

Electrical Engineer

Design the circuits, chips, motors and power systems that everything else quietly depends on.

TYPICAL PAY

\$120,630

a year, full time

PAY RANGE

\$77k to \$184k

starting to experienced

TIME TO QUALIFY

4 to 8 years

after high school

DEMAND

Very high

job outlook

LICENCE NEEDED

No

anyone can do it

WHERE YOU WORK

Design offices, factories, power utilities, defense contractors, chi...

How you get there

- 1 High school diploma** Grade 12
Calculus and physics are the two that decide whether first year feels possible. Take both as far as your school goes.
- 2 Bachelor's degree in electrical engineering** 4 years
Choose a program accredited by ABET (the Accreditation Board for Engineering and Technology). Circuits, signals, electromagnetics and a lot of differential equations.
- 3 Internships or a co-op** During college
One paid term every summer, or a full co-op year. This is how nearly everyone gets their first offer.
- 4 First engineering job** Straight after graduating
Design, test, applications or field engineering. You work under experienced engineers and learn what the textbook left out.
- 5 License, if your work needs it** 4 more years, optional
Pass the Fundamentals of Engineering exam, work about 4 years under a licensed engineer, then pass the Principles and Practice of Engineering exam. Needed mainly for power and building systems work.

Pros and cons

- + High pay from year one with a four-year degree
- + Work exists in nearly every industry and most states
- + Rapid growth, especially in power, chips and defense
- The degree is genuinely hard and the dropout rate is high
- Deadline crunches before a product launch or a test date
- Some of the best-paid work is in defense, which not everyone wants

Optional boosts

Power systems. Chip and circuit design. Embedded and control systems. Communications and radio frequency.

Where these numbers come from

My Next Move: Electrical Engineers (17-2071.00)

NCEES: Fundamentals of Engineering exam

ABET: accreditation

USAJOBS, the federal government's official hiring site

Numbers checked September 2026. Pay figures are typical full-time annual amounts in United States dollars, based on Bureau of Labor Statistics wage data and published pay scales. They vary by state, employer and experience. Tuition is for in-state students at public schools unless the card says otherwise. Sources, links and the click-through version: <https://career.help/us/careers/electrical-engineer>

Good to know

The country runs on three separate grids

The lower 48 states are split into the Eastern Interconnection, the Western Interconnection and a third grid covering most of Texas. They are only loosely tied together, which is why a failure in one rarely dar...

There was a war over alternating current

In the 1880s Thomas Edison pushed direct current while George Westinghouse and Nikola Tesla backed alternating current. Alternating current won because it travels far more cheaply over long distances,...



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