**Senate Policy 25-02**
**B.S. Completion Degree in Computer Science**

Motion: To approve the B.S. Completion Degree in Computer Science

Passed at the October 21, 2025 meeting of the Academic Senate

Approvals:

Christina Smith (Dec 17, 2025 17:00:28 PST) 12/17/2025

Christina Smith, PhD
Chair, Academic Senate

Date

12/23/2025

Sue Andrzejewski, PhD
Interim President

Date

# Computer Science, B.S. - 120 units

## H. 2024-2025: Completion Program Proposal

## General Catalog Information

**ALL submissions must meet the Program Implementation Timelines outlined in the Academic Programs Development Page.**

**Select *"Program"* below**, as it's only valid option

**Program Type:*** (•) Program
( ) Shared Core

# **Instructions: read before beginning**

**Note: For more detailed instructions, go to Resources.**

**1. Before beginning, do an Advanced Search for this program in current CI University Catalog. Doing so should yield useful information, such as required courses and areas which will be needed to complete curriculum schema portion of this form. For step-by-step instruction, go to Resources.**

**2. Import curriculum data from current Catalog by clicking on the Import icon in top left corner. Then, click "Save." Curriculog will generate a comment showing all fields that were imported, but no further action is required for this step.**

**3. Make proposed changes and as you add/modify information to this proposal "Save all Changes" as you move along.**

**Note: information provided through this modification/inactivation is vital for the entire campus to be able to effectively implement it; thus, all fields must be completed before you approve modification/inactivation; if this does not happen, be aware modification/inactivation may be returned to you for completion from any step in approval process, before it's allowed to move forward**

**4. Validate and launch proposal by clicking on the Launch and Validate icon in top left corner. Curriculog will state: This proposal has moved on. This proposal moved on in the workflow. This statement means that the proposal is now visible to all Curriculog users. You, as the proposer, still need to MAKE your DECISION in order to send this proposal to Program Chair (next step in process).**

**5. MAKE your DECISION, approve/reject/hold/suspend/custom route the proposal by clicking on the Decision icon Decisions in the Toolbox on the right side of the form. Once approved, proposal will move to next step in process.**

**Every effort will be made to include your proposal in the earliest possible catalog, and inclusion is based on the timeliness of the approval process and is not guaranteed.**

**Choose program that has/will have authority over this degree/minor/cert./credential/etc.**

**Program Owner:*** Computer Science

**Where is this program offered?*** ○ State Supported ◉ Self Supported = Extended University

**Program Name:*** Computer Science, B.S. - 120 units

**Program Type:*** Major(s)

**Degree Type:*** Bachelor of Science

**Status:*** (•) Active-Visible
( ) Inactive-Hidden

**Choose which Local Curriculum Committee program will be reviewed by. If unsure, click HERE for list of Local Curriculum Committees and which Programs they review.**

**Local Curriculum Committee:*** Math & Sciences Local Curriculum Committee

**This form would is used for:**
**Proposing a new degree or modifying a current one as/to a completion program.**

**List detailed summary of changes to program here in numerical order. It'd likely be helpful to place changes in order of most significant to least significant, or in order changes occur when viewing program in current catalog.**

**Summary of Changes:***

There are no substantial changes to the curriculum leading to the degree. This is a new program offered through self-support because it is fully online and aimed at working professionals. This distance-learning completion program aligns to the existing state-side B.S. in Computer Science curriculum.

The program structure is online with two 8-week course sessions during fall and spring semester, and 12-week summer sessions. The 8-week structure of classes has been shown successful (see here and here), allows for better focus, a flexible schedule and a shorter time frame, three items that adult learners prefer, and that are now standard in distance learning programs. Enrollment occurs each fall and spring semester. The flowchart is intended to provide a visual pathway and information about pre-requisites for admission and course progression to degree completion.

Curriculog and/or roadmaps will show specific semester or course pathway and structure.

**Provide justification(s) for proposed change(s) listed in field above**

**Justification(s):*** 

**Advantages**

Practical, Quality Education: Receive education in up-to-the-minute theory and real world applications. Faculty members are active in computer science and engineering research and education.

Student Convenience: Perfect for busy schedules. This program is 100% online. Courses are offered asynchronous online 8-week course sessions during the Spring/Fall and 12-week session in summer within a structured program that ensures consistency and maximizes success.

Career Focused: Acquire the knowledge, skills and attitudes you need to further your career in computing and technology.

Affordability: Financial aid is available.

**Industry Advantages**

- There are currently over 6 million Californians without a college degree.
- There is a pressing need to serve adult learners, many of whom work full-time and are not able to attend campus courses. An online program provides the flexibility for career advancement.
- Hanover Research identified only eight of nine benchmarked online computer science programs that offer fully asynchronous course delivery, with only the program at California State University-Monterey Bay includes a synchronous component. Students begin each course with a single-session orientation. (see Hanover Research Report)
- BLS identifes software developers, computer and information systems managers and data scientists as fields with high growth over the next decade, with median incomes of 132,270, 169,510 and 108,020 respectively (see bls.gov).
- Region, there are over 8,000 job openings in Ventura County, 15,000 within CA and 59,000 nationally (see Dice.com).

# Follow steps below to modify Curriculum Schema found in Prospective Curriculum section:

**Click here for the detailed step-by-step instructions on how to create the curriculum schema.**
**First, ALL courses involved in Program Modification must be added (new courses) and/or imported (existing courses) under the View Curriculum Courses tab. Second, under the View Curriculum Schema tab modify by editing cores (e.g.: Requirements, Required Core, Electives, etc.) with added or imported courses.**

### Step 1. Adding and/or Importing Courses

**Click on "View Curriculum Schema" tab. There are two options to add courses to Program Modification: "Add Course" or "Import Course." For new courses in Curriculog Approval Process, click on "Add Course." A dialog box will open asking for prefix, course number, and course title. Use exact prefix, course number, and course title as used on New Course Proposal Form. All new courses must have New Course Proposal Form submitted in Curriculog prior to completing this step. For courses already in the Catalog, click on "Import Course" and find needed courses.**

### Step 2. Editing Curriculum Schema

**Click on "View Curriculum Schema" tab. Then, click on Add Core or Import Core. Next, click on New Core, complete Title field for core (e.g.: Electives), and Description field if applicable. Click on Add Courses. This will bring up course list created in Step 1. Select courses you wish to add and click "Add Course." To remove courses, click on icon and proceed.**

### Step 3. Preview Program as it will show in University Catalog

**To see what the program will look like when exported to the Univesity Catalog click on the Preview Curriculum icon**

**Ensure units in this field correspond with any changes made to program curriculum. For example, if total units or individual section units change, ensure those changes are accurately reflected here. Majors cannot exceed 120 units, with the exception of Mechatronics Engineering, B.S.**

**Summary of Units:***

## Summary of Units:

| | |
|---|---|
| Lower Division Major Requirements | 36-39 |
| Upper Division Major Requirements | 26 |
| Major Elective Requirements | 12 |
| General Education | 36 |
| Free Electives and other Graduation Requirements | 7-10 |
| **Total Units** | **120** |

## Special Grade Requirement

All courses must be completed with a C- or better to apply toward the Computer Science major.

**Prospective Curriculum:***

## Lower Division Requirements - 36-39 units

| | |
|---|---|
| **COMP 150 Object-Oriented Programming** | **4** |
| **COMP 151 Data Structures And Program Design** | **4** |
| **COMP 162 Computer Architecture and Assembly Language** | **3** |
| **COMP 232 Programming Languages** | **3** |
| **COMP 262 Computer Organization and Architecture** | **3** |
| **MATH 150 Calculus I** | **4** |
| **MATH 151 Calculus II** | **4** |
| **MATH 240 Linear Algebra** | **3** |
| **[After]** | |
| **[Before]Complete one series from the following:** | |
| **PHYS 200 General Physics I** | **4** |
| **PHYS 201 General Physics II** | **4** |

## or

| | |
|---|---|
| **BIOL 200 Principles of Organismal and Population Biology** | **4** |
| **BIOL 212 Principles of Neurobiology** | **3** |
| **PHYS 200 General Physics I** | **4** |

## Upper Division Requirements - 26 units

| | |
|---|---|
| **COMP 350 Introduction To Software Engineering** | **3** |
| **COMP 362 Operating Systems** | **4** |
| **COMP 454 Automata, Languages, and Computation** | **3** |
| **COMP 491 Capstone Preparation** | **1** |
| **COMP 499 Capstone Project** | **3** |
| **MATH 300 Discrete Mathematics** | **3** |
| **MATH 352 Probability and Statistics** | **3** |
| **MATH 354 Analysis of Algorithms** | **3** |
| **[After]** | |
| **[Before]Complete one GWAR course from the following:** | |
| **COMP 447 Societal Issues in Computing** | **3** |
| **COMP 449 Human-Computer Interaction** | **3** |

## Major Electives - 12 units

| [Before]Complete 12 units from the following: | |
|---|---|
| COMP 345 Digital Image Processing | 3 |
| COMP 347 Online Communication and Society | 3 |
| COMP 351 Distributed Computing | 3 |
| COMP 405 Mobile Application Development | 3 |
| COMP 420 Database Theory and Design | 3 |
| COMP 424 Computer System Security | 3 |
| COMP 425 Computer Game Programming | 3 |
| COMP 429 Computer Networks | 3 |
| COMP 436 Computational Biology | 4 |
| COMP 445 Image Analysis and Pattern Recognition | 3 |
| COMP 451 Advanced Object-Oriented Programming | 3 |
| COMP 452 Computational Bioinformatics | 4 |
| COMP 462 Embedded Systems | 3 |
| COMP 464 Computer Graphic Systems And Design I | 3 |
| COMP 469 Introduction To Artificial Intelligence | 3 |
| COMP 470 Mobile Robotics | 3 |
| COMP 478 Introduction To Data Mining | 3 |
| COMP 490 Topics in Computer Science | 3 |
| COMP 492 Internship | 1 - 3 |
| COMP 494 Independent Research | 1-3 |
| COMP 497 Directed Studies | 3 |
| MATH 429 Operations Research | 3 |
| MATH 448 Scientific Computing | 3 |

## General Education and Graduation Requirements - B.S.

To graduate, students must complete a minimum of **120 units** (**27 units** must be upper division), including the following General Education Requirements (GE) and Graduation Requirements not met within the major:

American Institutions Requirements

GE Requirements

General Education Area A-F Requirements

Upper Division General Education (UDGE) Requirements (minimum of 3 units in each Area: UDGE-B, UDGE-C, and UDGE-D)

Graduation Writing Assessment Requirement (C- or better grade)
Language Requirement (C- or better grade)

Multicultural Perspectives (MP) Requirement
Free electives as needed to meet minimum units for graduation

**Provide the catalog language with program information below. Language entered here will be published to the Catalog and it will be visble to all students.**

- What kind of program
- Admission requirements
- Mode of Instruction
- Contact information

**Program Information:***

The Bachelor of Science in Computer Science Completion degree at Channel Islands offers latest cutting edge education for various industrial and applied fields. The program will prepare students for careers in high-tech, computer and Internet driven industries, where interdisciplinary, dynamic and innovative professionals trained in latest technologies are increasingly sought. Students will be given a strong background in computer hardware and software, as well as a substantial amount of "hands-on" experience. The program will stress interdisciplinary applications in other sciences and business.

Students graduating from the Computer Science program will be able to:

- Demonstrate critical thinking and problem solving skills by identifying, evaluating, analyzing and presenting fundamental software solutions and their applications.
- Demonstrate the knowledge of current computing practices and broad technology use in industry and society, including a working knowledge of software development techniques.
- Be cognizant of emerging new technologies and industrial practices connected to the computer industry.
- Demonstrate communication, research and cooperation skills by working effectively with others in interdisciplinary group settings - both inside and outside the classroom.
- Demonstrate a sense of exploration that enables them to pursue rewarding careers in high-tech and bio-tech industries with life-learning.

**CS Completion Program Pre-Requisites**

- Admissions application at CalState Apply online & $70.00 application fee
- GPA of 2.0 or higher
- Transfer a minimum of 60 semester/90 quarter units for admission
- (Students must transfer 70 lower-division semesters/105 quarter units to complete the degree)
- Golden Four (A1, A2, A3, B4) classes completed with grades of “C-” or better
- Good standing (i.e. eligible to re-enroll) at the last institution attended

**CS Program Specific Requirements**

- COMP 105 Introduction to Programming
- COMP 150 Object-Oriented Programming
- COMP 151 Data Structures and Program Design
- COMP 162 Comp Arch and Assembly
- MATH 150 Calculus I
- MATH 151 Calculus II
- MATH 230 Discrete Mathematics *Course can be substituted with A3 Critical Thinking Course

* To meet General Education and Graduation Requirements, students must complete GE Areas A-F, the CSU American Institutions Requirement and the CSUCI’s Language Requirement, which are not offered as part of this degree completion program.

Advantages

Practical, Quality Education: Receive education in up-to-the-minute theory and real world applications. Faculty members are active in computer science and engineering research and education.

Student Convenience: Perfect for busy schedules. This program is 100% online. Courses are offered asynchronous online 8-week course sessions during the Spring/Fall and 12-week session in summer within a structured program that ensures consistency and maximizes success.

Career Focused: Acquire the knowledge, skills and attitudes you need to further your career in computing and technology.

Affordability: Financial aid is available.

**Upload Program Flowchart and Roadmaps (four-year and two-year) by navigating to Proposal Toolbox at top right of form and clicking on plus sign icon.**

| | |
|---|---|
| **Program Flowchart has been attached:*** | ☑ Yes |
| **Program Roadmaps have been attached:*** | ☑ Yes |
| **Notes (optional):** | |
| **DO NOT USE** | No DO NOT USE |

# Steps for Computer Science, B.S. - 120 units

## Originator

Status: *Approved*

### Participants

Brian Thoms 1/27/2025 3:10 PM

## Program Chair

Status: *Approved*

### Participants

Brian Thoms 3/18/2025 5:51 PM

## Dean

Status: *Approved*

### Participants

Philip Hampton 3/31/2025 12:15 PM

## Extended University Dean

Status: *Approved*

### Participants

Jill Leafstedt 4/2/2025 12:50 PM

## Mathematics & Sciences Local Curriculum Committee

Status: *Approved*

### Participants

▲ **Mathematics & Sciences Local Curriculum Committee**

Ruben Alarcon * 4/21/2025 12:42 PM

## Academic Policy & Planning Committee

Status: *Approved*

### Participants

Ruben Alarcon 5/6/2025 1:37 PM

Cynthia Sherman 5/6/2025 4:46 PM

## Academic Programs Technical Review

Status: *Approved*

### Participants

Kristen Dobson 8/5/2025 11:31 AM

## Academic Programs Catalog Review

Status: *Approved*

### Participants

Taryn McHugh 8/18/2025 2:58 PM

Andrea Skinner 8/12/2025 3:40 PM

## AVP for Academic Programs and Planning

Status: *Approved*

### Participants

Francelina Neto 8/27/2025 8:50 AM

## Senate

Status: *Approved*

### Participants

Christina Smith 10/27/2025 1:09 PM

## Provost

Status: *Approved*

### Participants

Jessica Lavariega Monforti 10/28/2025 9:23 AM

## President

Status: *Approved*

### Participants

Susan Andrzejewski 11/7/2025 9:16 AM