# **Articulation Agreement by Major**

Effective during the 2022-2023 Academic Year

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

From: Lake Tahoe Community College 2022-2023 General Catalog, Quarter

# **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

Programming (4.00)

- 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/.

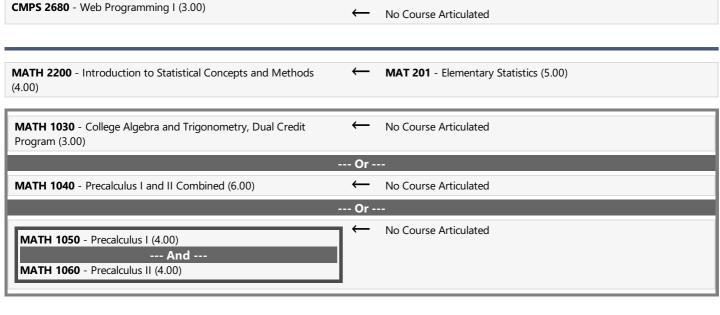
For additional information, visit the Department of Computer & Electrical Engineering and Computer Science.

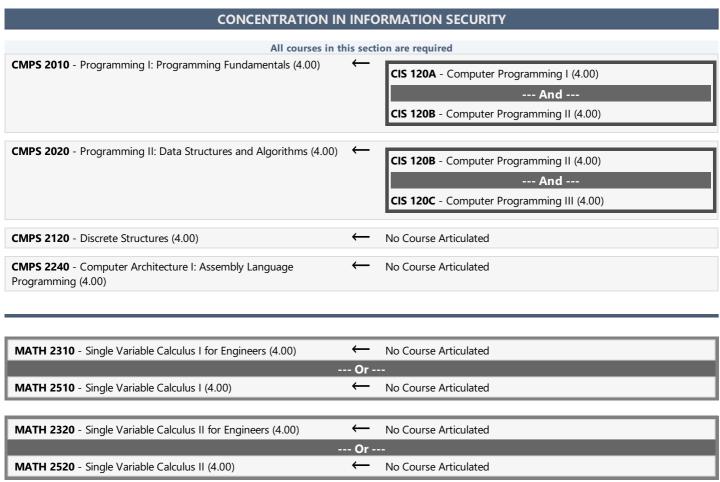
## **IMPORTANT NOTE**

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 this section are required CMPS 2010 - Programming I: Programming Fundamentals (4.00) --- And -- CIS 120A - Computer Programming I (4.00) --- And -- CIS 120B - Computer Programming II (4.00) --- And -- CIS 120B - Computer Programming II (4.00) --- And -- CIS 120C - Computer Programming II (4.00) --- And -- CIS 120C - Computer Programming III (4.00) --- And -- CIS 120C - Computer Programming III (4.00) --- And -- CIS 120C - Computer Programming III (4.00) --- And -- CIS 120C - Computer Programming III (4.00)

MATH 2310 - Single Variable Calculus I for Engineers (4.00)	← No Course Articulated
Or	
MATH 2510 - Single Variable Calculus I (4.00)	← 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)	← No Course Articulated
PHYS 2210 - Calculus-Based Physics I (4.00)	← No Course Articulated
PHYS 2220 - Calculus-Based Physics II (4.00)	← No Course Articulated
Timb 2220 Calculus Based Hilysies II (1.00)	110 Course / Wilculated
Select 1 Course	(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)	← BIO 101 - Principles of Biology I (5.00)
	Or
CHEM 1000 - Foundations of Chemistry (3.00)	CHM 101 - General Chemistry I (5.75)
-	Or
GEOL 2010 - Physical Geology (4.00)	← GEL 102 - Physical Geology (5.00)
Or	
MATH 2200 - Introduction to Statistical Concepts and Methods	← MAT 201 - Elementary Statistics (5.00)
(4.00)	
Or	
MATH 2533 - Multivariable and Vector Calculus (4.00)	← No Course Articulated
Or	
MATH 2540 - Ordinary Differential Equations (4.00)	← MAT 204 - Differential Equations (5.00)
Or	
<b>MATH 2610</b> - Linear Algebra I (4.00)	← MAT 203 - Linear Algebra (5.00)
	Or
PHYS 2230 - Calculus-Based Physics III (4.00)	Or
SCI 1409 - Introduction to Scientific Thinking (3.00)	← No Course Articulated
CONCENTRATION IN COMPUTER INFORMATION SYSTEMS	
All courses in the	his section are required
CMPS 2010 - Programming I: Programming Fundamentals (4.00)	←
	CIS 120A - Computer Programming I (4.00)
	And
	CIS 120B - Computer Programming II (4.00)
CMDS 2020 Programming III Data Structures and Algorithms (4.00)	<del>-</del>
CMPS 2020 - Programming II: Data Structures and Algorithms (4.00)	CIS 120B - Computer Programming II (4.00)
	And
	CIS 120C - Computer Programming III (4.00)





## **END OF AGREEMENT**