

Bachelor of Science in Computer Science

The purpose of the Degree Roadmap is to serve as a guide for planning one's academic coursework required to complete a specific major semester by semester. Before enrolling, you can use the Degree Roadmap to get a feel for the courses you'll take in this major. After enrolling, refer to the University Catalog, Class Schedule and consult with your academic advisor each semester for advisement to specify which courses you will take to fulfill each graduation

requirement and are progressing toward graduation in a timely manner as possible. **The Degree Roadmap is subject to change and is NOT to be considered a replacement for advisement with an academic advisor.** See *University Catalog* for information on the Graduate Writing Assessment Requirement (GWAR). *See reverse side for General Education (GE) course requirements. **A minimum of 120 units are required for completion of degree.

Upper Division Transfer Requirements

- Complete a minimum 60 transferable semester (or 90 quarter) units with a 2.0 GPA (nonresidents require 2.4 GPA) and be in good standing at the last college or university attended. Within those 60 semester units, complete a minimum of 30 semester (or 45 quarter) units of General Education courses with a 2.0 GPA with a "C" grade or better, including Oral Communication, Written Communication (English Composition), Logic/Critical Thinking and Mathematics/Quantitative Reasoning.
- Complete and submit a CSU Application for Admission by the posted deadline through CSU Mentor at CSUMENTOR.EDU.
- Submit official transcripts from all colleges attended.
- Students applying to an impacted program may have to meet supplementary requirements.
- The following degree roadmap assumes you have junior standing (60 units) and have completed all lower division General Education Courses.
- Minimum of 120 units are required for completion of degree, 30 of which must be taken in residence at CSUDH.

First Semester		
Course		Units
CSC 321	Programming Languages	3
MAT 281	Discrete Mathematics	3
MAT 321	Probability and Statistics	3
GE F2*	Studies in the Natural Sciences area	3
GWAR	ENG 350 or GWE	0-3

Second Semester		
Course		Units
CSC 301	Computer and Society	3
CSC 311	Data Structures	3
CSC 331	Computer Organization	3
MAT 361	Finite Automata	3
GE E*	The Whole Person area	3

Third Semester		
Course		Units
CSC 341	Operating Systems	3
CSC 401	Analysis of Algorithms	3
GE F1*	Studies in the Humanities area	3
Elective	Select TWO CSC upper division courses	6

Fourth Semester		
Course		Units
CSC 481	Software Engineering	3
CSC 492	Senior Project	3
GE F3/G*	Studies in Social Sciences area/Cultural Pluralism area	3

Total Units: 51-54**

NOTE: Upper division elective courses cannot double count for upper division GE courses. The following courses are electives for this degree: CSC 395, CSC 411, CSC 421, CSC 431, CSC 441, CSC 451, CSC 453, CSC 455, CSC 459, CSC 461, CSC 463, CSC 471, CSC 490, CSC 495, MAT 367, and MAT 469. Students must earn a grade of "C" or better in each course taken within the department. Students must earn a grade of "C" or better in all direct and indirect prerequisite courses listed in the catalog before advancing to the next level course in a sequence for English, Mathematics and Science courses. This is a single field major. No minor required.

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Learn More

- To learn more about the B.S. in Computer Science at CSUDH, call the Department of Computer Science at (310) 243-3398, visit NSM A-132, or visit NBS.CSUDH.EDU.
- For more information on applying to CSUDH, visit CSUDH.EDU/FutureStudents.
- Apply online at CSUMENTOR.EDU.
- Career information, visit CSUDH.EDU/CareerCenter.

Faculty

Mohsen Beheshti, Department Chair
Ph.D., University of Louisiana of Lafayette

Jianchao (Jack) Han
Assistant Professor of Computer Science
Ph.D., University of Waterloo, Canada

Kazimierz Kowalski
Professor of Computer Science
Ph.D., Wroclaw University of Technology

Marek Suchenek, Professor of Technical Science
Ph.D., Warsaw University of Technology

Career Options

Entry level positions in the areas of systems analysis, systems programming, applications programming, data engineering, data communications and software engineering provide typical career opportunities for computer science graduates. Such positions are available in a wide variety of software vendors, aerospace and defense related industries, manufacturing and commercial firms, and government and other public agencies. Many graduates have also gone on to graduate school. Job opportunities for computer science graduates continue to be excellent because of the continued long-term growth of the computer industry.

*General Education (GE) Requirements

A. **Basic Skills:**

Courses must be passed with a grade of "C" or higher.
GE A1: ENG 110, ENG 111 (both required)
GE A2: PHI 120 or PSY 110
GE A3: THE 120
GE A4: CSC 101 or LIB 150 (optional category)

B. **Area of the Natural Sciences and Quantitative Reasoning:**

Select one course from each category below. Category 4 courses must be passed with a grade of "C" or higher.
GE B1: CHE 102, EAR 100, GEO 200, PHY 100
GE B2: ANT 101, BIO 102
GE B3: BIO 103, EAR 101, CHE 103
GE B4: MAT 105, 131, 153, 171, 191, 193

C. **Area of the Humanities:**

Select one course from each category below.
In categories 2 and 3, select courses from different departments.
GE C1: HUM 200
GE C2: ART 100, ART 101, CHS 125, COM 130, DAN 130, MUS 101, MUS 110, THE 100, THE 160
GE C3: AFS 200, AFS 231, APP 101, CHS 100, CHS 205, ENG 230, FRE 220, HUM 212, PHI 101, PHI 102, SPA 151, SPA 221

D. **Area of the Social Sciences:**

Select one course from each category below.
In categories 1 and 2, select courses from different departments.
GE D1: AFS 212, AFS 220, ANT 100, APP 212, CHS 212, PSY 101, SOC 101, SOC 102, WMS 250

GE D2: AFS 201, ANT 102, CHS 200, GEO 100, HIS 120, HIS 121, POL 100
GE D3: HIS 101
GE D4: POL 101

E. **Objectives for Lifelong Learning and Self-Development:**

Select one course from the following.
GE E: HEA 100, HSC 201, KIN 235, REC 100, UNV 101

F. **Upper Division Integrative Studies:**

Select one course from each category. Courses in this category are to be taken after 60 semester units and ALL lower division General Education courses have been completed.
GE F1: HUM 310, 312, 314
GE F2: SMT 310, 312, 314, 416
GE F3: SBS 318¹

G. **Cultural Pluralism Requirement:**

Within their General Education selections or within other requirements, all students must take one course which addresses cultural pluralism (i.e. the impact of the integration of cultures).
GE G: ANT 312, 336, 337, 338, 339, 340, 342, 389, CHS 300, HIS 305, MUS 401, PHI 383, SBS 318, SOC 322, SOC 331, SOC 383

¹ SBS 318 satisfies both F3 and G areas. Students will receive only three units credit, but will have met both requirements.