

Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, San Marcos
2022-2023 General Catalog, Semester

From: San Diego Miramar College
2022-2023 General Catalog, Semester

Computer Science - CS Option

THE ARTICULATION AGREEMENT BELOW IS SUBJECT TO PERIODIC REVISION. PLEASE CONSULT A COUNSELOR EVERY SEMESTER TO OBTAIN CURRENT INFORMATION ABOUT POSSIBLE CHANGES IN THE AGREEMENT.

MINIMUM GRADE OF C

All courses counted toward the major, including Preparation for the Major courses, must be completed with a letter grade of C (2.0) or better. Credit/No Credit is not accepted.

LOWER AND UPPER DIVISION COURSE OPTIONS

The course below, MATH 264, can be used to satisfy a major requirement; an upper division course can also be used to satisfy this requirement.

[*Please see the 2022-2023 CSUSM catalog to view the upper division option within the Requirements for Non-Computer Science Supporting Courses section*](#)

PREPARATION FOR THE MAJOR

CS 111 - Computer Science I (4.00)	←	CISC 192 - C/C++ Programming (4.00) --- Or --- CISC 190 - Java Programming (4.00)
CS 211 - Computer Science II (4.00)	←	CISC 191 - Intermediate Java Programming (4.00)
CS 231 - Assembly Language and Digital Circuits (4.00)	←	CISC 211 - Computer Organization and Assembly Language (4.00)

NON-COMPUTER SCIENCE SUPPORTING COURSES

MATH 160 - Calculus with Applications, I (5.00)	←	MATH 150 - Calculus with Analytic Geometry I (5.00)
MATH 162 - Calculus with Applications, II (4.00)	←	MATH 151 - Calculus with Analytic Geometry II (4.00)
MATH 270 - Basic Discrete Mathematics (3.00)	←	MATH 245 - Discrete Mathematics (3.00)
MATH 242 - Introduction to Statistics (3.00)	←	MATH 119 - Elementary Statistics (3.00)
MATH 264 - Introduction to Linear Algebra (3.00)	←	MATH 254 - Introduction to Linear Algebra (3.00)

Select 8 Unit(s) from the following

BIOL 104 - Principles of Biology-Human Emphasis (4.00)	←	BIOL 107 - General Biology-Lecture and Laboratory (4.00)
BIOL 160 - Microbiology for Health Sciences (4.00)	←	BIOL 205 - General Microbiology (5.00)
BIOL 177 - Intro to Human Anatomy & Physiology for Kinesiology I (4.00)	←	BIOL 230 - Human Anatomy (4.00) --- And --- BIOL 235 - Human Physiology (4.00)
BIOL 178 - Intro to Human Anatomy & Physiology for Kinesiology II (4.00)	←	BIOL 230 - Human Anatomy (4.00) --- And --- BIOL 235 - Human Physiology (4.00)
BIOL 210 - Introduction to Cellular and Molecular Biology (4.00)	←	BIOL 210A - Introduction to the Biological Sciences I (4.00) --- And --- BIOL 210B - Introduction to the Biological Sciences II (4.00)

BIOL 211 - Introduction to Organismal and Population Biology (4.00) ←

BIOL 210A - Introduction to the Biological Sciences I (4.00)

--- And ---

BIOL 210B - Introduction to the Biological Sciences II (4.00)

CHEM 105 - General, Organic, and Biochemistry for Life (4.00) ←

CHEM 130 - Introduction to Organic and Biological Chemistry (3.00)

--- And ---

CHEM 130L - Introduction to Organic and Biological Chemistry Laboratory (1.00)

--- And ---

CHEM 105L - General, Organic, and Biochemistry for Life Laboratory (1.00) ←

CHEM 130 - Introduction to Organic and Biological Chemistry (3.00)

--- And ---

CHEM 130L - Introduction to Organic and Biological Chemistry Laboratory (1.00)

CHEM 150 - General Chemistry (4.00) ←

CHEM 200 - General Chemistry I - Lecture (3.00)

--- And ---

CHEM 200L - General Chemistry I - Laboratory (2.00)

--- And ---

CHEM 150L - General Chemistry Laboratory (1.00) ←

CHEM 200 - General Chemistry I - Lecture (3.00)

--- And ---

CHEM 200L - General Chemistry I - Laboratory (2.00)

CHEM 160 - General Chemistry II (3.00) ←

CHEM 201 - General Chemistry II - Lecture (3.00)

--- And ---

CHEM 175 - General Chemistry Laboratory II (1.00) ←

CHEM 201 - General Chemistry II - Lecture (3.00)

--- And ---

CHEM 201L - General Chemistry II - Laboratory (2.00)

CHEM 201 - Organic Chemistry (3.00) ←

CHEM 231 - Organic Chemistry I - Lecture (3.00)

--- And ---

CHEM 231L - Organic Chemistry I - Laboratory (2.00)

--- And ---

CHEM 201L - Organic Chemistry Laboratory (2.00) ←

CHEM 231 - Organic Chemistry I - Lecture (3.00)

--- And ---

CHEM 231L - Organic Chemistry I - Laboratory (2.00)

CHEM 202 - Organic Chemistry (3.00) ←

CHEM 233 - Organic Chemistry II - Lecture (3.00)

--- And ---

CHEM 202L - Organic Chemistry Laboratory (2.00) ←

CHEM 233 - Organic Chemistry II - Lecture (3.00)

--- And ---

CHEM 233L - Organic Chemistry II - Laboratory (2.00)

PHYS 101 - Introduction to Physics I (4.00)	← PHYS 125 - General Physics (5.00)
PHYS 102 - Introduction to Physics II (4.00)	← PHYS 126 - General Physics II (5.00)
PHYS 201 - Physics of Mechanics and Sound (4.00)	← <div> PHYS 195 - Mechanics (5.00) <div>--- And ---</div> PHYS 196 - Electricity and Magnetism (5.00) <div>--- And ---</div> PHYS 197 - Waves, Optics and Modern Physics (5.00) </div>
PHYS 202 - Physics of Electromagnetism and Optics (4.00)	← <div> PHYS 195 - Mechanics (5.00) <div>--- And ---</div> PHYS 196 - Electricity and Magnetism (5.00) <div>--- And ---</div> PHYS 197 - Waves, Optics and Modern Physics (5.00) </div>
PHYS 205 - Physics for the Biological Sciences I (4.00)	← <div> PHYS 180A - General Physics I (4.00) <div>--- And ---</div> PHYS 181A - General Physics Laboratory I (1.00) </div>
PHYS 206 - Physics for the Biological Sciences II (4.00)	← <div> PHYS 180B - General Physics II (4.00) <div>--- And ---</div> PHYS 181B - General Physics Laboratory II (1.00) </div>

END OF AGREEMENT