CATALOG TERM: 2024-2027 **TOTAL UNITS REQUIRED = 120**

ELECTRICAL ENGINEERING

- 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.
- A minimum of fifteen (15) upper-division units counted toward the major must be completed at CSUSM.
- All non-articulated courses MUST be reviewed and approved by a faculty advisor in the corresponding department.

PREPARATION FOR THE MAJOR (37 UNITS)

Supporting Courses (25 units):

✓	Course	Units
	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
	PHYS 201: Physics of Mechanics and Sound (*MATH 160)	4
	PHYS 202: Physics of Electromagnetism and Optics (*PHYS 201 or 205 and MATH 162)	4
	PHYS 203: Thermodynamics and Modern Physics	4

Lower Division (12 units):

✓	Course	Units
	CS 111: Computer Science I (^MATH 125, 126, or 160)	4
	EE 110: Electrical Engineering Clinic I (*EE 100)	1
	EE 120: Introduction to Electrical Engineering (*EE 110)	3
	EE 210: Electrical Engineering Clinic II (*CS 111)	1
	EE 280: Introduction to Circuit Analysis (*(EE 100,PHYS 201), (EE 120, PHYS 201), PHYS 202, or PHYS 206)	3

UPPER-DIVISION COURSEWORK (47 UNITS)

Core Coursework (44 units):

✓	Course	Units
	MATH 346: Mathematical Methods for Engineering and Physics (*MATH 162)	3
	PHIL 348: Ethics in Engineering	3
	EE 301: Digital Systems Design/HDL ({*EE 100 and CS 111} or {*CS 231 and PHYS 202 or 206})	4
	EE 303: Signals and Systems (*EE/PHYS 280; ^MATH 346)	3
	EE 310: Electric Power and Energy Conversion (*EE/PHYS 280 and PHYS 321)	3
	EE/PHYS 321: Electromagnetism (*PHYS 202 or 206 and MATH 260)	3
	EE 330: Electronic Circuits (*EE/PHYS 280)	4
	EE 342: Probability and Statistics for Engineers/Scientists (*CS 111 and MATH 260 or 260A)	3
	EE 402: Microcontroller Systems and Computer Interfacing (*EE/CE/PHYS 301)	4
	EE 420: Control Systems (*EE 301, 303 and MATH 346)	3

ELECTRICAL ENGINEERING

	EE 430: Integrated Circuits and VLSI Design (*EE 330)	3
	EE 435: Communication Systems and Circuits (*EE 210, 303)	4
	EE 491A: Senior Project Planning (*instructor consent)	1
	EE 491B: Senior Lab Project (*EE/CE 491A)	3

Elective Courses (3 units):
Choose 3 units from the following:

CS 331: Computer Architecture (3) (*CS 231)
EE 300: Electrical Engineering Clinic III (1) (*EE 100, 210)
EE 310: Electric Power and Energy Conversion (3) (*EE 280, PHYS 321)
EE 322: Solid State Devices (3) (*PHYS 203 or EE/PHYS 280)
EE 340: Artificial Intelligence Applications in Electrical Engineering (*EE 210, 280, 303; ^MATH 342)
EE 404: Digital Signal Processing (3) (*EE/PHYS 303)
EE 406: Digital Embedded Systems Design with HDL (3) (*CS 331 or EE/PHYS 301)
EE 415: Instrumentation: Sensing and Controls (4) (*EE/PHYS 280, EE 303, EE 330; ^EE 430)
EE/PHYS 421: Applied Electromagnetic Waves (3) (*PHYS 321 and MATH 346)
PHYS 422: Applied Solid State Physics (3) (*PHYS 203; ^MATH 346)
PHYS 442: Physical & Geometric Optics (3) (*PHYS 321) **or**
UNIV 495A-C: Internships (1-3) (*instructor consent; program consent/must be EE field; up to 3 units permitted)

✓	Course	Units
		3