

Computer Engineering Career Readiness Map

Curricular activities
(Inside the classroom)

Co-curricular activities
(Outside the classroom)

First Years (First -Sophomore Years)

- CE 100 Intro to CE
 - What does a Computer Engineer Do?
- CS 111 and 211 Intro to CS
 - Fundamental Programming Skills
- CS 231 Assembly
 - Computer Fundamentals
- EE 280 Intro to Circuits
 - Basic Circuit principles, laws, and analysis
- PHYS 201 and 202
 - Mechanics, Electricity, and Magnetism
- MATH 160 and 162
 - Calculus

Middle Years (Sophomore -Junior Years)

- CE 310 Intro to CE Lab
 - Hardware and Software Tools for Computer Engineering
- CS 311 Data Structures
 - How to Store and Compute Data
- CS 331 Computer Architecture
 - How CPUs Work
- CE/EE 301 Digital Logic
 - Digital Logic Circuits with FPGAs
- EE 303 Signals and Systems
 - How Data is Filtered and Transmitted
- EE 330 Electronic Circuits
 - Advanced Circuits and Analysis

Last Years (Junior-Senior Years)

- CE 491A & B Capstone
 - Practical Computer Engineering Project
- CE 411 System on Chip
 - Miniaturizing Computing Platforms
- CS 433 Operating Systems
 - Computer Fundamentals
- CS 436 Networks
 - Networking Protocol and Integrating them with Applications
- CE/EE 402 Microcontrollers
 - Creating a System with Sensors and Actuators
- CE/CS/EE Elective
 - Expand Your Skills

Student Organizations

- | Topics and Skills | Institutions | Societies |
|--|--|--|
| <ul style="list-style-type: none">• <u>Artificial Intelligence Club</u>• <u>Amateur Radio Club</u>• <u>Cybersecurity Club</u>• <u>Game Development Club</u>• <u>Google Developer Club</u> | <ul style="list-style-type: none">• <u>Harmony Hacks</u>• <u>New Energies Club</u>• <u>Tikkun Olam Makers</u>• <u>Robotics Club</u> | <ul style="list-style-type: none">• <u>Association of Computer Machinery</u>• <u>Institute of Electrical and Electronic Engineers</u> |
| <ul style="list-style-type: none">• <u>National Society of Black Engineers</u>• <u>Society of Asian Scientists and Engineers</u>• <u>Society of Hispanic Professional Engineers</u>• <u>Society of Women Engineers</u>• <u>Women in STEM</u> | | |

Work Towards Your Career

- Create your first resume
- Create a LinkedIn Profile
- Create a Github Account
- Join a Club You are Interested In
- Join Professional Institutions and Societies
- Career Readiness Teams Channel

Alumni Engagement Office

- Network with CSUSM Alumni
- Attend Events
- Ask Alumni Questions

Professional Mentoring Program

- One-on-one Mentoring
- Monthly Discussion Night Events
- Career Advice

Funding Opportunities

- Summer Scholars - Research
- Student Success Grants
- CTREE, Scholarships, and More

Innovation Hub

- Makerspace
- Invention Help
- Workshops + Events

Career Center

- Handshake – Find a Job!
- Career Counseling
- Workshops and Events