

APPLIED PHYSICS

Applied Electronics Option

- This worksheet is intended for supplemental use only. The University will use your Academic Requirements Report (ARR) to track your graduation requirements, including those for your major. Please continue to check your ARR for accuracy.
- If your ARR requires a correction, please submit an [ARR Correction Form](#).
- Your [Degree Planner](#) (in mycsusm.edu) will display the following requirements in the University's recommended sequence.
- All courses used for the major and preparation for the major must be completed with a grade of C (2.0) or higher.
- All non-articulated courses MUST be reviewed and approved by a faculty advisor.
- A minimum of 18 units in Physics must be completed at CSUSM.

PREPARATION FOR THE APPLIED ELECTRONICS OPTION (43 UNITS)

Non-Physics Supporting Courses (28 units):

✓	Course	Units
<input type="checkbox"/>	CS 111: Computer Science I (^MATH 160)	4
<input type="checkbox"/>	CS 211: Computer Science II (*CS 111, MATH 160)	4
<input type="checkbox"/>	CS 231: Assembly Language and Digital Circuits (*CS 111)	4
<input type="checkbox"/>	MATH 160: Calculus with Applications I (*MATH 125, 126 or pass Math Placement Test)	5
<input type="checkbox"/>	MATH 162: Calculus with Applications II (*MATH 160)	4
<input type="checkbox"/>	MATH 260: Calculus with Applications III (*MATH 162)	4
<input type="checkbox"/>	MATH 346: Mathematical Methods for Physics (*MATH 162; fall only)	3

Lower-division Physics Courses (15 units):

✓	Course	Units
<input type="checkbox"/>	PHYS 201: Physics of Mechanics and Sound (*MATH 160)	4
<input type="checkbox"/>	PHYS 202: Physics of Electromagnetism and Optics (*PHYS 201, MATH 162)	4
<input type="checkbox"/>	PHYS 203: Modern Physics (spring only)	4
<input type="checkbox"/>	PHYS 280: Introduction to Electronics ((*EE 100 and PHYS 201) or PHYS 202 or PHYS 206)	3

UPPER-DIVISION CORE REQUIREMENTS (24 UNITS)

✓	Course	Units
<input type="checkbox"/>	PHYS 301: Digital Systems Design with HDL (*EE 100 and CS 111) or (CS 231 and either PHYS 202 or 206))	4
<input type="checkbox"/>	PHYS 303: Signals and Systems (*PHYS 202; spring only)	3
<input type="checkbox"/>	PHYS 320: Classical Mechanics (*PHYS 201 or 205; ^MATH 346; fall only)	3
<input type="checkbox"/>	PHYS 321: Classical Electromagnetism (*PHYS 202 or 206 and MATH 260; fall only)	3
<input type="checkbox"/>	PHYS 323: Quantum Physics (*PHYS 203, ^MATH 346; fall only)	3
<input type="checkbox"/>	PHYS 402: Microcontroller Systems and Computer Interfacing (*PHYS or EE 301; fall only)	4
<input type="checkbox"/>	PHYS 499B: Senior Laboratory Thesis (*instructor consent)	2

*prerequisite; ^pre/co-requisite;

#may be chosen as an elective if not already taken for an Upper-division Core Requirement.

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Select 1 of the following courses:

- PHYS 380 Applied Laboratory Techniques (*PHYS 203; odd spring only)
- PHYS 480: Advanced Applied Physics Laboratory (*PHYS 203; even spring only)

<input checked="" type="checkbox"/>	Course	Units
<input type="checkbox"/>		2

ELECTIVE COURSES FOR THE MAJOR (8-9 UNITS)

Select elective courses from the following list:

- CS 331: Computer Architecture (3) (*CS 231)
- PHYS 306: Introduction to Physics Education Research (3) (*PHYS 203)
- PHYS 324: Statistical Mechanics and Thermodynamics (3) (spring only)
- PHYS 342: Introduction to Astrophysics (3) (*PHYS 203)
- PHYS 380#: Applied Lab Techniques (2) (*PHYS 203, odd spring only)
- PHYS 421: Applied Electromagnetic Waves and Optics (3) (*PHYS 321, MATH 346; spring only)
- PHYS 422: Applied Solid State Physics (3) (*PHYS 203, ^MATH 346; fall only)
- PHYS 423: Quantum Mechanics (3) (*PHYS 323; spring only)
- PHYS 440: Biological Physics (3) (*PHYS 202 or 206; odd spring only)
- PHYS 442: Physical and Geometric Optics (3) (*PHYS 321)
- PHYS 480#: Advanced Applied Physics Laboratory (2) (*PHYS 203; even spring only)

Up to six (6) units of elective coursework from another department in the natural or mathematical sciences chosen in consultation with and pre-approved by the Physics Advisor may be used for this section.

<input checked="" type="checkbox"/>	Course	Units
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		

*prerequisite; ^pre/co-requisite;
 #may be chosen as an elective if not already taken for an Upper-division Core Requirement.