

# Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, San Marcos  
2021-2022 General Catalog, Semester

From: Southwestern College  
2021-2022 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)	←	MATH 130 - Introduction to Computer Programming (4.00)
CS 211 - Computer Science II (4.00)	←	MATH 140 - Data Structures and Algorithms (4.00)
CS 231 - Assembly Language and Digital Circuits (4.00)	←	MATH 230 - Computer Organization and Architecture (4.00)

### NON-COMPUTER SCIENCE SUPPORTING COURSES

MATH 160 - Calculus with Applications, I (5.00)	←	MATH 250 - Analytic Geometry and Calculus I (5.00)
MATH 162 - Calculus with Applications, II (4.00)	←	MATH 251 - Analytic Geometry and Calculus II (4.00)
MATH 270 - Basic Discrete Mathematics (3.00)	←	MATH 265 - Discrete Structures (3.00)
MATH 242 - Introduction to Statistics (3.00)	←	MATH 119 - Elementary Statistics (4.00)
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)	←	No Course Articulated
BIOL 160 - Microbiology for Health Sciences (4.00)	←	No Course Articulated
BIOL 177 - Intro to Human Anatomy & Physiology for Kinesiology I (4.00)	←	<div>BIOL 260 - Human Anatomy (4.00)</div> <div>--- And ---</div> <div>BIOL 261 - Principles of Human Physiology (4.00)</div>
BIOL 178 - Intro to Human Anatomy & Physiology for Kinesiology II (4.00)	←	<div>BIOL 260 - Human Anatomy (4.00)</div> <div>--- And ---</div> <div>BIOL 261 - Principles of Human Physiology (4.00)</div>
BIOL 210 - Introduction to Cellular and Molecular Biology (4.00)	←	<div>BIOL 210 - General Zoology (4.00)</div> <div>--- And ---</div> <div>BIOL 211 - Introduction to Cell and Molecular Biology (4.00)</div> <div>--- And ---</div> <div>BIOL 212 - Biology of Plants (4.00)</div>

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



**BIOL 210** - General Zoology (4.00)

--- And ---

**BIOL 211** - Introduction to Cell and Molecular Biology (4.00)

--- And ---

**BIOL 212** - Biology of Plants (4.00)

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



**CHEM 110** - Elementary Organic and Biological Chemistry (4.00)

--- And ---

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



**CHEM 110** - Elementary Organic and Biological Chemistry (4.00)

**CHEM 150** - General Chemistry (4.00)



**CHEM 200** - General Chemistry I (5.00)

--- And ---

**CHEM 150L** - General Chemistry Laboratory (1.00)



**CHEM 200** - General Chemistry I (5.00)

**CHEM 160** - General Chemistry II (3.00)



**CHEM 210** - General Chemistry II (5.00)

--- And ---

**CHEM 175** - General Chemistry Laboratory II (1.00)



**CHEM 210** - General Chemistry II (5.00)

**CHEM 201** - Organic Chemistry (3.00)



**CHEM 240** - Organic Chemistry I (5.00)

--- And ---

**CHEM 201L** - Organic Chemistry Laboratory (2.00)



**CHEM 240** - Organic Chemistry I (5.00)

**CHEM 202** - Organic Chemistry (3.00)



**CHEM 242** - Organic Chemistry II (5.00)

--- And ---

**CHEM 202L** - Organic Chemistry Laboratory (2.00)



**CHEM 242** - Organic Chemistry II (5.00)

**PHYS 101** - Introduction to Physics I (4.00)



**PHYS 150** - Fundamentals of Physics I (3.00)

--- And ---

**PHYS 151** - Fundamentals of Physics Laboratory I (1.00)

**PHYS 102** - Introduction to Physics II (4.00)



**PHYS 152** - Fundamentals of Physics II (3.00)

--- And ---

**PHYS 153** - Fundamentals of Physics Laboratory II (1.00)

**PHYS 201** - Physics of Mechanics and Sound (4.00)



**PHYS 270** - Principles of Physics I (3.00)

--- And ---

**PHYS 271** - Principles of Physics Laboratory I (1.00)

--- And ---

**PHYS 272** - Principles of Physics II (3.00)

**PHYS 202** - Physics of Electromagnetism and Optics (4.00)



**PHYS 270** - Principles of Physics I (3.00)

--- And ---

**PHYS 271** - Principles of Physics Laboratory I (1.00)

--- And ---

**PHYS 272** - Principles of Physics II (3.00)

**PHYS 205** - Physics for the Biological Sciences I (4.00)



**PHYS 150** - Fundamentals of Physics I (3.00)

--- And ---

**PHYS 151** - Fundamentals of Physics Laboratory I (1.00)

--- Or ---

**PHYS 170** - College Physics I (3.00)

--- And ---

**PHYS 171** - College Physics Laboratory I (1.00)

--- And ---

**PHYS 172** - College Physics II (3.00)

--- And ---

**PHYS 173** - College Physics Laboratory II (1.00)

--- And ---

**PHYS 174** - College Physics III (3.00)

--- And ---

**PHYS 175** - College Physics Laboratory III (1.00)

**PHYS 206** - Physics for the Biological Sciences II (4.00)



**PHYS 152** - Fundamentals of Physics II (3.00)

--- And ---

**PHYS 153** - Fundamentals of Physics Laboratory II (1.00)

--- Or ---

**PHYS 170** - College Physics I (3.00)

--- And ---

**PHYS 171** - College Physics Laboratory I (1.00)

--- And ---

**PHYS 172** - College Physics II (3.00)

--- And ---

**PHYS 173** - College Physics Laboratory II (1.00)

--- And ---

**PHYS 174** - College Physics III (3.00)

--- And ---

**PHYS 175** - College Physics Laboratory III (1.00)

**END OF AGREEMENT**