Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Fullerton 2022-2023 General Catalog, Semester	From: Irvine 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 36** - C Programming (3.00)
CPSC 121 - Object-Oriented Programming (3.00)	←	**CS 37** - C++ Programming (3.00)
CPSC 131 - Data Structures (3.00)	←	**CS 41** - Data Structures (3.00)
CPSC 240 - Computer Organization & Assembly Language (3.00)	←	**CS 40A** - Computer Organization and Assembly Language I (3.00)
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)	←	**CS 38** - Java Programming (3.00)
CPSC 223N - Visual C# Programming (3.00)	←	**CS 39** - C# Programming Using Microsoft.NET (3.00)
CPSC 223P - Python Programming (3.00)	←	**CS 10** - Introduction to Programming Using Python (3.00)

MATHEMATICS REQUIREMENTS

Select 18 Semester Unit(s) from the following

MATH 150A - Calculus I (4.00)	←	**MATH 3A** - Analytic Geometry and Calculus I (5.00) **--- Or ---** **MATH 3AH** - Analytic Geometry and Calculus I Honors (5.00)
MATH 150B - Calculus II (4.00)	←	**MATH 3B** - Analytic Geometry and Calculus II (5.00) **--- Or ---** **MATH 3BH** - Analytic Geometry and Calculus II Honors (5.00)

MATH 170A - Mathematical Structures I (3.00)	←	**CS 6A** - Computer Discrete Mathematics I (3.00) Same-As: MATH 30

MATH 170B - Mathematical Structure II (3.00)	←	**CS 6B** - Computer Discrete Mathematics II (3.00) Same-As: MATH 31 **--- Or ---** **MATH 31** - Computer Discrete Mathematics II (3.00) Same-As: CS 6B
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)	←	**BIO 1** - The Life Sciences (3.00) **--- Or ---** **BIO 1H** - The Life Sciences Honors (3.00)
BIOL 101L - Elements of Biology Laboratory (1.00)	←	**BIO 1L** - The Life Sciences Laboratory (1.00)
BIOL 151 - Cellular & Molecular Biology (4.00)	←	**BIO 16** - Cellular Biology (4.00) **--- Or ---** **BIO 81** - Integrated Biology: From DNA to Organisms (4.00) **--- Or ---** **BIO 81H** - Integrated Biology: From DNA to Organisms Honors (4.00)
BIOL 152 - Evolution & Organismal Biology (4.00)	←	**BIO 80** - Integrated Biology: Organisms to Ecosystems (4.00) **--- Or ---** **BIO 80H** - Integrated Biology: Organisms to Ecosystems Honors (4.00)

CHEM 120A - General Chemistry (5.00)	←	**CHEM 1A** - General Chemistry I (5.00) **--- Or ---** **CHEM 1AH** - General Chemistry 1 Honors (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)	←	No Course Articulated
GEOL 101L - Introduction to Geology Laboratory (1.00)	←	No Course Articulated
GEOL 201 - Earth History (3.00)	←	**GEOL 2** - Historical Geology (4.00)
GEOL 201L - Earth History Supplemental Lab (1.00)	←	No Course Articulated

MATH 250A - Calculus III (4.00)	←	**MATH 4A** - Analytic Geometry and Calculus III (5.00)
MATH 250B - Intro to Linear Algebra and Diff. Equations (4.00)	←	**MATH 24** - Elementary Differential Equations (4.00) **--- And ---** **MATH 26** - Introduction to Linear Algebra (4.00) **--- Or ---** **MATH 24H** - Elementary Differential Equations Honors (4.00) **--- And ---** **MATH 26** - Introduction to Linear Algebra (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)	←	**PS 1** - American Government (3.00) **--- Or ---** **PS 1H** - American Government Honors (3.00)

ARTICULATION DETAILS

BIOL 101 - Elements of Biology (3.00) **--- And ---** **BIOL 101L** - Elements of Biology Laboratory (1.00)	←	**BIO 1** - The Life Sciences (3.00) **--- And ---** **BIO 1L** - The Life Sciences Laboratory (1.00) **--- Or ---** **BIO 1H** - The Life Sciences Honors (3.00) **--- And ---** **BIO 1L** - The Life Sciences Laboratory (1.00)
BIOL 151 - Cellular & Molecular Biology (4.00) **--- And ---** **BIOL 152** - Evolution & Organismal Biology (4.00)	←	**BIO 16** - Cellular Biology (4.00) **--- And ---** **BIO 80** - Integrated Biology: Organisms to Ecosystems (4.00) **BIO 80H** - Integrated Biology: Organisms to Ecosystems Honors (4.00) **--- And ---** **BIO 81H** - Integrated Biology: From DNA to Organisms Honors (4.00) **BIO 80** - Integrated Biology: Organisms to Ecosystems (4.00) **--- And ---** **BIO 81** - Integrated Biology: From DNA to Organisms (4.00)
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)	←	**CHEM 1A** - General Chemistry I (5.00) **--- And ---** **CHEM 1B** - 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)	←	**CS 36** - C Programming (3.00) **--- And ---** **CS 37** - C++ Programming (3.00) **--- And ---** **CS 41** - Data Structures (3.00)

CPSC 253U - Workshop In Unix (1.00) **--- And ---** **CPSC 254** - Software Development with Open Source Systems (3.00)	←	**CIM 161** - Systems and Network Administrator (Linux+) (3.00)

GEOL 101 - Introduction to Geology (3.00) **--- And ---** **GEOL 101L** - Introduction to Geology Laboratory (1.00)	←	**GEOL 1** - Physical Geology (4.00)
GEOL 201 - Earth History (3.00) **--- And ---** **GEOL 201L** - Earth History Supplemental Lab (1.00)	←	**GEOL 2** - Historical Geology (4.00)

MATH 150A - Calculus I (4.00) **--- And ---** **MATH 150B** - Calculus II (4.00)	←	**MATH 3A** - Analytic Geometry and Calculus I (5.00) **--- And ---** **MATH 3B** - Analytic Geometry and Calculus II (5.00) **--- Or ---** **MATH 3AH** - Analytic Geometry and Calculus I Honors (5.00) **--- And ---** **MATH 3BH** - Analytic Geometry and Calculus II Honors (5.00)
MATH 150A - Calculus I (4.00) **--- And ---** **MATH 150B** - Calculus II (4.00) **--- And ---** **MATH 250A** - Calculus III (4.00)	←	**MATH 3A** - Analytic Geometry and Calculus I (5.00) **--- Or ---** **MATH 3AH** - Analytic Geometry and Calculus I Honors (5.00) **MATH 3B** - Analytic Geometry and Calculus II (5.00) **--- Or ---** **MATH 3BH** - Analytic Geometry and Calculus II Honors (5.00) **MATH 4A** - Analytic Geometry and Calculus III (5.00)

PHYS 225 - Fundamental Phys; Mechanics (3.00) **--- And ---** **PHYS 225L** - Fundamental Physics Lab (1.00)	←	**PHYS 4A** - General Physics (4.00)
PHYS 226 - Fund Phys.Elect + Magnetism (3.00) **--- And ---** **PHYS 226L** - Fundamental Physics Lab (1.00)	←	**PHYS 4B** - General Physics (4.00)
PHYS 227 - Fund Phys: Waves, Optics, & Mod Phys (1.00 - 3.00) **--- And ---** **PHYS 227L** - Fundamental Physics Lab (1.00)	←	**PHYS 4C** - General Physics (4.00)

END OF AGREEMENT