - Cell and Molecular Biology (4.00) **--- And ---** **BIOL 206** - Organismal Biology (4.00)

CHEM 120A - General Chemistry (5.00) **--- And ---** **CHEM 120B** - General Chemistry (5.00)	←	**CHEM 150** - General Chemistry I (5.00) **--- And ---** **CHEM 151** - General Chemistry II (5.00)
CHEM 120A - General Chemistry (5.00) **--- And ---** **CHEM 125** - Gen Chemistry B Lecture (3.00)	←	**CHEM 150** - General Chemistry I (5.00) **--- And ---** **CHEM 151** - General Chemistry II (5.00) **CHEM 150H** - General Chemistry I - Honors (5.00) **--- And ---** **CHEM 151H** - General Chemistry II - Honors (5.00)

CPSC 120 - Introduction to Programming (3.00) **--- And ---** **CPSC 121** - Object-Oriented Programming (3.00) **--- And ---** **CPSC 131** - Data Structures (3.00)	←	**CS 110** - Fundamentals of Computer Science (3.00) **--- And ---** **CS 190** - Programming in C++ (4.00) **--- And ---** **CS 265** - Data Structures and Algorithms with C++ (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** - Introduction to Physical Geology (3.00) **--- And ---** **GEOG 111** - Physical Geography 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 250** - Single Variable Calculus I (4.00) **--- And ---** **MATH 251** - Single Variable 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 250** - Single Variable Calculus I (4.00) **--- And ---** **MATH 251** - Single Variable Calculus II (4.00) **--- And ---** **MATH 252** - Multivariable Calculus (5.00)

PHYS 225 - Fundamental Phys; Mechanics (3.00) **--- And ---** **PHYS 225L** - Fundamental Physics Lab (1.00)	←	**PHYSIC 200** - Physics I (6.00) **PHYSIC 202** - Physics I (4.00)
PHYS 226 - Fund Phys.Elect + Magnetism (3.00) **--- And ---** **PHYS 226L** - Fundamental Physics Lab (1.00)	←	**PHYSIC 201** - Physics II (6.00)

PHYS 227 - Fund Phys: Waves, Optics, & Mod Phys (1.00 - 3.00) **--- And ---** **PHYS 227L** - Fundamental Physics Lab (1.00)	←	**PHYSIC 204** - Physics III (4.00)

END OF AGREEMENT