

Physicist

Work out how the universe behaves, then prove it. Almost everyone in this job holds a doctorate.

TYPICAL PAY

\$172,250

a year, full time

PAY RANGE

\$82k to \$274k

starting to experienced

TIME TO QUALIFY

9 to 11 years

after high school

DEMAND

Moderate

job outlook

LICENCE NEEDED

No

anyone can do it

WHERE YOU WORK

**National laboratories, universities,
defense contractors, semiconduc...**

How you get there

- 1 High school** Grades 11 and 12
Physics, calculus and as much programming as you can find. Start on problems you cannot immediately solve.
- 2 Bachelor's degree in physics** 4 years
Mechanics, electricity and magnetism, quantum mechanics, statistical mechanics, plus two years of math. Get into a research group as an undergraduate: it decides where you go next.
- 3 Doctoral program** 5 to 7 years
At MIT (Massachusetts Institute of Technology) the typical stay is 5 to 7 years. Written qualifying exams in classical mechanics, electricity and magnetism, quantum mechanics and statistical mechanics, then an oral exam in front of three faculty members.
- 4 Thesis and defense** Inside the doctorate
Years of original research, a thesis committee formed by year three, a written thesis and a defense.
- 5 Postdoctoral research** 2 to 6 years
One or two fixed-term contracts, often in another city or country, before a permanent post exists. Many people stop here and take an industry job instead.

Pros and cons

- + You get paid to answer questions nobody has answered
- + Graduate school is funded, so the doctorate does not add debt
- + The median pay is high and the skills sell elsewhere
- A decade of training on a stipend, not a salary
- Far more doctorates than permanent research jobs
- Postdoctoral years mean moving city, sometimes country, on short contracts

Optional boosts

Condensed matter. Particle and nuclear. Astrophysics and cosmology. Optics and photonics.

Good to know

Four exams stand between you and your thesis

At MIT (Massachusetts Institute of Technology), doctoral students must show mastery of classical mechanics, electricity and magnetism, quantum mechanics and statistical mechanics, by written exam or b...

One society, fifty thousand physicists

The American Physical Society has more than 50,000 members worldwide and publishes 19 peer-reviewed journals, including Physical Review Letters. Its March Meeting is the largest physics gathering in t...

Where these numbers come from

My Next Move: Physicists, wages and tasks

American Physical Society

American Institute of Physics: statistical research on physics degrees and careers

Massachusetts Institute of Technology, Department of Physics: graduate program

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/physicist>



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