

Bachelor's Degrees in Physics: What you didn't know



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Job Stability & Satisfaction

Based on national surveys of students
with bachelor's degrees in physics

High employment rates (95%)

High job satisfaction in terms of:

Feelings of job security

- 75% to 93% (depending on sector) felt secure.

Overall satisfaction

- 71% to 90% (depending on sector) felt a sense of satisfaction.

Job Opportunities

Flexible Options and Sectors Including:

- National Labs
- Professional Schools (e.g., Medicine, Health)
- Environmental/Climate Science, Energy
- Space Science
- Government/Policy
- Public Administration, Business
- Communication (e.g., Science Writing, Media)
- Education (e.g., High School, College/University)
- Engineering, Computing
- Arts (e.g., Music, Television)
- Not-for-Profit Organizations
- Graduate Studies (e.g., Multiple STEM Disciplines)

Job Opportunities

On the MCAT (Medical College Admission Test), which major from amongst the following gets the highest scores? Lowest scores?

A. Biology B. Psychology C. Chemistry D. Physics E. Engineering

On the LSAT (Law School Admission Test), which major from amongst the following gets the highest scores? Lowest scores?

A. Biology B. Psychology C. Chemistry D. Physics E. Engineering

Surprising Facts: Medicine

Physics Majors and Medical School

Physics majors get very high scores on the MCATs.

Scores on MCAT by major

| DEGREE FIELD | PHYSICAL SCIENCE | BIOLOGICAL SCIENCE | VERBAL REASONING | SUM OF 3 SCORES |
|------------------------|------------------|--------------------|------------------|-----------------|
| Economics | 10.8 | 10.8 | 9.9 | 31.5 |
| Physics | 11.1 | 10.4 | 9.8 | 31.3 |
| Biomedical Engineering | 11.1 | 10.6 | 9.6 | 31.3 |
| Mathematics | 10.9 | 10.1 | 9.4 | 30.4 |
| Electrical Engineering | 10.6 | 10.4 | 9.3 | 30.3 |
| Neuroscience | 10.1 | 10.6 | 9.5 | 30.2 |
| English | 9.6 | 10.1 | 10.2 | 29.9 |
| Biochemistry | 10.1 | 10.4 | 9 | 29.5 |
| Chemistry | 9.5 | 10 | 9 | 28.5 |
| Premedical | 9.2 | 10.1 | 8.8 | 28.1 |
| Microbiology | 9.1 | 9.6 | 9.1 | 27.8 |
| Psychology | 9 | 9.7 | 8.7 | 27.4 |
| Biology | 8.3 | 8.9 | 8.1 | 25.3 |
| All Majors | 9.5 | 9.9 | 9 | 28.4 |



NOTE: Sorted by total score and based on test takers who applied to Medical School. The MCAT test at the time had the 3 sections noted, but also a writing sample (not included here). Each section had a potential score range of 1-15.

Source: AIP, Focus on MCAT, LSAT and Physics Bachelor's, 2013

Scores on LSAT by major

Surprising Facts: Law

Physics Majors and Law School

Physics majors get very high scores on the LSATs.

| DEGREE FIELD | AVERAGE SCORE |
|-------------------|---------------|
| Mathematics | 162.2 |
| Physics | 162.1 |
| Economics | 159.1 |
| Engineering | 157.3 |
| Chemistry | 156.7 |
| History | 156.7 |
| English | 155.8 |
| Biology | 155.2 |
| Political Science | 154.3 |
| Psychology | 153.3 |
| Computer Science | 152.3 |
| Pre-Law | 149.0 |
| Criminal Justice | 145.6 |
| All Majors | 153.6 |



NOTE: Based on test takers who applied to Law School. The LSAT is a standardized test and raw scores are converted to a scale that ranges from 120 to 180.

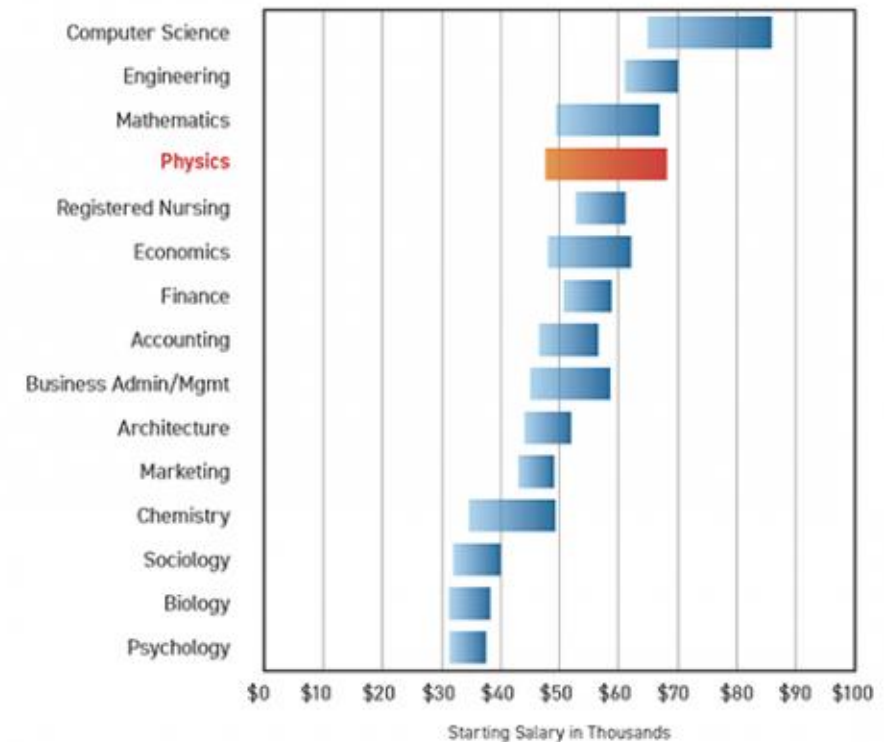
Source: AIP, Focus on MCAT, LSAT and Physics Bachelor's, 2013

Surprising Facts: Salaries

Physics Majors and Earnings

Physics bachelors earn comparatively more.

What Do New Bachelors Earn? Starting Salaries for the Class of 2018



Bars represent the middle 50% of salaries, i.e. between the 25th and the 75th percentiles.

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Surprising Facts: Helping Society

Physics Majors Help Others

Improving people's health

Diagnosis and treatment of illness, for example:

- Cancer treatment using radiation, new nanobot technology to target individual cancer cells
- Body imaging using X-rays, ultrasound, NMR and PET scans
- New methods using infrared light to monitor our blood

Addressing environmental issues

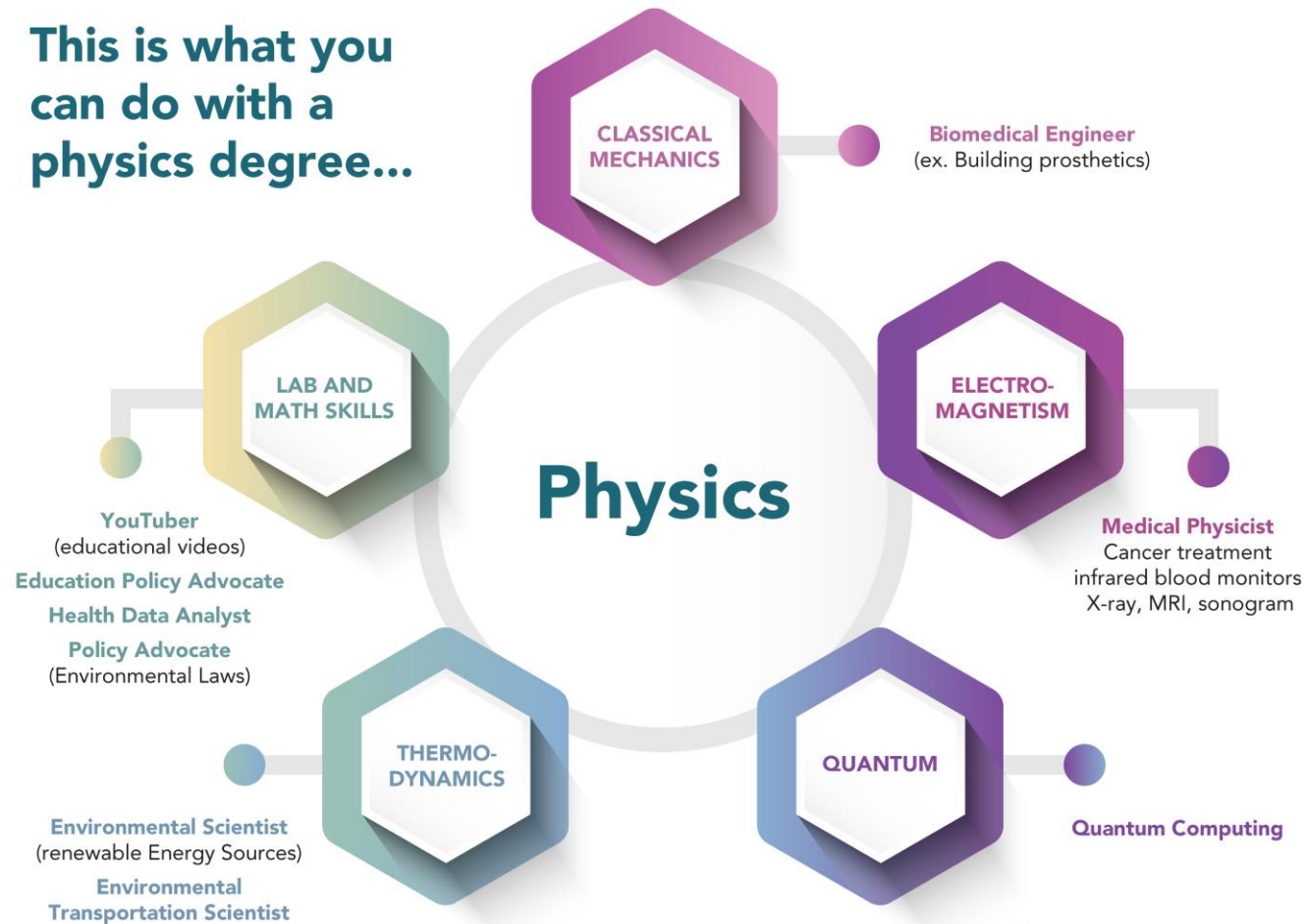
Energy needs and climate change effects, for example:

- New renewable energy technology
- Climate change effects on humans, animals (e.g., penguin populations), and land (size of the Sahara Desert)
- Environmentally friendly transportation methods

And many more...

Surprising Facts: Helping Society

This is what you can do with a physics degree...



...and many more

Summary

Students who earn a degree in physics:

Have high employment and job satisfaction.

Work in many different sectors (STEM/non-STEM).

Gain skills that give them a competitive edge for medical and law school.

Earn comparatively higher salaries than most other bachelor's degrees.

Have an opportunity to help society in substantial ways.

Surprises?

What surprised you about the:

Areas in which physicists work?

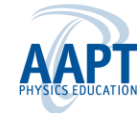
Skills physicists apply working in such diverse areas?

Benefits physicists can have on the lives of others?

References

- AIP Statistics (2016). What's a Bachelor's Degree Worth? American Institute of Physics (AIP). Retrieved from: <https://www.aip.org/sites/default/files/statistics/physics-trends/fall16-bs-deg-worth.pdf>
- IOP (2017). Institute of Physics (IOP) Careers from physics. Retrieved from: <http://www.physics.org/careers.asp?contentid=381>
- Mulvey, P., & Pold, J. (2017). Physics Bachelor: Initial Employment. American Institute of Physics (AIP) Report. Retrieved from: <https://www.aip.org/sites/default/files/statistics/employment/bachinitemp-p-14.1.pdf>
- Pold, J. and Mulvey, P. (2016). Physics Bachelors: One Year After Degree. American Institute of Physics (AIP) Report. Retrieved from: <https://www.aip.org/sites/default/files/statistics/employment/bach1yrafterdeg-p-14.1.pdf>
- Tesfaye, C. L. and Mulvey, P. (2012). Physics Bachelor's Initial Employment. American Institute of Physics (AIP) Report. Retrieved from: <https://www.aip.org/sites/default/files/statistics/employment/bachinitemp-p-10.pdf>
- Tesfaye, C. L. and Mulvey, P. (2013). MCAT, LSAT and Physics Bachelor's. American Institute of Physics (AIP) Report. Retrieved from: <https://www.aip.org/sites/default/files/statistics/undergrad/mcat-lsat1.pdf>

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