

Bachelors Degrees in Physics: What you didn't know













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)
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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





Surprising Facts: Law

- Physics Majors and Law School
 - Physics majors get very high scores on the LSATs

Scores on LSAT by major

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





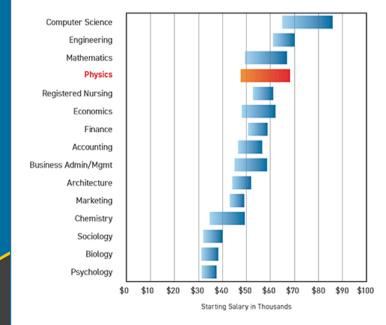
Surprising Facts: Salaries

- 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. Reprinted from the Summer 2019 Salary Survey, with permission of the National Association of Colleges and Employers, copyright holder.

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Surprising Facts: Helping Society



Physics Majors Help Others

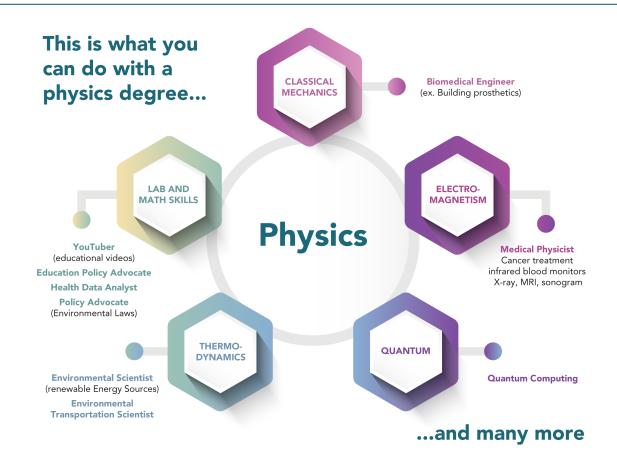
- Improving people's health
 - Diagnosis and treatment of illness, for example:
 - Cancer treatment using radiation, new nanobot technology to target individual cancer cells
 - Body imaging using X-rays, ultrasound, NMR and PET scans
 - New methods using infrared light to monitor our blood
- Addressing 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...

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Surprising Facts: Helping Society







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 the opportunity to help society in substantial ways



Discussion Questions



What surprised you about the:

- Areas in which physicists work?
- Skills physicists apply working in such diverse areas?
- Benefit 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., & 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., & 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., & 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















This material is based upon the work supported by the National Science Foundation under Grant Nos. 1720810, 1720869, 1720917, and 1721021. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

