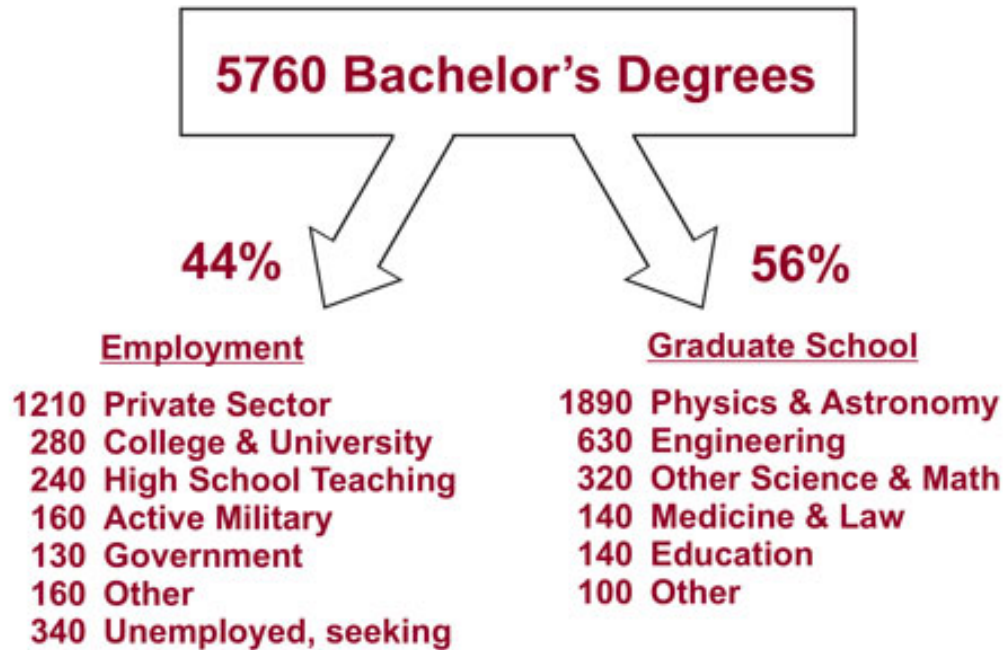


Possible jobs for the Physics major

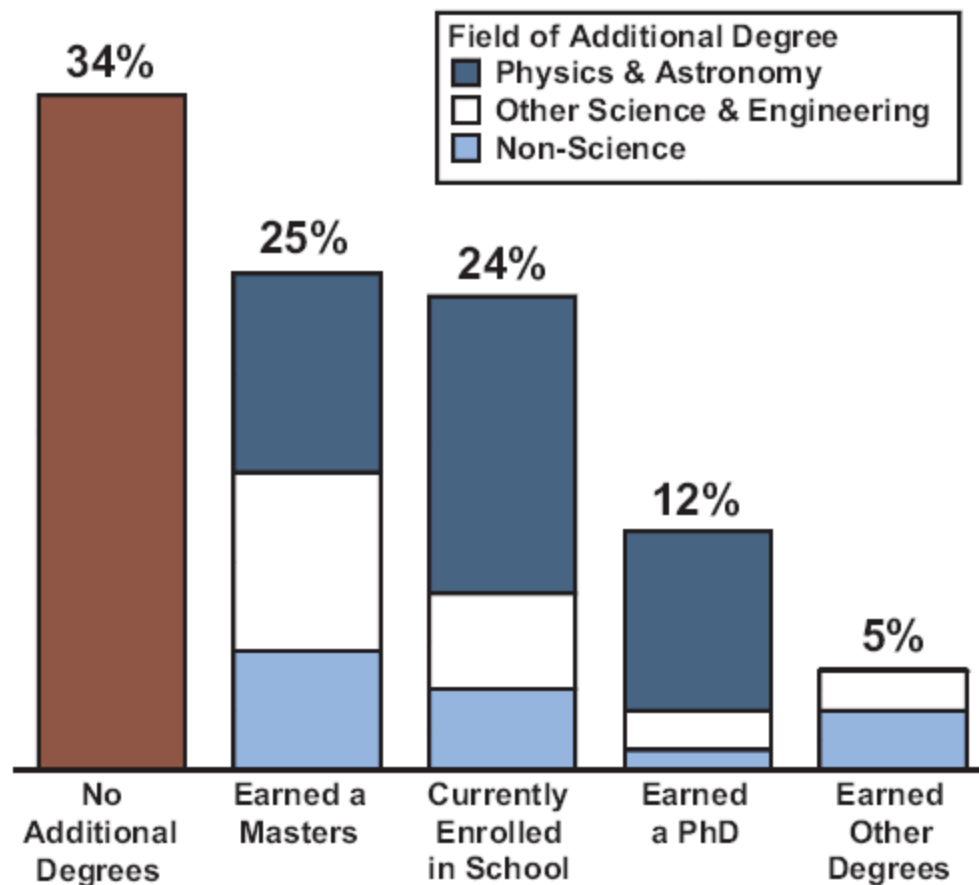
Or: I may not want to be stuck in a
University for the rest of my life

Physics Bachelor's 1 Year Later



Source: AIP Statistical Research Center, Initial Employment Survey Classes of 2007 and 2008.

Highest Degree Obtained by Physics Bachelors, Five to Seven Years After Degree



Source: 1998 Bachelors Plus Five Study

Two possible routes

Advanced degree

- Master's and/or PhD
- Grad School
- Professional research
 - Professor
 - Other research

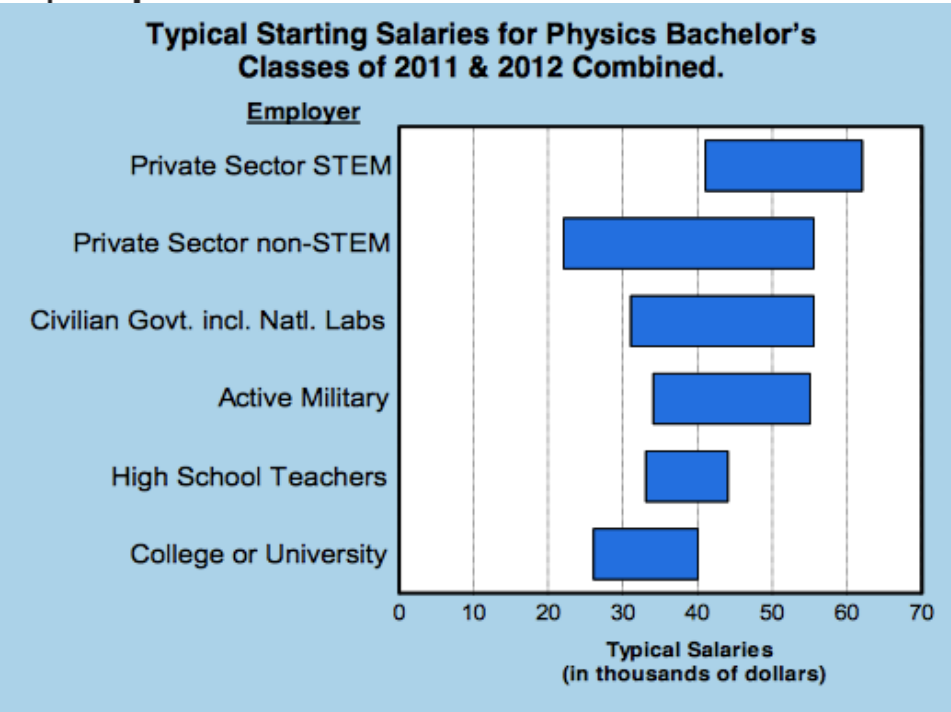
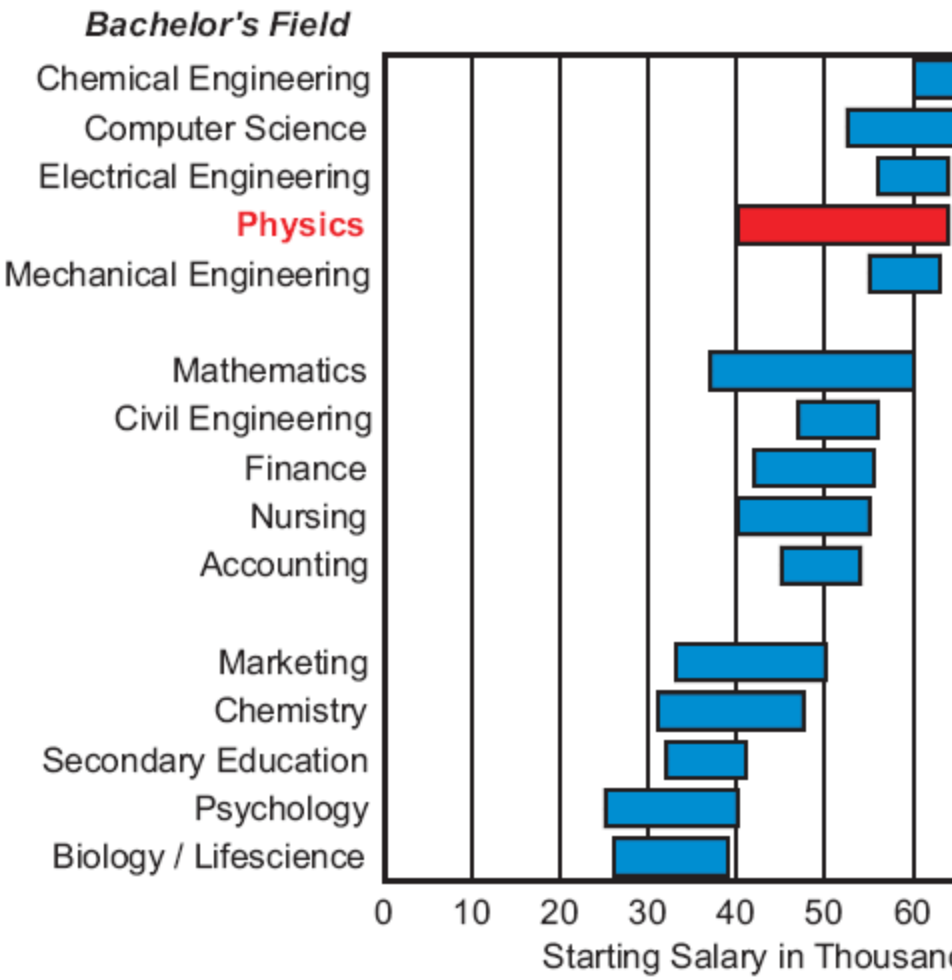
Job right after

Bachelor's degree

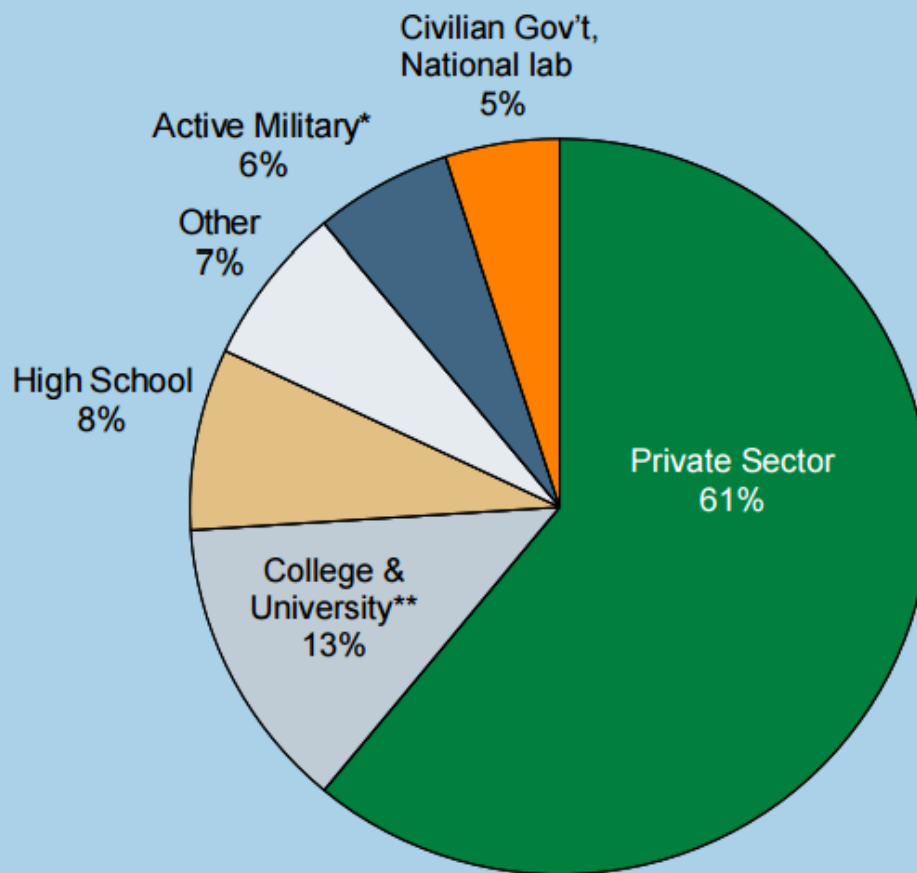
- A job is not a career
- Your first job will likely not be your only job

What's a Bachelor's Degree Worth?

Typical Salary Offers by Campus Recruiters, AY 2008-09



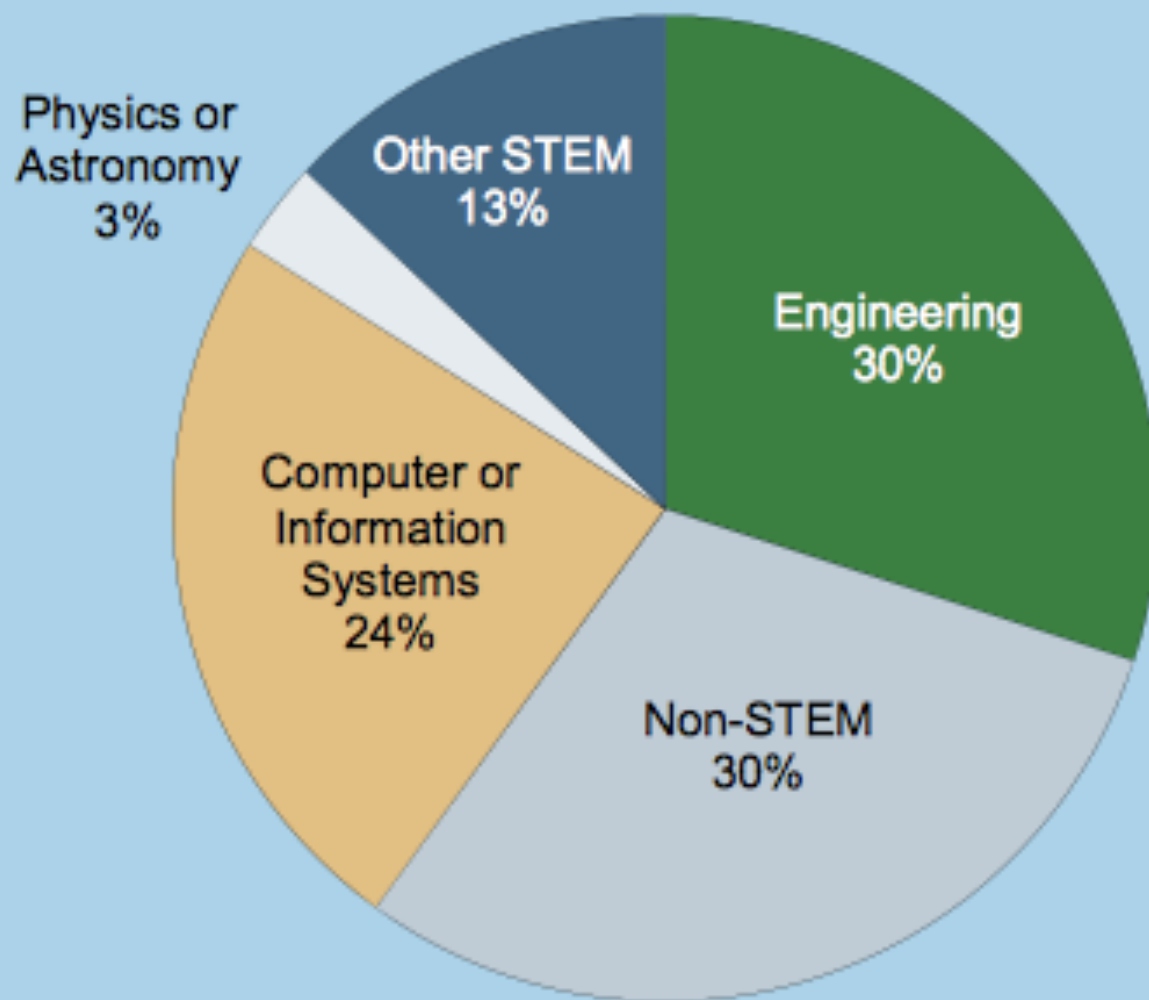
Initial Employment Sectors of Physics Bachelor's, Classes of 2011 & 2012 Combined.



*Data does not include degree recipients from the three military academies (US Naval Academy, US Military Academy, US Air Force Academy).

** Data include two- and four-year colleges, universities, and university affiliated research institutes.

Field of Employment for Physics Bachelor's in the Private Sector, Classes of 2011 & 2012 Combined.



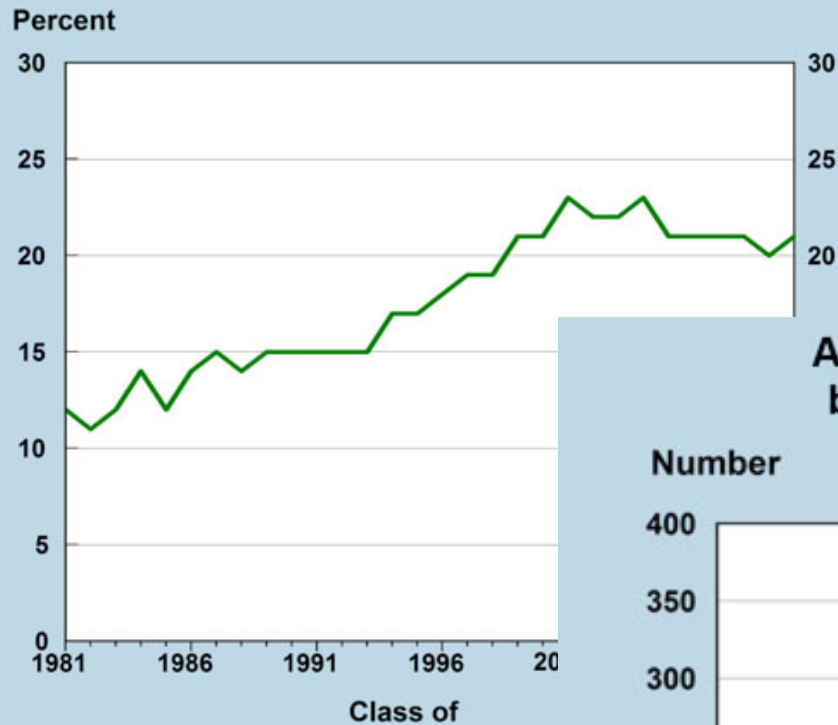
STEM refers to natural science, technology, engineering, and mathematics.

<http://www.aip.org/statistics>

Employers in California that Recently Hired New Physics Bachelor Recipients

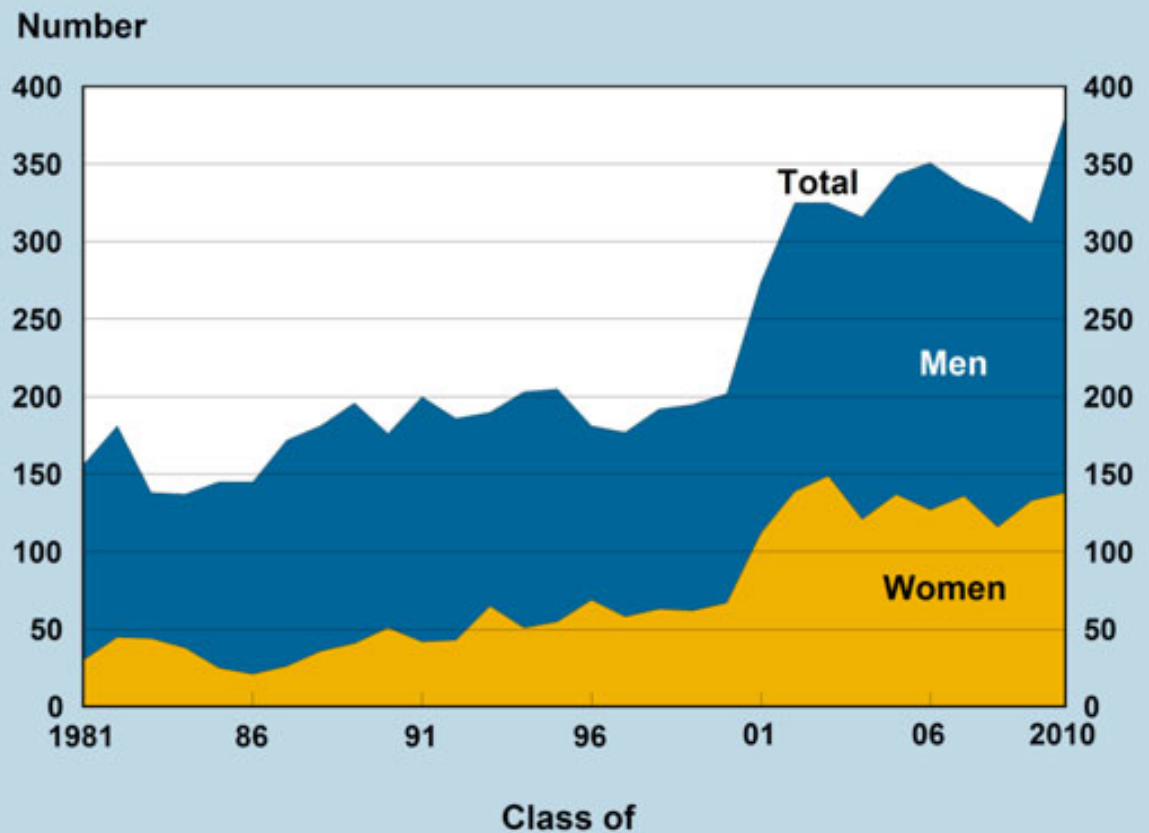
- 2K Games
- Aberdeen Proving Lab
- AOR, Inc.
- APV Research
- Arete Associates
- Art of Problem Solving
- Avanade
- Beckman Coulter
- Beckman Research Institute at City of Hope
- Boeing
- Capitol Door Service
- Centrillion Biosciences
- Cisco
- Euclid Elements
- Facebook
- Flowline
- Fuse Interactive
- Gamma Medica-Ideas
- General Atomics Aeronautical Systems, Inc.
- Google
- Guided Discoveries, Inc.
- Haas Automation
- Harris Miller Miller & Hanson, Inc
- Hitachi GST
- Illumina, Inc.
- Intel Labs

Percent of Physics Bachelor's Degrees Earned by Women, Classes of 1981 through 2010.



<http://www.aip.org/statis>

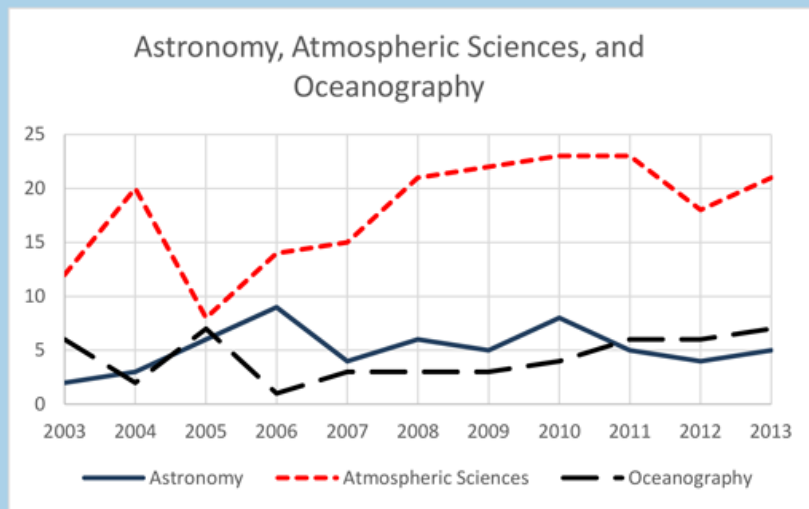
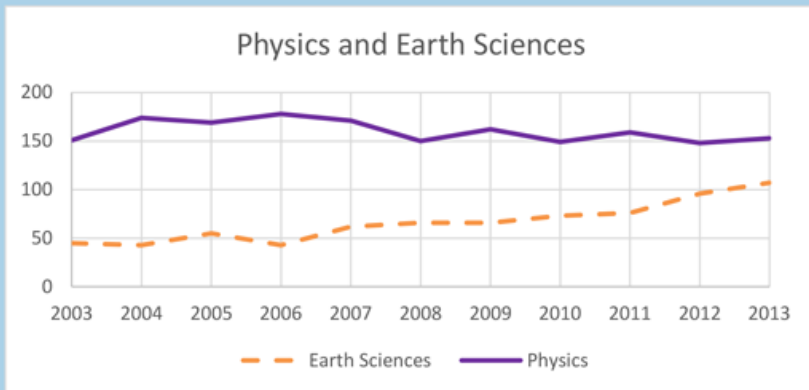
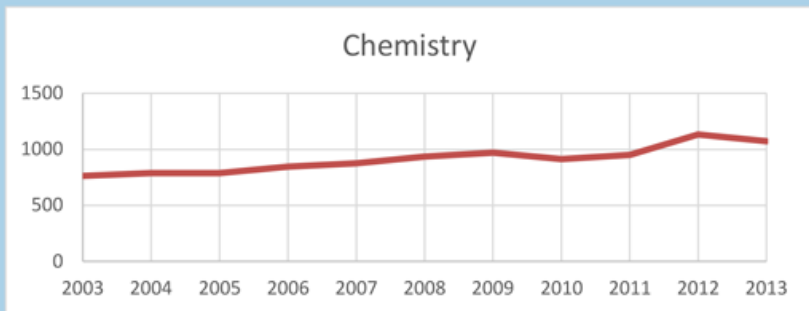
Astronomy Bachelor's Degrees Awarded by Gender, Classes 1981 through 2010.



<http://www.aip.org/statistics>

Trends in Bachelor's Degrees Earned by African Americans in Physical Science Fields, 2003-2013

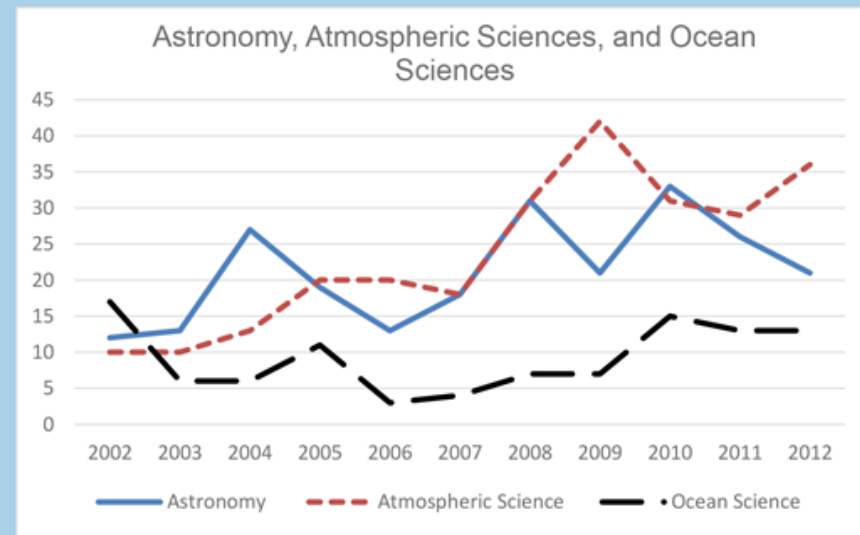
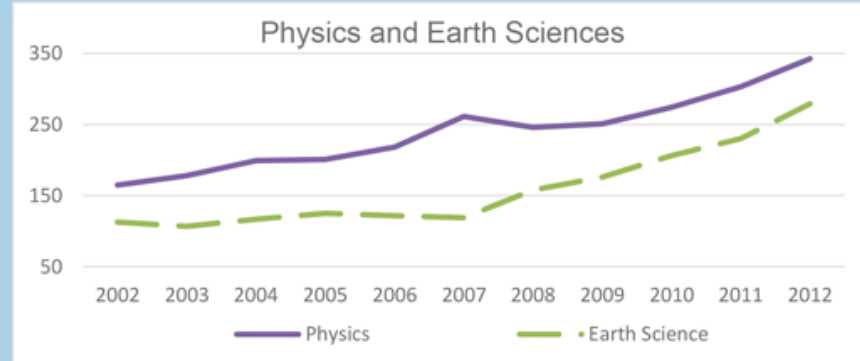
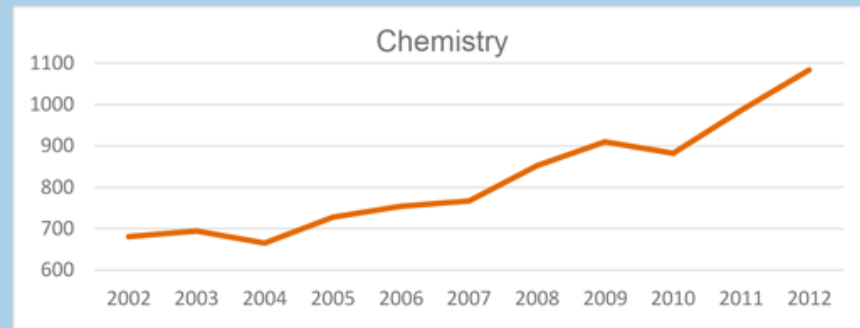
Number of Bachelor's Degree Recipients



www.aip.org/statistics

Trends in Bachelor's Degrees Earned by Hispanics in Physical Science Fields, 2002-2012

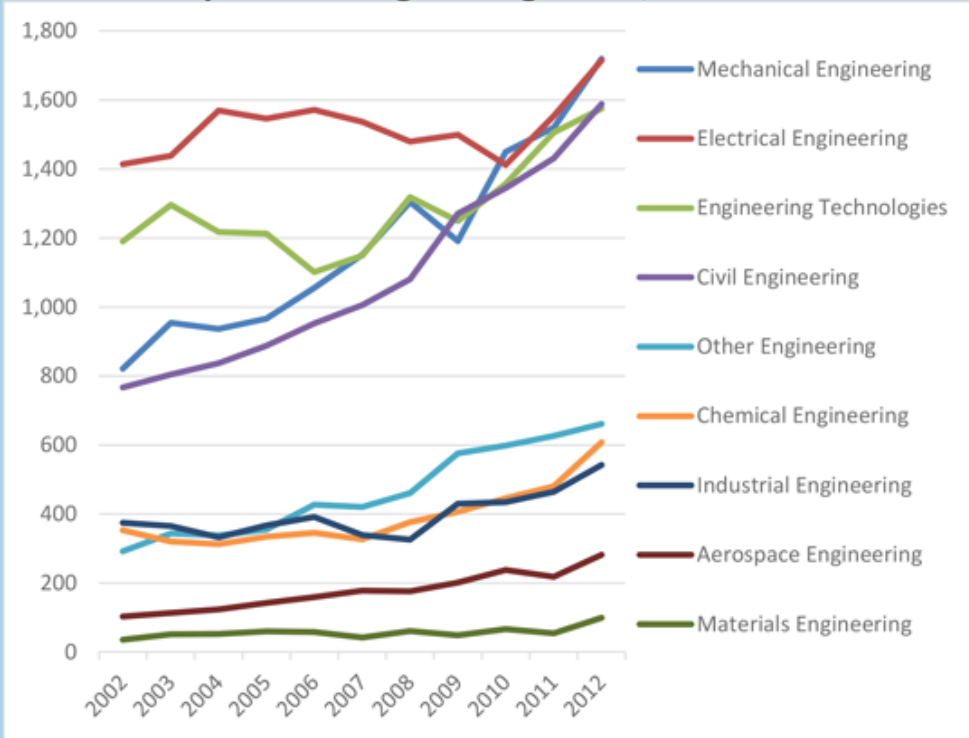
Number of Degree Recipients



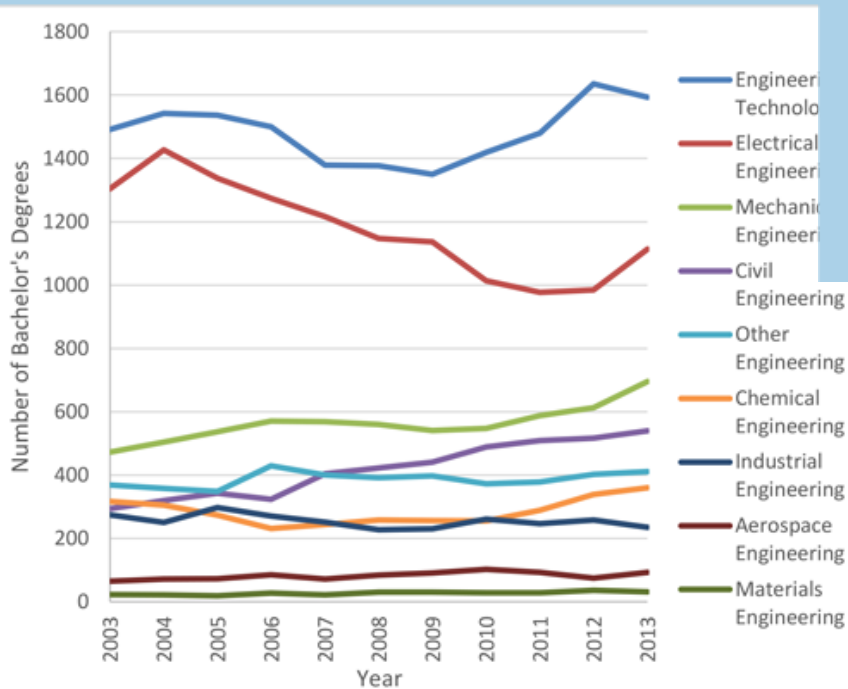
Year

www.aip.org/statistics

Trends in Bachelor's Degrees Earned by Hispanics in Engineering Fields, 2002-2012



Trends in Bachelor's Degrees Earned by African Americans in Engineering Fields, 2003-2013

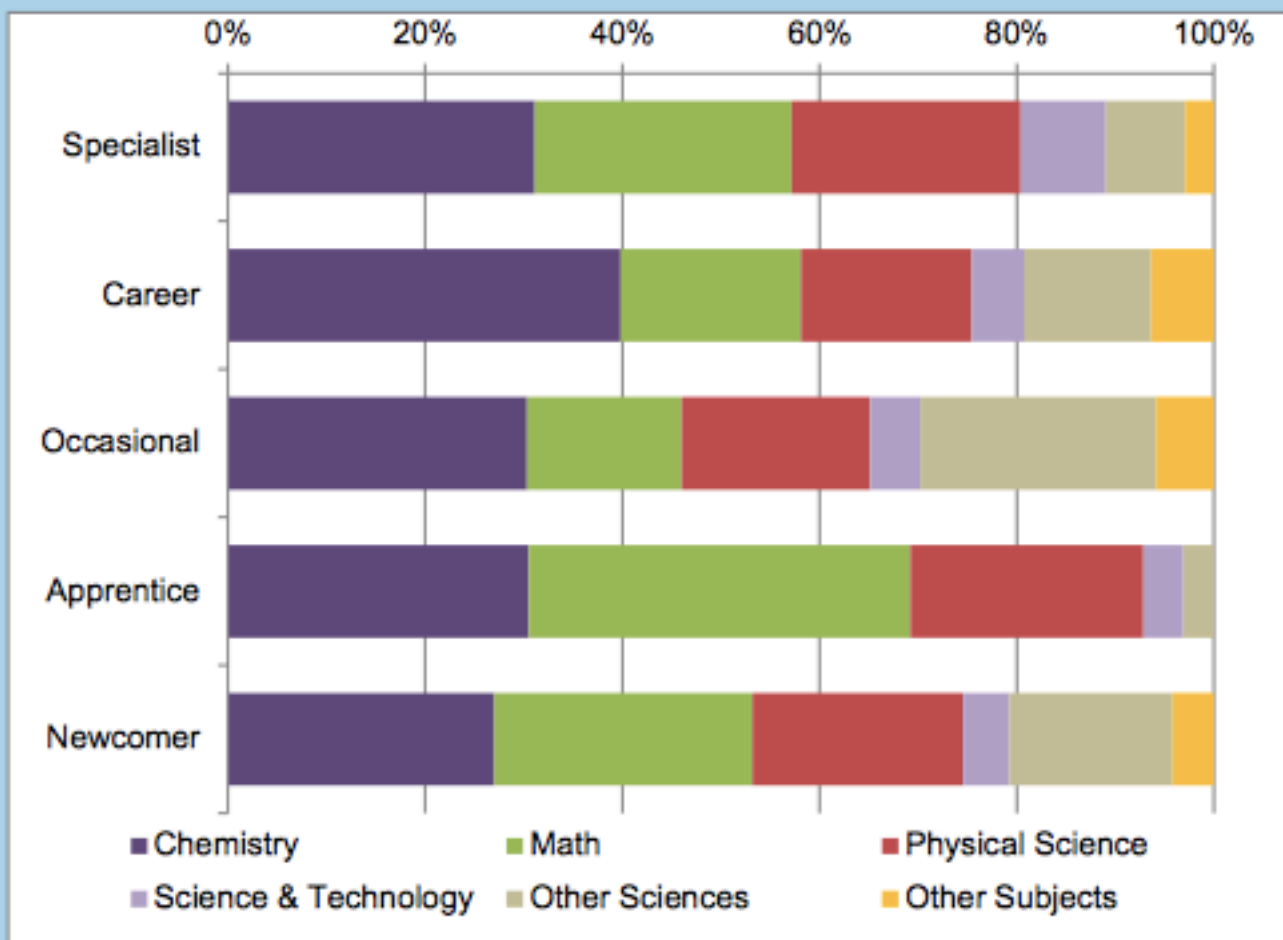


www.aip.org/statistics

www.aip.org/statistics

What Do High School Physics Teachers Teach?

Variation in Non-Physics Classes Taught
By Type of Physics Teacher, 2012-13



Preparation for the Job Search

1. Take one burden off your back
 - Relax
2. Make the acquaintance of alumni from your department.
 - Get to know upperclassmen
 - Invite alumni to visit.
3. Make choices that will set you apart.

Set yourself apart

- A physics degree with a solid GPA is the first step.
- Develop other skills
 - Computer programming, writing, communication
 - Second language, business course
- Do an internship
 - Or, arrange for a shadowing experience or do independent research
 - http://www.nsf.gov/crssprgm/reu/reu_search.jsp

Research Experiences of Physics Undergraduates

Working with a professor on a project	54%
As part of a thesis project	40%
Research Experience for Undergraduates (REU-funded by the National Science Foundation)	23%
At a National Lab	10%
A co-op or internship	7%
None	26%

The total adds to more than 100% as seniors were permitted to indicate more than one type of research experience.

Source: AIP Statistical Research Center, Senior Survey.

PhD

- Research Degree
- Grad School in Physics, Astronomy, Engineering most common
- Takes an average of six years to complete
- Two years for a master's degree
- Most PhD education is funded
- If interested, should get BS not BA
- Undergraduate research important
- GRE exam very important for some schools

UC Davis Admission Standards

Year	Undg GPA	GRE-Verbal	GRE-Quant	GRE-Anal	GRE-Physics
2007	3.54	81.8	86.6	59.8	56.1
2006	3.63	74.8	86.0	61.9	69.0
2005	3.54	73.1	81.4	65.8	52.0
2004	3.57	74.9	84.1	73.3	46.1
2003	3.51	75	84	74	47
2002	3.56	68	85	75	43
2001	3.44	70	85	66	35
2000	3.42	63	82	68	36
1999	3.51	77	88	83	46
1998	3.43	62	88	72	46
1997	3.53	76	87	79	49
1996	3.42	74	87	78	45
1995	3.54	73	89	78	49
91-95	3.49		87		55
Five Year Averages					
All Domestic	3.56 +/- 0.35	71.5 +/-20	84.3+/-10	65.7+/-25	51.2+/-25

2007 Accept Rate = **39%** (33/89)

Five Year Averages:

A: 33%

B: 49%

Enrollment and Acceptance Rates:

Year	CA Enroll	CA Admit	CA Apply	Dom. Enroll	Dom. Admit	Dom. Apply	For. Enroll	For. Admit	For. Apply
2007	10	31	52	16	45	88	7	13	159
2006	6	32	71	3	20	80	3	14	106
2005	15	32	57	8	27	52	8	19	87
2004	20	37	55	11	32	39	5	13	94
2003	16	27	30	9	28	36	0(3)	0(3)	51(54)
2002	8	28	35	1(4)	10(13)	31	5(9)	13(18)	44
2001	8(17)	16(27)	34	2	10	21	4	23	47
2000	12	22	24	6	23	25	4	10	38
1999	5	17	19	5	19	24	9	18	61
1998	11	21	24	3	25	32	6	13	36
1997	7	19	30	4	19	25	1	1	74
1996	11	21	31	2	12	19	2	2	47
1995	6	13	29	2	18	27	0	0	38
2007 Rate	32%	60%		36%	51%		54%	08%	
02-06 Ave	42%	62%		29%	50%		36%	18%	

The Application Packet – Increasing Your Success Rate:

- Grades – GPA
 - GPA in Major
 - GPA from two schools
- Standardized Tests – GRE, TOFEL
 - GRE – Quantitative
 - GRE – Verbal
 - GRE – Analytical Writing
 - GRE – Subject Test
- Letters of Recommendation
 - Best are from physics faculty
- Personal Statement
 - 1-2 pages – no small fonts
 - State your goals, state your strengths
 - Explain anything unusual
- Contacts – School Visits

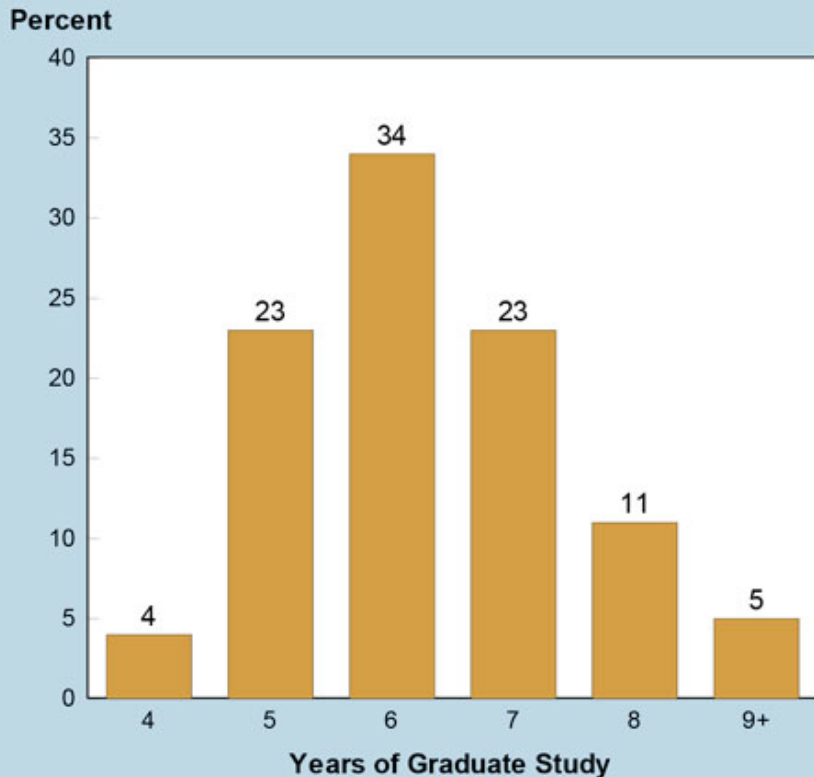
Who Reads Your Packet?

- Busy Faculty
- NOT administrators
- Specialists in your intended research area

Maximizing Success:

- Apply to the right schools
- Do your Homework on to which school to apply
- Talk to the faculty at your home institution
- Apply to 3-5 Schools

Years of Physics Graduate Study to Receive a PhD, Classes of 2007 & 2008 Combined.

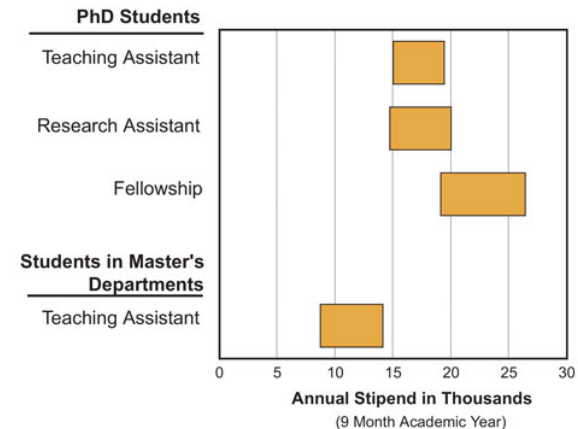


Note: This graph depicts the number of full-time equivalent years of physics graduate study completed in the US. Includes US citizens only.

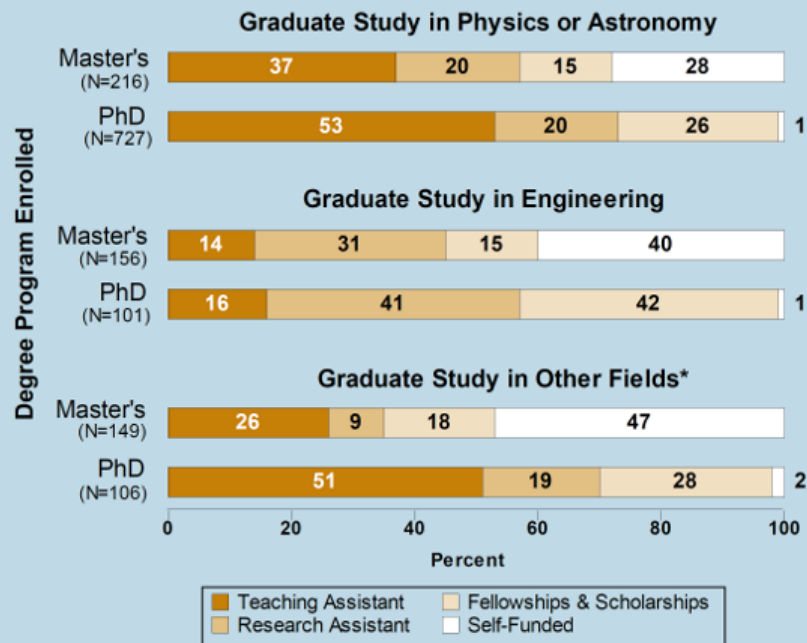
<http://www.aip.org/statistics>

Typical Stipends

First-Year Physics Graduate Students



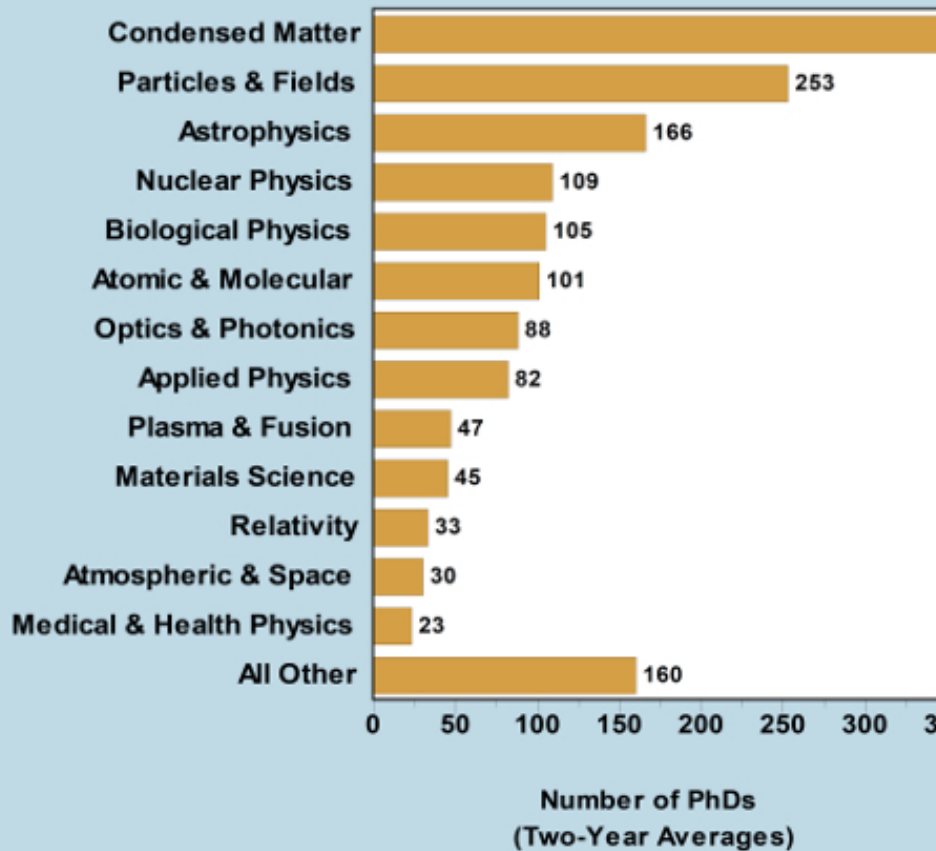
Primary Types of Financial Support for Physics Bachelor's One Year After Degree, Classes of 2011 & 2012 Combined



*Does not include professional degree fields such as law and medicine.

<http://www.aip.org/statistics>

Number of Physics PhDs Granted by Subfield From Physics Departments, Classes of 2010 & 2011 Combined.

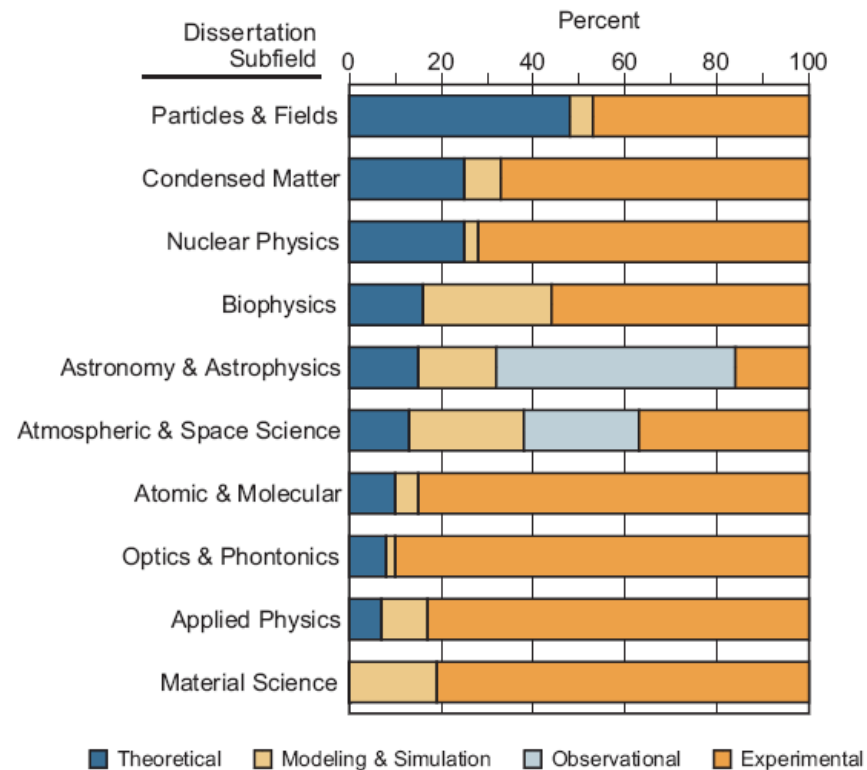


Note: These data are based on a 2 year average of 1,623 PhDs co U.S. physics departments. Additionally, there was an aver 158 PhD astronomers from departments that offer astronomi degrees.

<http://www.aip.org/statistics>

Type of Dissertation Research

Physics and Astronomy PhD Classes of 2002 & 2003



Starting Salaries for Physics PhDs, Classes of 2011 & 2012 Combined

Potentially Permanent Positions

Government Lab
(N=17)

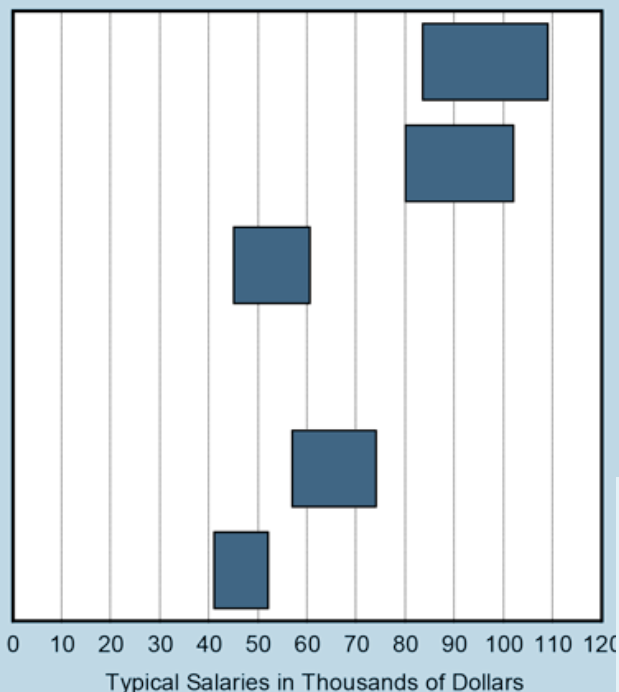
Private Sector
(N=127)

University &
4-year College
(N=42)

Postdocs

Government Lab
(N=86)

University
& UARI
(N=386)



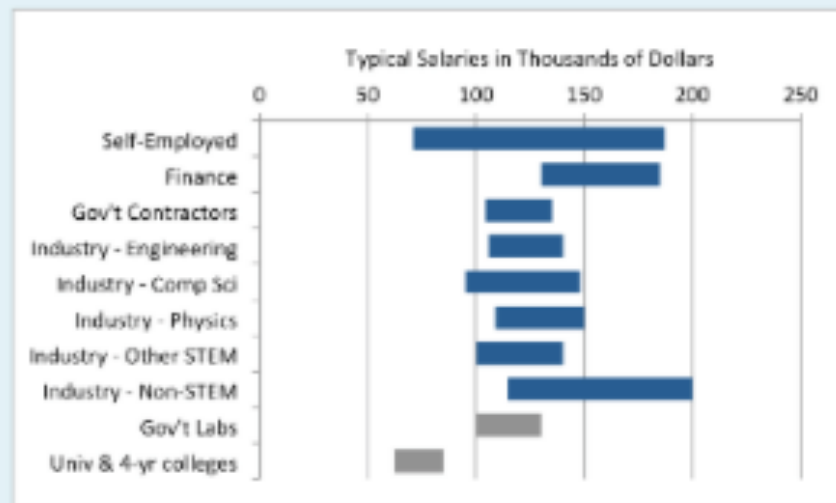
Data only include US-educated PhDs who remained in the US after earning their degrees. The ranges of salaries represent the middle 50% i.e. between the 25th and 75th percentiles. Government Lab includes Federally Funded Research and Development Centers, e.g. Los Alamos National Laboratory. UARI is University Affiliated Research Institute. The data for PhDs holding potentially permanent positions in academia include salaries based on the 9-10 and 11-12 month commitments. "N" represents the number of individuals who were full-time employed and provided salary data.

<http://www.aip.org/statistics>

PhD Salaries 10 Years Later

Typical PhD Physicists Salaries by Career Type, 2011 10 – 15 Years after Degree

Data show middle 50% of respondents



Data include US-educated physicists who earned their PhDs 10 – 15 years earlier and were working full-time in the US in 2011.

Preparing to seek your first job

1. Series of questions for self-assessment
2. Identify your own skills
3. Determine what you value in a job
4. Reflect on a list of assets identified by physicists in industry
5. Visit <http://careers.aps.org/search/browse/>

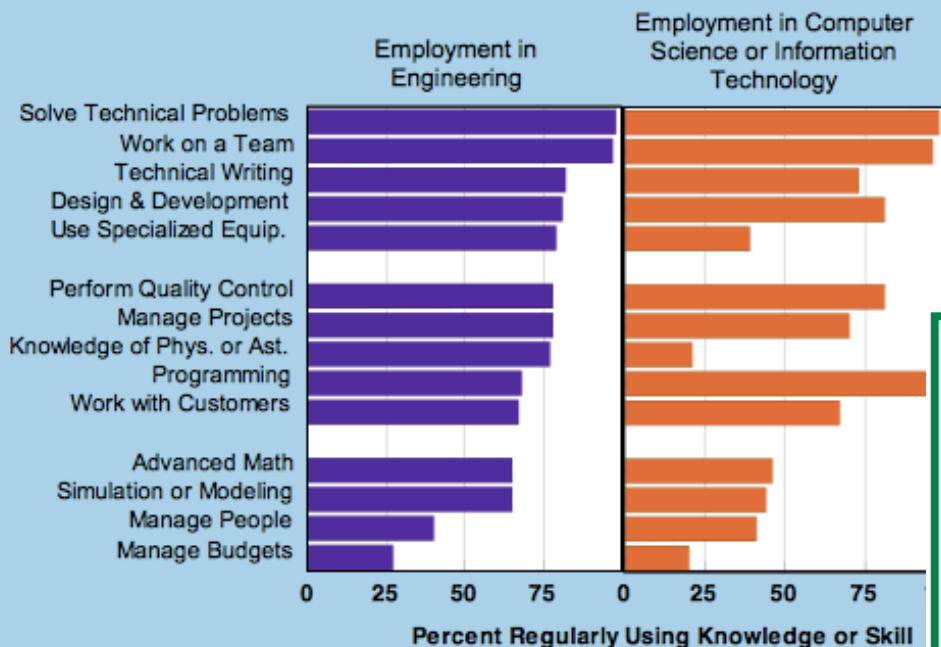
Self -assessment

1. Do I have overarching goals?
2. Do I want my life' s story to be told through my own accomplishments or through my influence on others?
3. Do I want my personal accomplishments to have tangible form?
4. Do I want to be a generalist or specialist?

Other questions

- What do I enjoy doing?
- What are my personal strengths/weaknesses?
- What are my technical skills and experiences?
- What are my non-technical skills and experiences?
- Am I better at starting a project or at follow-through?
- Am I more a leader or a follower?
- Am I an idea person or a detail person?
- Am I a people person?
- Do I prefer a task where I work alone or with others?
- What is important to me – Money? Job Satisfaction? Prestige?
- Am I willing to relocate?
- What types of positions or responsibilities/dues are not acceptable?
- What are my salary needs?

Knowledge and Skills Regularly Used by Physics Bachelor's Employed in the Private Sector, Classes of 2011 & 2012 Combined.

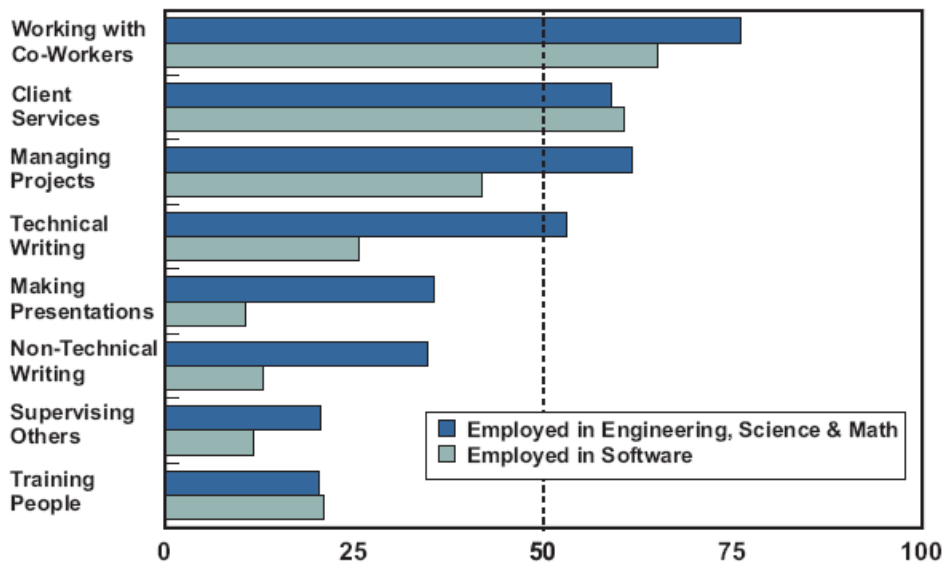


Percentages represent the physics bachelor's who chose "daily," "weekly," or "monthly" on a four-point scale that also included "never or rarely."

<http://www.aip.org/statistics>

Communication and People Skills

Percentage of physics bachelors who spend a large amount of time on the following work activities, 5-7 years after earning their degrees



Source: 1998-99 Bachelors Plus Five Study