Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: California State University, Bakersfield 2022-2023 General Catalog, Semester From: Rio Hondo College 2022-2023 General Catalog, Semester

Computer Science

GENERAL INFORMATION

This articulation agreement displays lower-division course requirements specific to the major. Students should always contact an academic advisor about degree requirements for their baccalaureate major.

Helpful Resources

- CSUB Catalog
- Transfer Admission Requirements
- Academic Advising Student Centers

ABOUT THE MAJOR

Computer Science is a constantly evolving discipline. To quote the Association for Computing Machinery, "Computer Science is not simply concerned with the design of computing devices-nor is it just the art of numerical calculation. Computer Science is concerned with information in much the same sense that Physics is concerned with energy, it is devoted to the representation, storage, manipulation, and presentation of information in an environment permitting automatic information systems."

The Computer Science major at CSUB has three pathways that lead to a B.S. in Computer Science:

- Traditional Computer Science program follows the guidelines recommended by the Association for Computing Machinery (ACM) and the Accreditation Board for Engineering and Technology (ABET).
- Computer Information Systems concentration is intended for training application programmers or for those who wish to apply computer science in another discipline.
- Information Security concentration is intended for students who wish to pursue a career in information assurance and security, either with government agencies
 or with industry. Students in the three pathways will take different advanced courses of their choice. A Computer Science minor is also offered.

The Computer and Electrical Engineering and Computer Science Department moved into a new building in the Fall of 2008. The department administers its own local area network which includes multiple Unix/Linux servers, two software programming labs, a walk-in lab/tutoring center, one advanced workstation lab, an isolated network lab, an Al/visualization lab, a DSP/communications lab, one digital electronics hardware lab, a power systems/electronics lab, and a robotics/control systems lab. There is also a departmental library/major study room available to students.

An important goal of the department is to enable students to work much more closely with faculty than they would be able to at larger universities. A detailed description of student learning goals and objectives can be found at https://www.cs.csub.edu/abet/.

For additional information, visit the Department of Computer & Electrical Engineering and Computer Science.

IMPORTANT NOTE

A modification to the standard GE program has been approved that allows the possibility of satisfying some GE requirements through the major. Please see the Computer Science General Education Courses and Notes in the **CSUB catalog** for further information.

MAJOR IN COMPUTER SCIENCE

All courses in the	nis section are required
CMPS 2010 - Programming I: Programming Fundamentals (4.00)	← No Course Articulated
CMPS 2020 - Programming II: Data Structures and Algorithms (4.00)	← No Course Articulated
CMPS 2120 - Discrete Structures (4.00)	← No Course Articulated
CMPS 2240 - Computer Architecture I: Assembly Language Programming (4.00)	← No Course Articulated

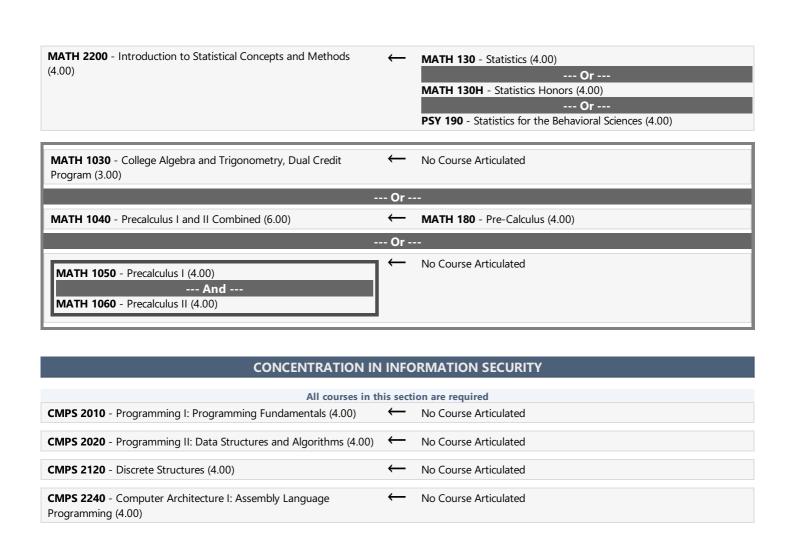
	MATH 2310 - Single Variable Calculus I for Engineers (4.00)	\leftarrow	No Course Articulated
ı		Or -	
ı	MATH 2510 - Single Variable Calculus I (4.00)	\leftarrow	MATH 190 - Calculus I (4.00)
ı			Or
			MATH 190H - Calculus I Honors (4.00)

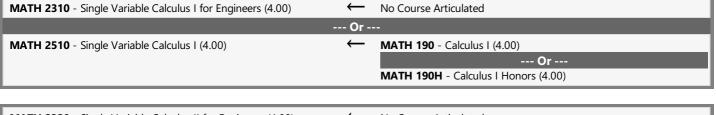
MATH 2320 - Single Variable Calculus II for Engineers (4.00)	← No Course Articulated		
Or			
MATH 2520 - Single Variable Calculus II (4.00)	← MATH 191 - Calculus II (4.00)		
PHYS 2210 - Calculus-Based Physics I (4.00)	← PHY 211 - Physics for Scientists and Engineers - I (4.00)		
PHYS 2220 - Calculus-Based Physics II (4.00)	← PHY 213 - Physics for Scientists and Engineers-III (4.00)		

	rse(s) from the following
BIOL 1009 - Perspectives in Biology (3.00)	← No Course Articulated Or
BIOL 1039 - Principles of Ecology (3.00)	← No Course Articulated
	Or
BIOL 2010 - Introductory Biology - Cells (4.00)	 ← BIOL 200 - Principles of Biology 1 (Molecular and Cellular Biology) (5.00)
	Course cannot be dual counted
	Or
CHEM 1000 - Foundations of Chemistry (3.00)	← CHEM 130 - General Chemistry I (5.00)
	Or
GEOL 2010 - Physical Geology (4.00)	GEOL 150 - Physical Geology (3.00) And
	GEOL 151 - Physical Geology Laboratory (1.00)
	Or
MATH 2200 - Introduction to Statistical Concepts and Methods (4.00)	← MATH 130 - Statistics (4.00) Or
	MATH 130H - Statistics Honors (4.00) Or
	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00)
	MATH 130H - Statistics Honors (4.00) Or
MATH 2533 - Multivariable and Vector Calculus (4.00)	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00)
MATH 2533 - Multivariable and Vector Calculus (4.00) MATH 2540 - Ordinary Differential Equations (4.00)	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00) Or MATH 250 - Calculus III (4.00)
	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00) Or MATH 250 - Calculus III (4.00) Or
	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00) Or MATH 250 - Calculus III (4.00) Or MATH 270 - Differential Equations (4.00)
MATH 2540 - Ordinary Differential Equations (4.00)	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00) Or MATH 250 - Calculus III (4.00) Or MATH 270 - Differential Equations (4.00) Or
MATH 2540 - Ordinary Differential Equations (4.00)	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00) Or ← MATH 250 - Calculus III (4.00) Or ← MATH 270 - Differential Equations (4.00) Or ← MATH 260 - Linear Algebra (4.00)
MATH 2540 - Ordinary Differential Equations (4.00) MATH 2610 - Linear Algebra I (4.00)	MATH 130H - Statistics Honors (4.00) Or PSY 190 - Statistics for the Behavioral Sciences (4.00) Or MATH 250 - Calculus III (4.00) Or MATH 270 - Differential Equations (4.00) Or MATH 260 - Linear Algebra (4.00)

CONCENTRATION IN COMPUTER INFORMATION SYSTEMS

All courses in this section are required				
CMPS 2010 - Programming I: Programming Fundamentals (4.00)	← No Course Articulated			
CMPS 2020 - Programming II: Data Structures and Algorithms (4.00)	← No Course Articulated			
CMPS 2120 - Discrete Structures (4.00)	← No Course Articulated			
CMPS 2680 - Web Programming I (3.00)	← No Course Articulated			





MATH 2320 - Single Variable Calculus II for Engineers (4.00)	← No Course Articulated	
Or		
MATH 2520 - Single Variable Calculus II (4.00)	← MATH 191 - Calculus II (4.00)	

END OF AGREEMENT