

ELECTRICAL ENGINEERING B.S.

CALIFORNIA STATE UNIVERSITY, FRESNO

2026-2027 CATALOG: RECOMMENDED 5-YEAR ROADMAP

The suggested program of study on this page is for general information and academic planning purposes and is not a substitute for the University Catalog. Consult the 2026-2027 University Catalog for more detailed information.

FIRST SEMESTER			Units	SECOND SEMESTER			Units
ENGR 1	Introduction to Engineering		1	ECE 1	Intro to EE and CompE		1
Area 5B	BIO 10 Life Science		3	Area 5A	CHEM 1A or 3A Chemistry ¹		4
Area 1A	ENGL 10 Composition or 5A&B		3	Area 1C	COMM 3, 7, or 8		3
Area 2	MATH 75 Calculus I		4	ECE 70	Intro to Elec/Comp Engr Tools		2
				MATH 76	Calculus II		4
Total First Semester Units:			11	Total Second Semester Units:			14
THIRD SEMESTER			Units	FOURTH SEMESTER			Units
PHYS 4A	Mechanics and Wave Motion		3	PHYS 4B	Electricity, Magnetism, and Heat		3
ECE 71	Intro to Computational Prog		4	PHYS 4BL	Electricity, Magnetism, Heat Lab		1
ECE 85	Digital Logic Design		3	MATH 77	Calculus III		4
ECE 85L	Digital Logic Design Lab		1	ECE 90	Principles of Electrical Circuits		3
ECE 103E	Professional Develop Skills		1	ECE 90L	Principles of Elect Circuits Lab		1
Total Third Semester Units:			12	Total Fourth Semester Units:			12
FIFTH SEMESTER			Units	SIXTH SEMESTER			Units
MATH 81 / ENGR 101			3	Area 3B	PHIL 1, 2, 10, 20, 25 or 45		3
ECE 111	Fund Principals of Optical Engr		3	ECE 102	Advanced Circuit Analysis		3
ECE 118	Microprocessor Arch and Prog		3	ECE 126	Electromagnetics I		3
ECE 118L	Microcontroller Lab		1	ECE 128	Electronics I		3
ECE 121	Energy Conversion		3	ECE 128L	Electronics I Lab		1
Total Fifth Semester Units:			13	Total Sixth Semester Units:			13
SEVENTH SEMESTER			Units	EIGHTH SEMESTER			Units
ECE 123	Discrete Time Signals and Sys		3	PLSI 2	(Graduation Requirement)		3
ECE 123L	Signal and Systems Lab		1	Area 4A	HIST 11, 12		3
ECE 125	Probabilistic Engr Sys Analysis		3	ME 29/136	Statics or Thermodynamics ¹		3
ECE 138	Electronics II		3	ECE 155	Control Systems		3
ECE 138L	Electronics II Lab		1	_____	Senior Lab ³		1
UDWR	Any Upper-Division W Course		3	Total Eighth Semester Units:			13
Total Seventh Semester Units:			14				
NINTH SEMESTER			Units	TENTH SEMESTER			Units
Area 4B	ECON 40 Micro/ ECON 50 Macro		3	ECE 186B	Senior Design II		3
ECE 134	Communication Engineering		3	_____	Technical Area Course ²		3
ECE 186A	Senior Design I		1	_____	Math Elective Course ⁴		3
_____	Technical Area Course ²		3	Area 6	Ethnic Studies		3
_____	Technical Area Course ²		3	Total Tenth Semester Units:			12
Total Ninth Semester Units:			13				

Total units for the program:

127

1. ME 136 requires CHEM 1A, otherwise CHEM 3A is recommended
2. Select from the list of Technical Area Courses, including labs
3. Select from: ECE 155L, ECE 119L, ECE 121L; ECE 134L, ECE 136L, ECE 178 (fulfills ² and ³)
4. Select from: MATH 121, MATH 123, MATH 128, MATH 152, MATH 171, MATH 181, MATH 182

General Education

Area 1A: ENGL 10 or ENGL 5A & 5B

Area 1B: Exempt

Area 1C: COMM 3, 7, or 8

Area 2: MATH 75

Area 3A: Exempt

Area 3B: PHIL 1, 2, 10, or 20

Area 4A: HIST 11 or 12

Area 4B: ECON 40 or 50

Area 5A: CHEM 3A

Area 5B: BIO 10 or 1A

Area 5C: PHYS 4BL

Area 6: Any upper or lower division GE area F

Area UD 3: Exempt

Area UD 4: ECE 118

Area UD 5: ECE 186B

Additional Fresno State Graduation Requirements

US & CA Gov: PLSI 2

A/H: Exempt

L/S: Exempt

M/I: Exempt

ECE 186A – Senior Design I

Prerequisites:

ECE 102;

ECE 118;

ECE 118L;

ECE 128;

ECE 128L;

(ECE 121 or ECE 141); (ECE 123 or ECE 176); and
additional 6 units of Upper-Division ECE coursework.

Prerequisites or Corequisites:

UDWR and

(ECE 155 or ECE 178)