

Industrial Engineer

Make a factory, hospital or warehouse work better. Four years of school and no licensing gauntlet.

TYPICAL PAY

\$102,440

a year, full time

PAY RANGE

\$74k to \$160k

starting to experienced

TIME TO QUALIFY

4 to 5 years

after high school

DEMAND

Very high

job outlook

LICENCE NEEDED

No

anyone can do it

WHERE YOU WORK

Factories, hospitals, warehouses, airlines, consulting firms

How you get there

- 1 High school** Grades 11 and 12
Take the hardest math you can handle, plus physics and any statistics or computing course on offer.
- 2 Four-year engineering degree** 4 years
A bachelor's in industrial engineering, or industrial and systems engineering, accredited by ABET (the Accreditation Board for Engineering and Technology). Check the accreditation before you enroll: it matters for licensing and for some employers.
- 3 Internships or a co-op** Summers, or alternating terms
A co-op alternates semesters of school and full-time paid work. It stretches the degree to five years and is the single best thing you can do for your hiring odds.
- 4 First job** On graduation
Titles vary: process engineer, manufacturing engineer, continuous improvement engineer, operations analyst. All the same work under different names.
- 5 Optional license** 4 to 5 more years if you want it
Sit the Fundamentals of Engineering exam near graduation, work four years under a licensed engineer, then take the Principles and Practice of Engineering exam to become a licensed Professional Engineer. Most industrial engineers never do this.

Pros and cons

- + Good pay for a four-year degree and no licensing marathon
- + Every industry needs this, so you are not tied to one sector
- + Natural ladder into operations management
- Your job is changing how other people work, and they often resent it
- Plants are where the jobs are, so that may mean a small town
- Manufacturing layoffs track the economy, and engineers are not immune

Optional boosts

Lean Six Sigma Green Belt, then Black Belt. Supply chain certification. Professional Engineer license. Master's degree in analytics or operations research.

Where these numbers come from

My Next Move: Industrial Engineers (17-2112.00)

National Council of Examiners for Engineering and Surveying: the Fundamentals of Engineering exam

Institute of Industrial and Systems Engineers

Georgia Institute of Technology, School of Industrial and Systems Engineering

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/industrial-engineer>

Good to know

The field began with a stopwatch

Industrial engineering grew out of time and motion study in American factories just after 1900. Frederick Taylor timed shovel loads at a steel works, and Frank and Lillian Gilbreth filmed bricklayers to cut out was...

Hospitals and theme parks hire them too

The same math that balances an assembly line balances an emergency room and a ride queue. Industrial engineers work on operating room schedules, airline crew rosters, package sorting hubs...



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