

Applied Physics Career Readiness Map

First Years (First -Sophomore Years)

- **PHYS 100 Intro to Physics**
 - What does a Physicist Do?
- **PHYS 201, 202, and 203**
 - Mechanics, Electricity, Magnetism, Thermodynamics and Modern Physics
- **PHYS 270 Computational Physics**
 - How to Model the World
- **CS 111 Into to CS**
 - Fundamental Programming Skills
- **CHEM 150 and 150L Gen. Chemistry**
 - Chemistry Fundamentals for Science Majors
- **MATH 160, 162, and 260**
 - Calculus

Middle Years (Sophomore -Junior Years)

- **PHYS 280 Intro to Circuits**
 - Basic Circuit principles, laws, and analysis
- **PHYS 320 Classical Mechanics**
 - How Forces Create Movement
- **PHYS 321 Electromagnetism**
 - Electric Fields and Analysis
- **PHYS 323 Quantum Physics**
 - Phys. of Atoms, Molecules, Nuclei
- **PHYS 324 Statistical Mechanics and Thermodynamics**
 - Application of Thermodynamics
- **MATH 346 Eng. Math**
 - Mathematical Models, Probability, and Statistics for Engineers

Last Years (Junior-Senior Years)

- **PHYS 499B Laboratory Thesis**
 - Physics Senior Research Project
- **PHYS 421 Applied Electromagnetics**
 - Radiation, Antennas, and Wireless Communication
- **PHYS 422 Solid State Physics**
 - Materials Engineered Into Hardware
- **PHYS 423 Quantum Mechanics**
 - Probability as Scale
- **PHYS 380/480 Lab Techniques**
 - Hands-on Experimental Work
- **Select PHYS/EE/CE Electives**
 - Expand Your Skills

Curricular activities
(Inside the classroom)

Co-curricular activities
(Outside the classroom)

Student Organizations

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

Work Towards Your Career

- [Create your first resume](#)
- [Create a LinkedIn Profile](#)
- [Join a Club You are Interested In](#)
- [Join Professional Institutions and Societies](#)
- [Start a Project Portfolio](#)
- [Career Readiness Teams Channel](#)

Alumni Engagement Office

- [Network with CSUSM Alumni](#)
- [Attend Events](#)
- [Ask Alumni Questions](#)

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](#)

Professional Mentoring Program

- [One-on-one Mentoring](#)
- [Monthly Discussion Night Events](#)
- [Career Advice](#)