

# COMPUTER SCIENCE MINOR

Natural Sciences, Mathematics, and Engineering (nsme) (<https://catalog.csub.edu/general-information/csub-information/school-natural-sciences-mathematics-engineering/>)

Department of Computer and Electrical Engineering and Computer Science (<https://catalog.csub.edu/general-information/csub-information/school-natural-sciences-mathematics-engineering/department-computer-electrical-engineering-computer-science/>)

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[www.cs.csubak.edu](http://www.cs.csubak.edu) (<http://www.cs.csubak.edu>)

Program Maps for Natural Sciences, Mathematics, and Engineering (<https://programmmap.csub.edu/academics/interest-clusters/4e942a6e-b8e4-4b60-a1ae-334235acc581/>)

## Program Requirements

A Minor in Computer Science will require the student to take a total of at least 16 units of 2000-level or higher computer science course work as well as satisfy the following additional requirements:

Code	Title	Units
<b>Minor Requirements</b>		
CMPS 2020	Programming II: Data Structures and Algorithms <sup>1</sup>	4
Select one of the following:		4
CMPS 2120	Discrete Structures <sup>2</sup>	
CMPS 2240	Computer Architecture I: Assembly Language Programming	
CMPS 2650	Linux Environment and Administration	
CMPS 2680	Web Programming I: Client -side Web Programming	
<i>Upper Division Course Work</i>		
Select at least 8 units of upper division course work <sup>3</sup>		8
<b>Total Units</b>		<b>16</b>

<sup>1</sup> Which requires CMPS 2010 Programming I: Programming Fundamentals or the equivalent with a grade of C- or better and one pre-calculus or calculus course with a grade of C- or better

<sup>2</sup> MATH 3000 Mathematical Foundations may be substituted for CMPS 2120 Discrete Structures

<sup>3</sup> At least 8 units of upper division course work in computer science (normally two-three courses) chosen with the help of a computer science advisor. MATH 3300 Numerical Analysis, MATH 4300 Applied Cryptography, ECE 4470 Computer Vision, and ECE 4550 Applied Machine Learning may be substituted for upper division course work, since they are cross-listed with CMPS 3300 Numerical Analysis, CMPS 4300 Applied Cryptography, CMPS 4470 Computer Vision, and CMPS 4550 Applied Machine Learning respectively.