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

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

PREPARATION FOR THE MAJOR (46 UNITS)

Lower-division Courses (16 units):

✓	Course	Units
	CE 100: Introduction to Computer Engineering	1
	CS 111: Computer Science I (^MATH 125, 126, or 160)	4
	CS 211: Computer Science II (*CS 111; ^MATH 160)	4
	CS 231: Assembly Language and Digital Circuits (*CS 111)	4
	EE 280: Introduction to Circuit Analysis (*(EE 100,PHYS 201), (EE 120, PHYS 201), PHYS 202, or 206)	3

Supporting Courses (30 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 260A: Multivariable Integration (*MATH 162)	1
	MATH 270: Basic Discrete Mathematics (*MATH 160)	3
	EE/MATH 342: Probability and Statistics for Engineers/Scientists (*CS 111; MATH 260 or 260A)	3
	MATH 346: Mathematical Methods for Engineering and Physics (*MATH 162)	3
	PHYS 201: Physics of Mechanics and Sound (*MATH 160)	4
	PHYS 202: Physics of Electromagnetism and Optics (*PHYS 201 or 205; MATH 162)	4
	PHIL 348: Ethics in Engineering	3

UPPER-DIVISION COURSEWORK (38 UNITS)

✓	Course	Units
	CE/EE/PHYS 301: Digital Systems Design with HDL (*{EE 120, CS 111}, {EE 100, CS 111} or {CS 231 and PHYS 202 or 206})	4
	CE 310: Introduction to Computer Engineering Laboratory (^CE 100, CS 231)	1
	CE/EE/PHYS 402: Microcontroller Systems and Computer Interfacing (*CE/EE/PHYS 301)	4
	CE 411: System-on-Chip Design (*CE 310;^CS 331)	3
	CS 311: Data Structures and Algorithms (*CS 211, ^MATH 270 or 350)	3
	CS 331: Computer Architecture (*CS 231)	3

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	CS 433: Operating Systems (*CS 231, 311)	3
	CS 436: Introduction to Networking (*CS 311)	3
	EE 303: Signals and Systems (*EE/PHYS 280; ^MATH 346)	3
	EE 330: Electronic Circuits I (*EE/PHYS 280)	4
	CE/EE 491A: Senior Project Planning (*instructor consent)	1
	CE/EE 491B: Senior Lab Project (*CE/EE 491A)	3

Computer Engineering Electives (3 units):
Choose a 400-level course from Computer Science, Computer Engineering, Electrical Engineering or SE 370*.

✓	Course	Units
		3