CATALOG TERM: 2023-2027 **TOTAL UNITS REQUIRED = 120**

APPLIED PHYSICS

General 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 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 Physics faculty advisor.
- A minimum of 18 units in Physics must be completed at CSUSM.

PREPARATION FOR THE APPLIED PHYSICS OPTION (44 UNITS)

Non-Physics Supporting Courses (25 units):

✓	Course	Units
	CHEM 150: General Chemistry (*MATH 101, 103, 105 or MATH Category 1 or 2)	4
	CHEM 150L: General Chemistry Laboratory (^CHEM 150)	1
	CS 111: Computer Science I (^MATH 125, 126, or 160)	4
	MATH 160: Calculus with Applications, I (*MATH 125, 126 or pass Calculus Readiness Diagnostic)	5
	MATH 162: Calculus with Applications, II (*MATH 160)	4
	MATH 260: Calculus with Applications, III (*MATH 162)	4
	MATH 346: Mathematical Methods for Engineering and Physics (*MATH 162; ♦MATH 260)	3

Lower-division Physics Courses (19 units):

✓	Course	Units
	PHYS 100: Introduction to being a Physicist	1
	PHYS 201: Physics of Mechanics & Sound (*MATH 160)	4
	PHYS 202: Physics of Electromagnetism & Optics (*PHYS 201 or 205 and MATH 162)	4
	PHYS 203: Modern Physics	4
	PHYS 270: Introduction to Computational Physics (*PHYS 201, MATH 160, CS 111)	3
	PHYS 280: Introduction to Electronics (*(EE 120,PHYS 201), (EE 100, PHYS 201),PHYS 202, or PHYS 206	3

UPPER-DIVISION CORE REQUIREMENTS (25 UNITS)

✓	Course	Units
	PHYS 320: Classical Mechanics (*PHYS 201 or 205; ^MATH 346; spring only)	3
	PHYS 321: Classical Electromagnetism (*PHYS 202 or 206 and MATH 260)	3
	PHYS 323: Quantum Physics (*PHYS 203, ^MATH 346; fall only)	3
	PHYS 324: Statistical Mechanics & Thermodynamics (spring only)	3
	PHYS/EE 421: Applied Electromagnetic Waves (*PHYS 321, MATH 346; spring only)	3
	PHYS 422: Applied Solid State Physics (*PHYS 203, ^MATH 346; fall only)	3

**prerequisite; ^pre/co-requisite; ♦recommended preparation;*

#may be used as an elective if not already used for Upper-division Core Requirements.

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APPLIED PHYSICS

General Option

☐	PHYS 423: Quantum Mechanics (*PHYS 323; spring only)	3
☐	PHYS 499B: Senior Laboratory Thesis (*instructor consent)	2

Select one 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)

✓	Course	Units
☐		2

ELECTIVES FOR THE MAJOR (6 UNITS)

Select elective courses from the following list:

PHYS/CE/EE 301: Digital Systems Design with HDL (*(EE 100 and CS 111), (EE 120 and CS 111) or (CS 231 and PHYS 202 or 206))
PHYS/EE 303: Signals and Systems (3) (*PHYS/EE 280, ^MATH 346)
PHYS 306: Introduction to Physics Education Research (3) (*PHYS 203)
PHYS 342: Introduction to Astrophysics (3) (*PHYS 203)
PHYS 380#: Applied Lab Techniques (2) (*PHYS 203; odd spring only)
PHYS/CE/EE 402: Microcontroller Systems and Computer Interfacing (4) (*PHYS/EE/CE 301)
PHYS 425: Fluid Dynamics (3) (*PHYS 201, MATH 260)
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)

Students may also take up to 6 units of elective coursework from another major in the natural or mathematical sciences, chosen in consultation with and pre-approved by the Physics faculty advisor. Examples of courses that may be taken are CHEM 402*, MATH 362*, or MATH 374*.

✓	Course	Units
☐		
☐		

**prerequisite; ^pre/co-requisite; ♦recommended preparation;*
#may be used as an elective if not already used for Upper-division Core Requirements.