Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Fullerton 2022-2023 General Catalog, Semester	From: Moreno 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)	←	**CIS 5** - Programming Concepts and Methodologies I: C++ (4.00)
CPSC 121 - Object-Oriented Programming (3.00)	←	**CIS 17A** - Programming Concepts and Methodologies II: C++ (3.00) **--- Or ---** **CIS 5** - Programming Concepts and Methodologies I: C++ (4.00)
CPSC 131 - Data Structures (3.00)	←	**CIS 17C** - C++ Programming: Data Structures (3.00) **CIS 17A** - Programming Concepts and Methodologies II: C++ (3.00)
CPSC 240 - Computer Organization & Assembly Language (3.00)	←	**CIS 11** - Computer Architecture and Organization: Assembly (3.00)
CPSC 253 - Cybersecurity Foundations and Principles (3.00)	←	**CIS 41D** - Advanced Security Concepts and Practices (3.00)

--- And ---

Select 1 Course(s) from the following

CPSC 223C - C Programming (3.00)	←	No Course Articulated
CPSC 223J - Java Programming (3.00)	←	**CIS 18A** - JAVA Programming: Objects (3.00) **--- Or ---** **CIS 18B** - Java Programming: Advanced Objects (3.00) **--- Or ---** **CIS 18C** - Java Programming: Data Structures (3.00)
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)	←	**MAT 1A** - Calculus I (4.00)
MATH 150B - Calculus II (4.00)	←	**MAT 1B** - Calculus II (4.00)

MATH 170A - Mathematical Structures I (3.00)	←	**CIS 7** - 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)	←	**BIO 60** - Introduction to Molecular and Cellular Biology (5.00) **--- Or ---** **BIO 60H** - Honors Introduction to Molecular and Cellular Biology (5.00)
BIOL 152 - Evolution & Organismal Biology (4.00)	←	**BIO 61** - Introduction to Organismal and Population Biology (Majors) (5.00)

CHEM 120A - General Chemistry (5.00)	←	**CHE 1A** - General Chemistry, I (5.00) **--- Or ---** **CHE 1AH** - Honors General Chemistry, I (5.00)
CHEM 120B - General Chemistry (5.00)	←	**CHE 1B** - General Chemistry, II (5.00) **--- Or ---** **CHE 1BH** - Honors General Chemistry, II (5.00)
CHEM 123 - Chemistry for Engineers (3.00)	←	No Course Articulated
CHEM 125 - Gen Chemistry B Lecture (3.00)	←	**CHE 1B** - General Chemistry, II (5.00)

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)	←	No Course Articulated
GEOL 201L - Earth History Supplemental Lab (1.00)	←	No Course Articulated

MATH 250A - Calculus III (4.00)	←	**MAT 1C** - Calculus III (4.00)
MATH 250B - Intro to Linear Algebra and Diff. Equations (4.00)	←	**MAT 2** - Differential Equations (4.00) **--- And ---** **MAT 3** - 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)	←	**POL 1** - American Politics (3.00) **--- Or ---** **POL 1H** - Honors American Politics (3.00)

ARTICULATION DETAILS

BIOL 101 - Elements of Biology (3.00) **--- And ---** **BIOL 101L** - Elements of Biology Laboratory (1.00)	←	No Course Articulated
BIOL 151 - Cellular & Molecular Biology (4.00) **--- And ---** **BIOL 152** - Evolution & Organismal Biology (4.00)	←	**BIO 60** - Introduction to Molecular and Cellular Biology (5.00) **--- And ---** **BIO 61** - Introduction to Organismal and Population Biology (Majors) (5.00) **--- Or ---** **BIO 60H** - Honors Introduction to Molecular and Cellular Biology (5.00) **--- And ---** **BIO 61** - Introduction to Organismal and Population Biology (Majors) (5.00)

CHEM 120A - General Chemistry (5.00) **--- And ---** **CHEM 120B** - General Chemistry (5.00)	←	**CHE 1A** - General Chemistry, I (5.00) **--- And ---** **CHE 1B** - General Chemistry, II (5.00) **CHE 1AH** - Honors General Chemistry, I (5.00) **--- And ---** **CHE 1BH** - Honors 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)	←	**CIS 5** - Programming Concepts and Methodologies I: C++ (4.00) **--- And ---** **CIS 17A** - Programming Concepts and Methodologies II: C++ (3.00) **--- And ---** **CIS 17C** - C++ Programming: 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)	←	No Course Articulated
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)	←	**MAT 1A** - Calculus I (4.00) **--- And ---** **MAT 1B** - Calculus II (4.00)
MATH 150A - Calculus I (4.00) **--- And ---** **MATH 150B** - Calculus II (4.00) **--- And ---** **MATH 250A** - Calculus III (4.00)	←	**MAT 1A** - Calculus I (4.00) **--- And ---** **MAT 1B** - Calculus II (4.00) **--- And ---** **MAT 1C** - Calculus III (4.00)

PHYS 225 - Fundamental Phys; Mechanics (3.00) **--- And ---** **PHYS 225L** - Fundamental Physics Lab (1.00)	←	**PHY 4A** - Mechanics (4.00)
PHYS 226 - Fund Phys.Elect + Magnetism (3.00) **--- And ---** **PHYS 226L** - Fundamental Physics Lab (1.00)	←	**PHY 4B** - 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)	←	No Course Articulated

END OF AGREEMENT