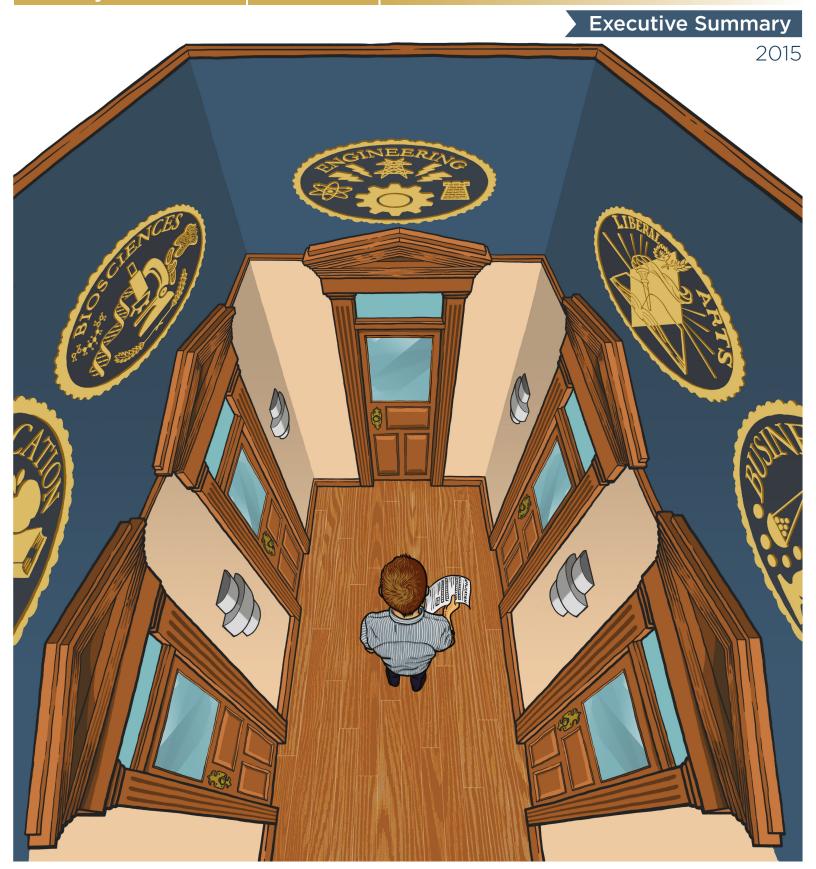
GEORGETOWN UNIVERSITY



Center on Education and the Workforce

McCourt School of Public Policy

Anthony P. Carnevale | Ban Cheah | Andrew R. Hanson



FACT SHEET

The Economic Value of College Majors

In this report, we analyze the annual earnings of college graduates by major. Entry-level earnings are for ages 21-24. Mid-career earnings are for ages 25-59. Earnings are reported in 2013 dollars.

Majors are aggregated into seven supergroups:















STEM (Science, technology, engineering, and mathematics)

Business

Teaching and serving (E.g., education and social work)

Health

Arts, humanities, and liberal arts

Career-focused (E.g., industrial arts)

Social sciences

We also analyze the prevalence of majors among college-educated adults and how much graduate degree holders earn based on their undergraduate major compared to Bachelor's degree holders. Finally, we analyze the 10 highest- and lowest-paying majors among 137 detailed major subgroups.



Graduate degree holders include workers between the ages of 25 and 59. Graduate degree holders' majors refer to their undergraduate major, not their graduate field of study.



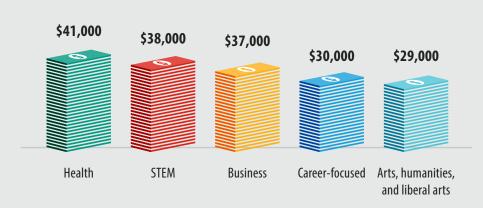
Bachelor's degree holders refers to adults between the ages of 21 and 59 with a Bachelor's degree but no further education. Earnings data are reported for workers employed full-time, full-year. Data on the prevalence of majors include all college-educated adults, including those neither employed nor in the labor force.



High school graduates refers to workers between the ages of 21 and 59 with nothing other than a high school diploma, employed full-time, full-year.

FIGURE

Not all Bachelor's degrees are created equal.



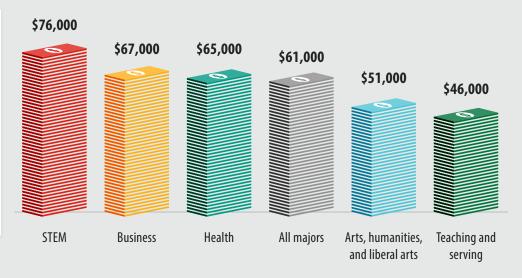
Entry-level

At the entry level, health majors earn \$41,000 annually, while humanities and liberal arts majors earn \$29,000 annually.

Median annual wages of college-educated workers (ages 21-24) by major supergroup (2013\$)

Mid-career

Among prime-age workers,¹ those who majored in STEM earn \$76,000 annually, while those who had a teaching and serving major earn \$46,000 annually.



Median annual wages of college-educated workers (ages 25-59) by major supergroup (2013\$)

2 E E E

College graduates' wages increase over the course of their careers, while the differences in wages among majors grow larger.

¹ "Prime-age workers" refers to those between the ages of 25 and 59.



Majors play a larger role in determining earnings than the decision to go to college.

\$3.4 MILLION

\$1 MILLION



The difference between the lifetime wages of college and high school graduates is \$1 million; the difference between the highest- and lowest-paying college majors is \$3.4 million.



Difference in lifetime wages of college and high school graduates

Difference in lifetime wages of highest- and lowest-paying majors

Lifetime wage premium (in millions of 2013\$)

FIGURE 4

Your major isn't your destiny.

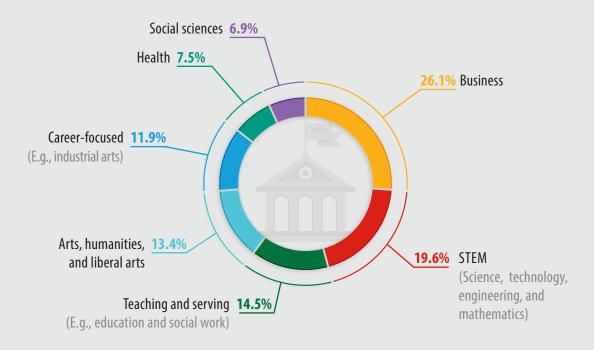
Some college graduates who have generally low-paying majors earn more than some college graduates with generally higher-paying majors: the top 25 percent of education majors earn \$59,000 or more annually, while the bottom 25 percent of engineering majors earn \$59,000 or less annually.



Interquartile range of annual wages of college-educated workers (ages 25-59) by educational attainment and major group (2013\$)

FIGURE 5

Business majors and STEM majors are the most common and among the highest-paying majors.



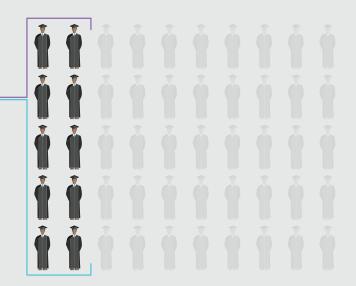
Share of college graduates (ages 25-59) by meta-major

FIGURE

Most students choose a major that is connected to the labor market.

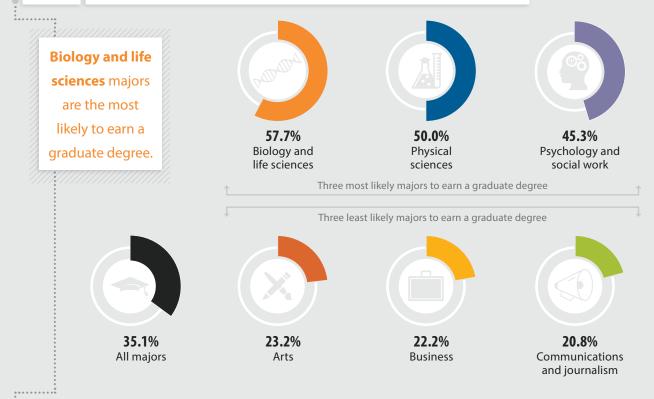
20%

Majors with weak connections to the labor market – humanities and liberal arts, social sciences, and arts majors – comprise only **20 percent** of college-educated workers.



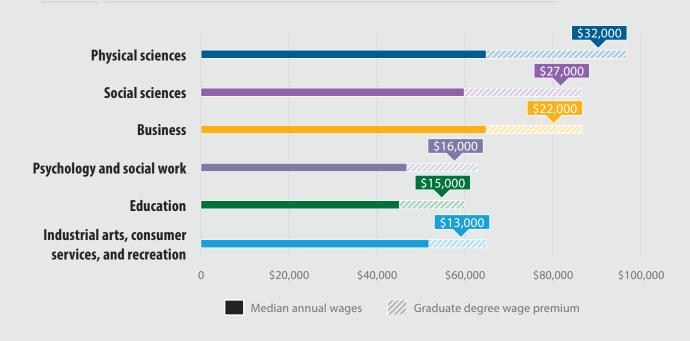
FIGURE

Some majors are more likely to lead to graduate school than others.



8 FIGURE

The benefit of a graduate degree is much greater for some majors than others.



What's It Worth?

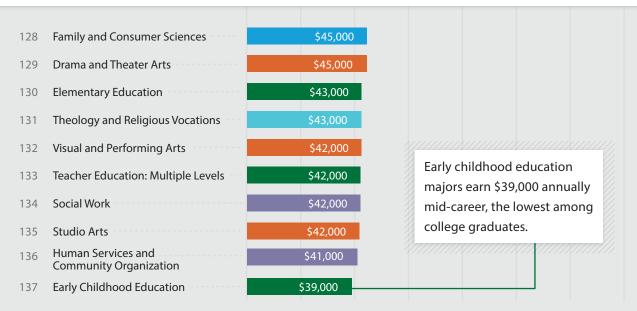
Highest- and Lowest-Earning Majors



Almost all of the highest-paying majors are in engineering fields.



The lowest-paying majors are in education, arts, and social work fields.



Median annual wages of college-educated workers (ages 25-59) by major subgroup (2013\$)

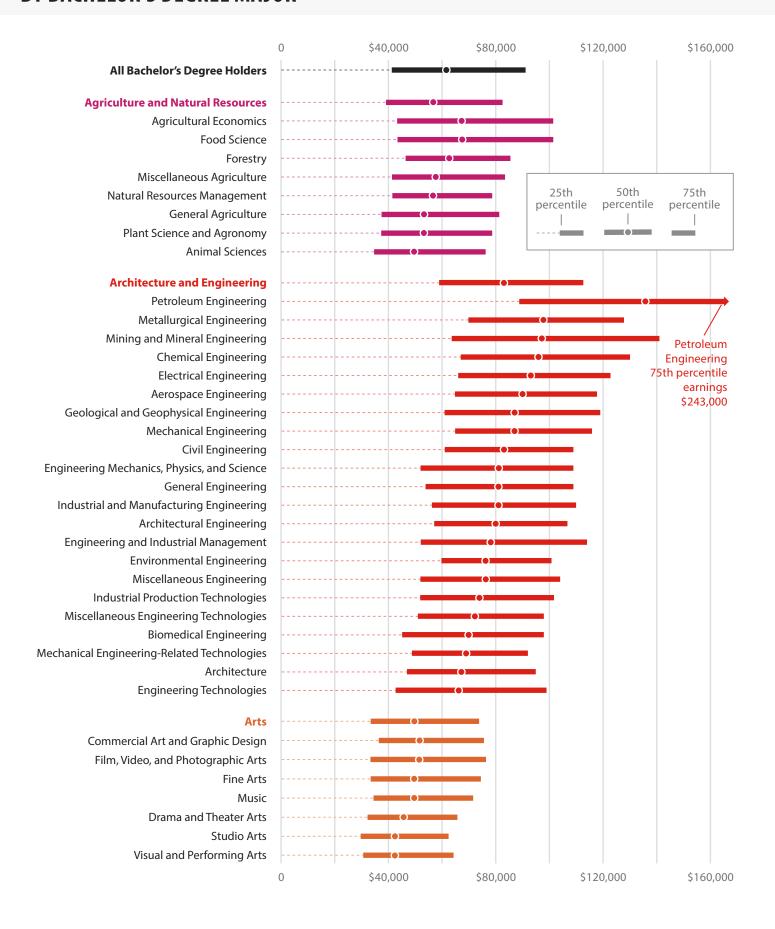
137 Detailed Majors

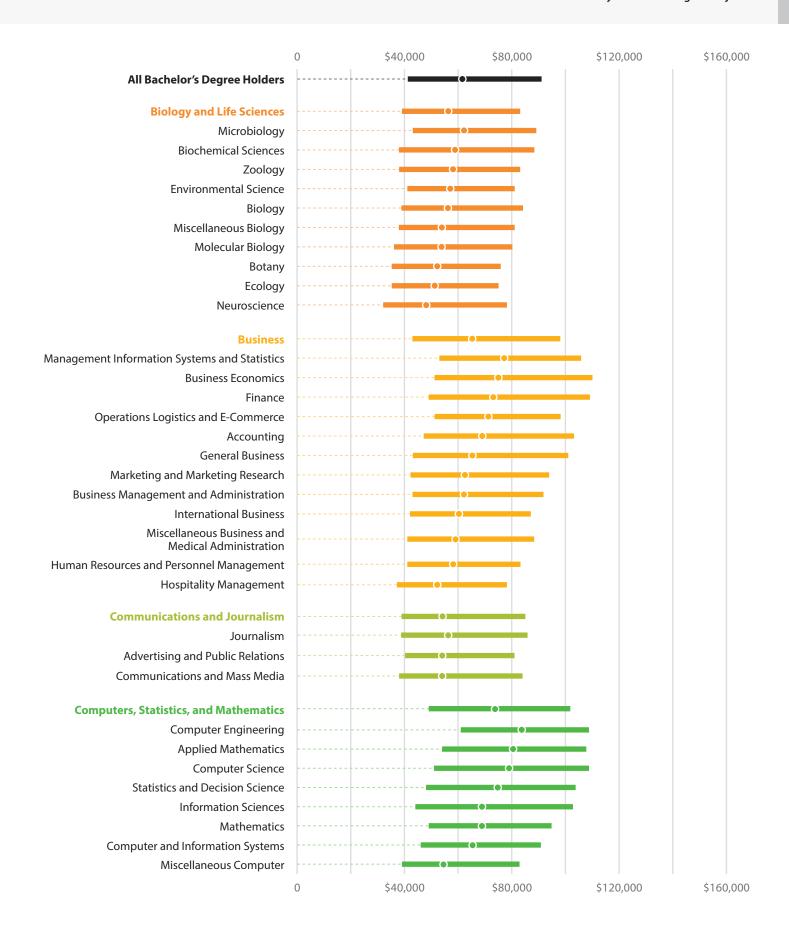
Selective Statistics

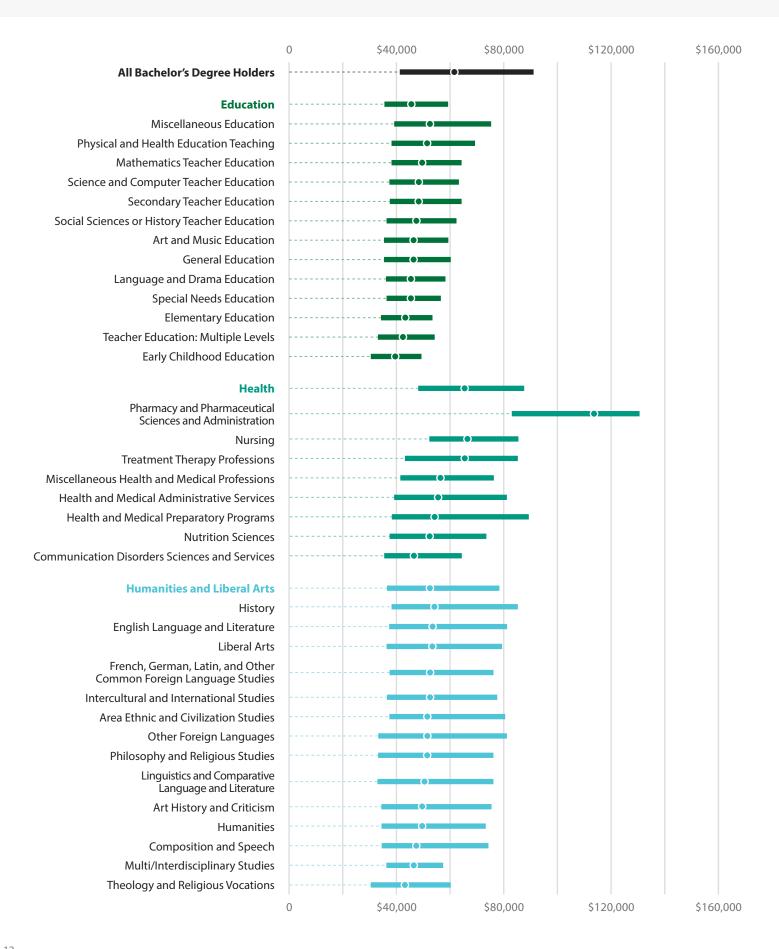
Contents

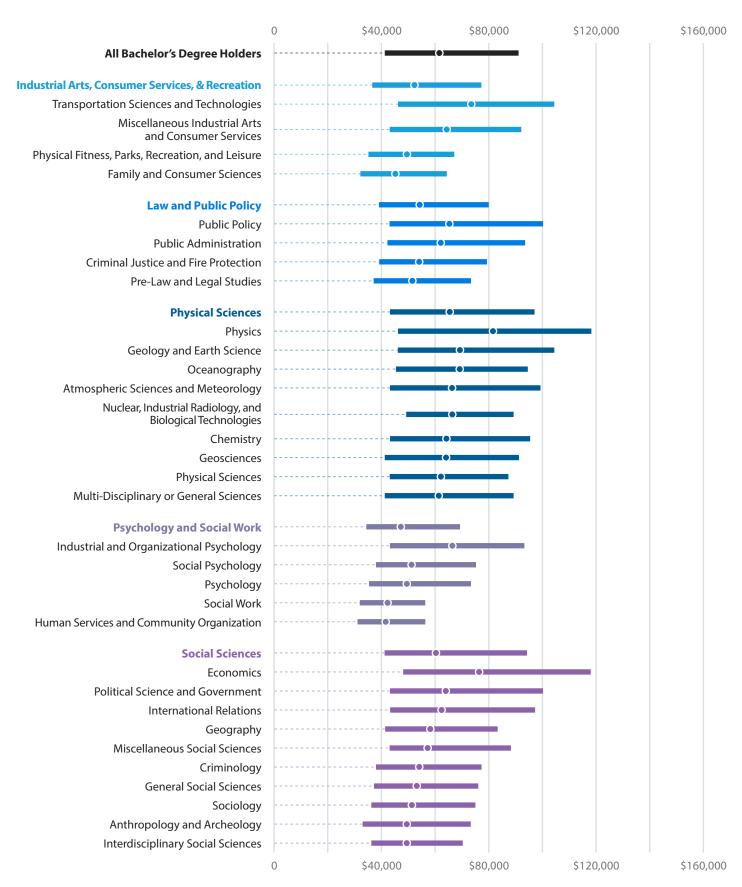
- Earnings at the 25th, 50th and 75th percentiles, by Bachelor's degree major
- 14 The graduate advantage, earnings at the 25th, 50th and 75th percentiles by Bachelor's degree major
- 30 All majors by group, ranked by earnings and popularity
- 34 Lowest- and highest-earning majors, Bachelor's degree holders
- 36 Lowest- and highest-earning majors, graduate degree holders
- 38 Majors ranked by popularity for Bachelor's degree holders
- Majors ranked by popularity for graduate degree holders

MID-CAREER EARNINGS AT THE 25TH, 50TH AND 75TH PERCENTILES, BY BACHELOR'S DEGREE MAJOR







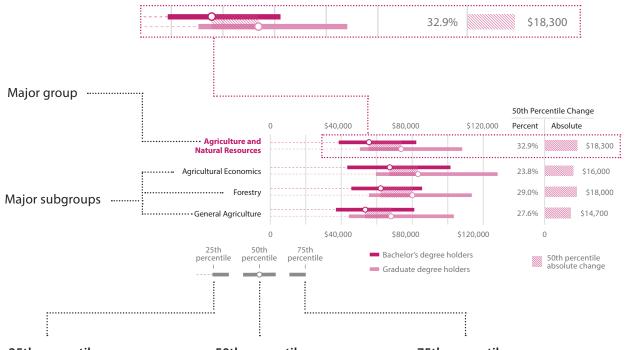


THE GRADUATE ADVANTAGE

The charts displayed in this section (the graduate advantage) show the interquartile range of annual wages for each major group and subgroup.

Each horizontal bar corresponds to a major group or subgroup. The leftmost point on the bar shows the 25th percentile of the wage distribution. The dot in the middle of the bar shows the median or 50th percentile of the wage distribution. The rightmost point on the bar shows the 75th percentile of the wage distribution.

The columns on the right correspond to the percentage and absolute difference between the median annual wage distribution of graduate degree holders and Bachelor's degree holders.



25th percentile

The bottom 25 percent of college-educated workers earn less than the 25th percentile.

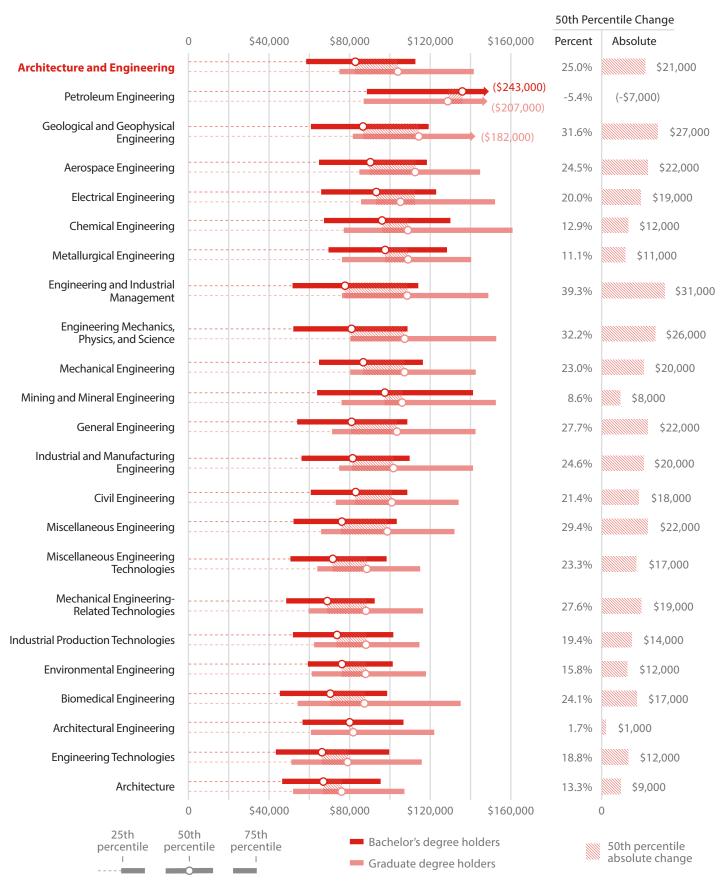
50th percentile

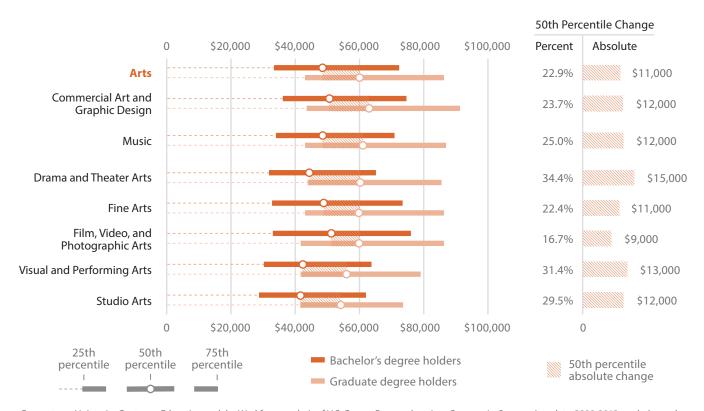
Half of college-educated workers earn more than the median and half earn less.

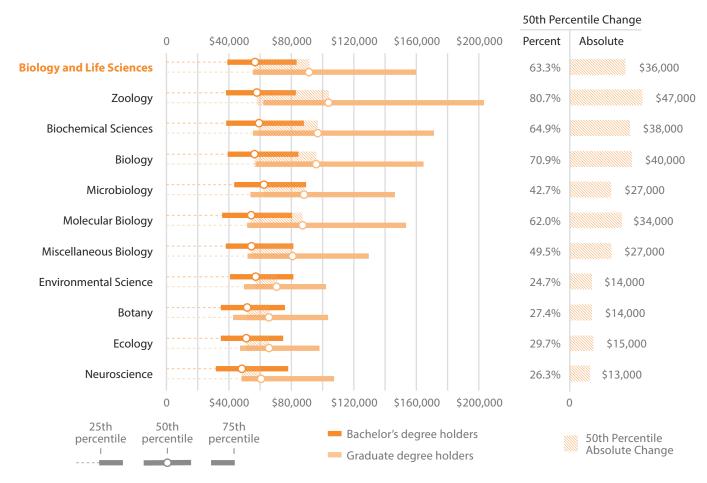
75th percentile

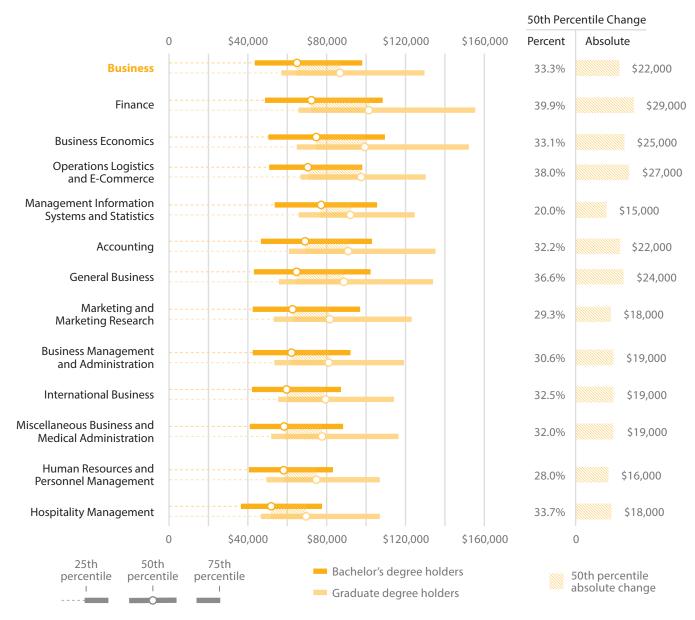
The top 25 percent of collegeeducated workers earn more than than 75th percentile.



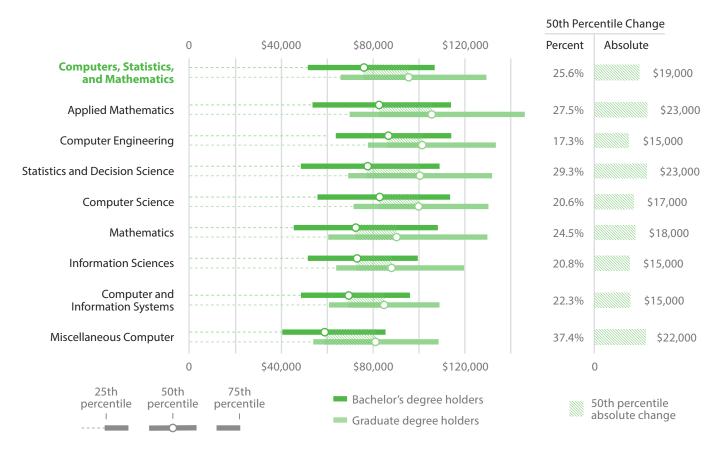


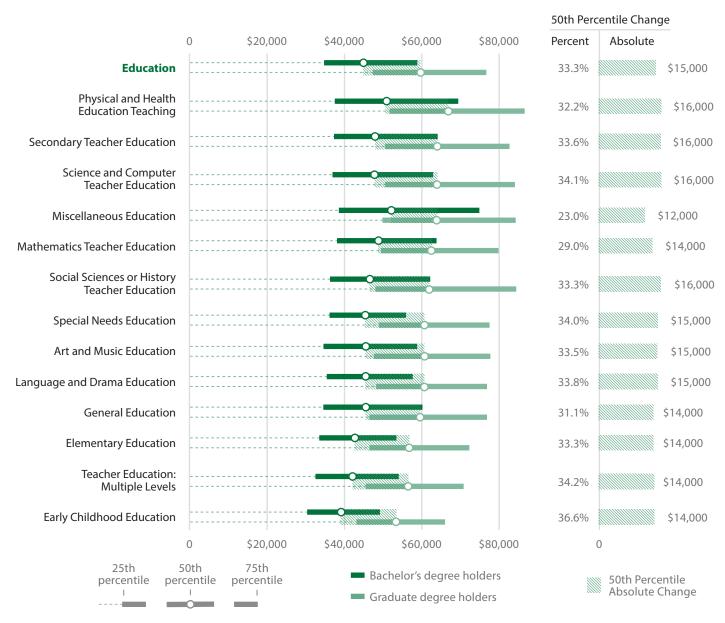


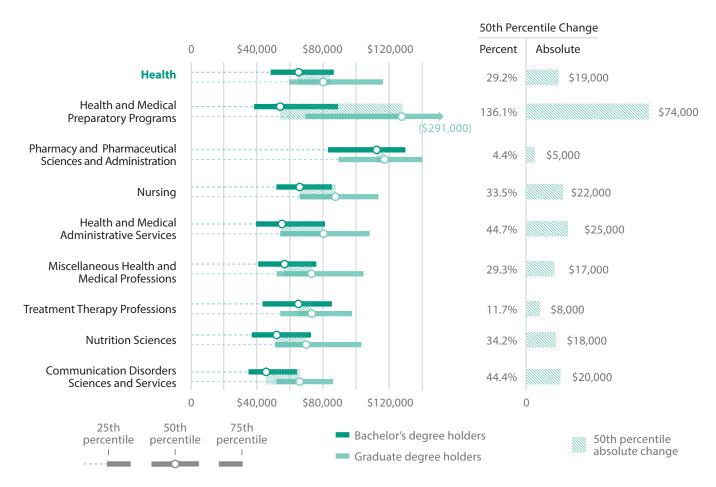


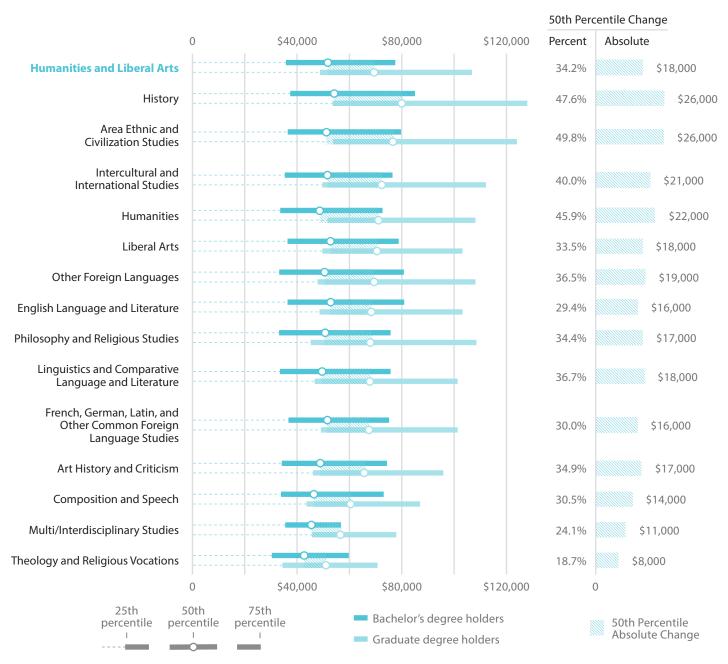


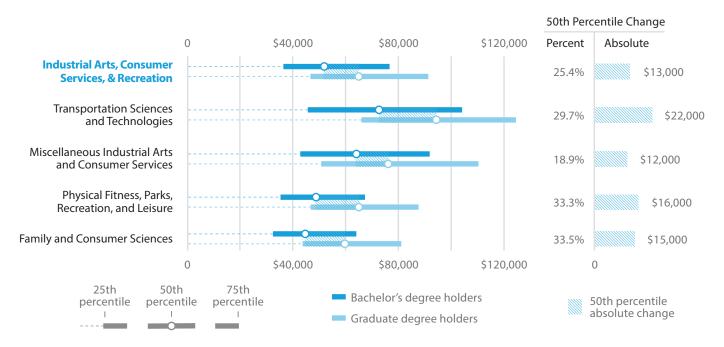


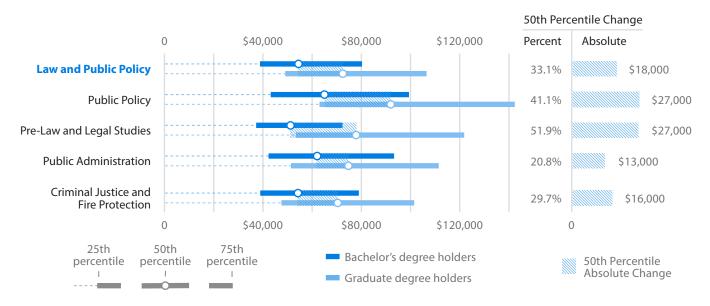


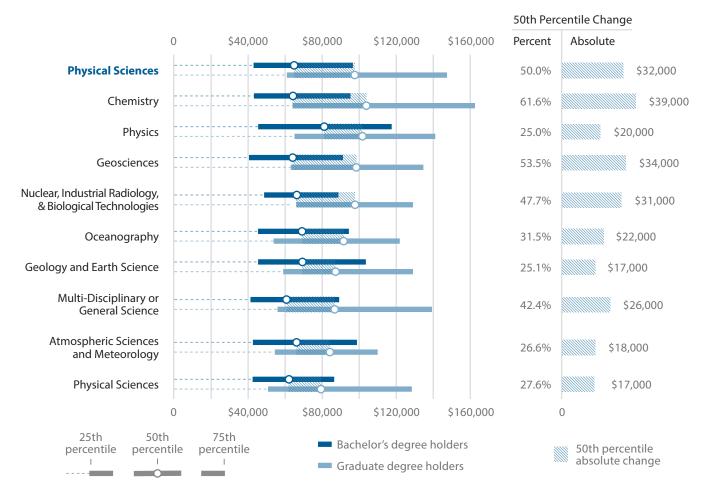


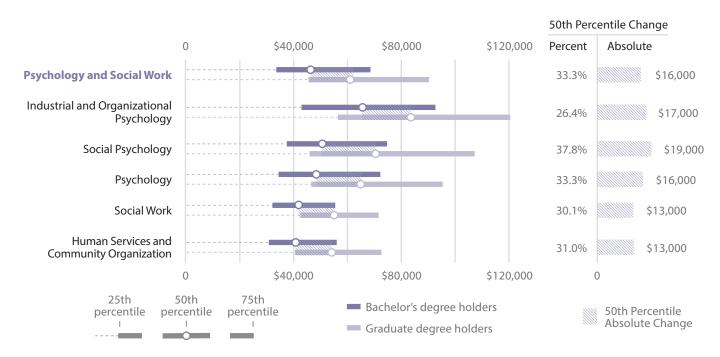


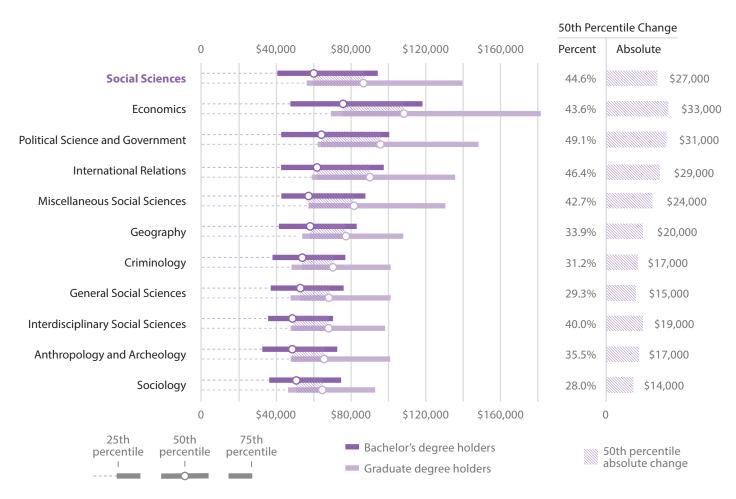












ALL MAJORS BY GROUP

RANKED BY EARNINGS AND POPULARITY

By earnings	By popularity		By earnings	By popularity
		Agriculture and Natural Resources		
39	112	Agricultural Economics	54	125
107	72	Animal Sciences	73	67
40	116	Food Science	71	119
55	99	Forestry	62	108
85	67	General Agriculture	96	89
70	70	Miscellaneous Agriculture	89	106
75	78	Natural Resources Management	82	90
86	86			
00	00	Plant Science and Agronomy	88	98
		Architecture and Engineering		
7	100	Aerospace Engineering	5	72
18	122	Architectural Engineering	57	133
41	34	Architecture	75	40
33	107	Biomedical Engineering	49	75
5	51	Chemical Engineering	7	38
12	31	Civil Engineering	22	33
6	17	Electrical Engineering	6	13
19	114	Engineering and Industrial Management	10	122
17	123	Engineering Mechanics, Physics, and Science	11	116
43	111	Engineering Technologies	67	127
22	128	Environmental Engineering	44	123
16	23	General Engineering	17	21
10	137	Geological and Geophysical Engineering	4	137
14	62	Industrial and Manufacturing Engineering	19	56
26	81	Industrial Production Technologies	45	115
8	24	Mechanical Engineering	12	18
37	113	Mechanical Engineering-Related Technologies	46	132
3	136	Metallurgical Engineering	8	128
4	131	Mining and Mineral Engineering	13	136
23	98	Miscellaneous Engineering	26	97
31	50	Miscellaneous Engineering Technologies	43	78
1	124	Petroleum Engineering	1	131
		Arts		
105	22	Commercial Art and Graphic Design	116	65
129	47	Drama and Theater Arts	124	64
98	58	Film, Video, and Photographic Arts	126	101
108	21	Fine Arts	125	36
113	36	Music	121	31
135	82	Studio Arts	134	93
132	97	Visual and Performing Arts	132	109

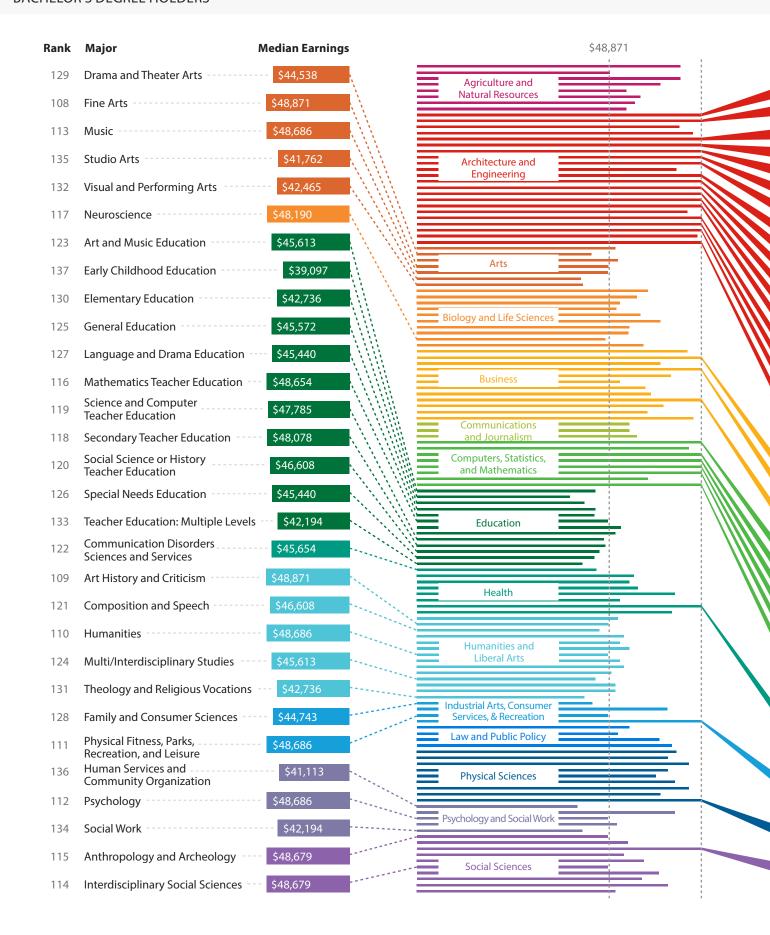
y earnings	By popularity		By earnings	By populari
		Biology and Life Sciences		
64	89	Biochemical Sciences	30	41
74	14	Biology	31	2
93	129	Botany	103	118
100	106	Ecology	104	102
71	63	Environmental Science	83	69
56	92	Microbiology	40	58
79	77	Miscellaneous Biology	59	50
83	115	Molecular Biology	48	80
117	133	Neuroscience	120	112
68	105	Zoology	15	59
		Business		
38	3	Accounting	37	9
25	87	Business Economics	25	95
58	1	Business Management and Administration	61	5
30	12	Finance	21	17
49	2	General Business	41	8
91	39	Hospitality Management	92	96
66	44	Human Resources and Personnel Management	77	61
62	74	International Business	66	86
21	45	Management Information Systems and Statistics	34	74
54	7	Marketing and Marketing Research	58	25
65	68	Miscellaneous Business and Medical Administration	70	105
32	94	Operations Logistics and E-Commerce	29	113
		Communications and Journalism		
78	42	Advertising and Public Relations	108	85
77	6	Communications and Mass Media	101	16
73	27	Journalism	81	49
		Computers, Statistics, and Mathematics		
13	119	Applied Mathematics	14	111
34	33	Computer and Information Systems	52	53
9	46	Computer Engineering	18	52
11	11	Computer Science	24	14
27	75	Information Sciences	42	91
29	30	Mathematics	38	19
63	40	Miscellaneous Computer	60	82
20	117	Statistics and Decision Science	23	104

Bachelor's Degree Ranking			Graduate Degree Ranking		
By earnings By popularity			By earnings	By popularity	
		Education			
123	49	Art and Music Education	119	44	
137	53	Early Childhood Education	136	54	
130	9	Elementary Education		4	
125	8	General Education		3	
127	61	Language and Drama Education	122	45	
116	102	Mathematics Teacher Education	115	66	
90	54	Miscellaneous Education	114	37	
101	38	Physical and Health Education Teaching	102	42	
119	108	Science and Computer Teacher Education	113	81	
118	55	Secondary Teacher Education	112	48	
120	76	Social Sciences or History Teacher Education	117	63	
126	56	Special Needs Education	118	32	
133	88	Teacher Education: Multiple Levels	130	73	
		Health			
122	93	Communication Disorders Sciences and Services	107	30	
76	65	Health and Medical Administrative Services	63	77	
81	118	Health and Medical Preparatory Programs	2	62	
72	25	Miscellaneous Health Medical Professions	78	23	
46	4	Nursing		10	
95	90	Nutrition Sciences	91	79	
2	57	Pharmacy and Pharmaceutical Sciences and Administration	n 3	39	
48	35	Treatment Therapy Professions	79	35	
		Humanities and Liberal Arts			
96	71	Area Ethnic and Civilization Studies	72	55	
109	80	Art History and Criticism	106	70	
121	96	Composition and Speech	123	99	
89	10	English Language and Literature	94	6	
92	43	French, German, Latin, and Other Common Foreign Language Studies	100	34	
82	18	History	64	11	
110	109	Humanities	84	103	
94	101	Intercultural and International Studies	80	87	
87	19	Liberal Arts	85	26	
106	91	Linguistics and Comparative Language and Literature	99	68	
124	110	Multi/Interdisciplinary Studies	131	120	
102	104	Other Foreign Languages	93	83	
103	48	Philosophy and Religious Studies	98	27	
131	41	Theology and Religious Vocations	137	46	

/ earnings	By popularit	ty	By earnings	By popularity
		Industrial Arts, Consumer Services, and Recreatio	n	
128	29	Family and Consumer Sciences	128	47
53	52	Miscellaneous Industrial Arts and Consumer Services	74	110
111	28	Physical Fitness, Parks, Recreation, and Leisure	109	43
28	60	Transportation Sciences and Technologies	33	100
20		mansportation sciences and recrimologies	33	100
		Law and Public Policy		
80	13	Criminal Justice and Fire Protection	87	24
97	83	Pre-Law and Legal Studies	68	88
59	103	Public Administration	76	84
47	127	Public Policy	35	114
		,		
		Physical Sciences		
42	126	Atmospheric Sciences and Meteorology	53	126
50	37	Chemistry	16	15
35	69	Geology and Earth Science	50	57
51	134	Geosciences	27	129
61	26	Multidisciplinary or General Science	51	28
44	120	Nuclear, Industrial Radiology, and Biological Technologies	s 28	117
36	130	Oceanography	36	130
57	135	Physical Sciences	65	134
15	73	Physics	20	29
		Psychology and Social Work		
136	79	Human Services and Community Organization	135	92
45	121	Industrial and Organizational Psychology	55	124
112	5	Psychology	110	1
99	132	Social Psychology	90	135
134	32	Social Work	133	22
		Social Sciences		
115	59	Anthropology and Archeology	105	51
84	85	Criminology	86	107
24	16	Economics	9	12
88	66	General Social Sciences	95	71
67	64	Geography	69	76
114	95	Interdisciplinary Social Sciences	97	94
60	84	International Relations	39	60
69	125	Miscellaneous Social Sciences	56	121
52	15	Political Science and Government	32	7
104	20	Sociology	111	20

LOWEST- AND HIGHEST-EARNING MAJORS

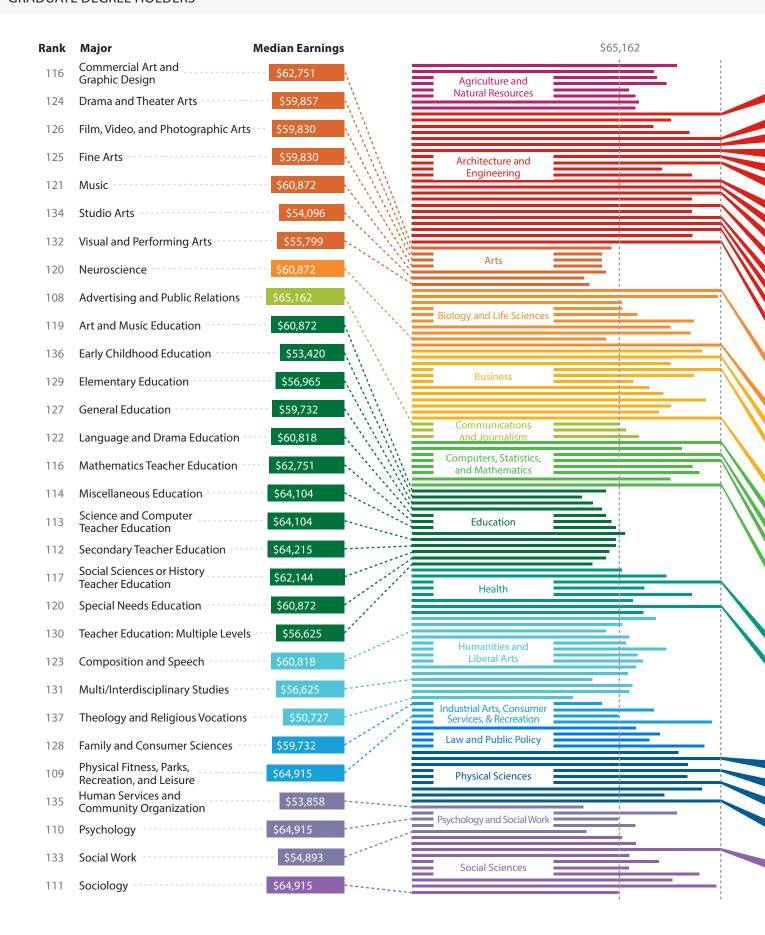
BACHELOR'S DEGREE HOLDERS



Rank	gs Major	2,501	\$72,
7	Aerospace Engineering		
18	Architectural Engineering	\$80,130	
5	96,156 Chemical Engineering		
12	Civil Engineering	\$82,8	
6	15 Electrical Engineering		
19	Engineering and Industrial Management	\$7	
17	Engineering Mechanics Physics and Science	\$80,787	
22	Environmental Engineering	\$76,0	
16	General Engineering	\$80,787	
10	Geological and Geophysical Engineering		
14	Industrial and Manufacturing Engineering	\$81,452	
26	Industrial Production Technologies	\$73,719	
8	Mechanical Engineering		
3	\$97,743 Metallurgical Engineering		IIII
4	\$97,372 Mining and Mineral Engineering		
23	Miscellaneous Engineering	\$76,0	
1	\$135,754 Petroleum Engineering		
25	Business Economics	\$74,78	
30	Finance	\$72,501	
21	Management Information Systems and Statistics	\$76	
13	Applied Mathematics	\$82,8	
9	Computer Engineering		
11	Computer Science	\$82,8	
27	Information Sciences	\$73,046	
29	Mathematics	\$72,501 -	
20	Statistics and Decision Science	\$7	
2	\$112,519 Pharmacy and Pharmaceutical Sciences and Administration		
28	Transportation Sciences and Technologies	\$72,764	
15	Physics	\$81,143	
24	Economics	\$75,60	

LOWEST- AND HIGHEST-EARNING MAJORS

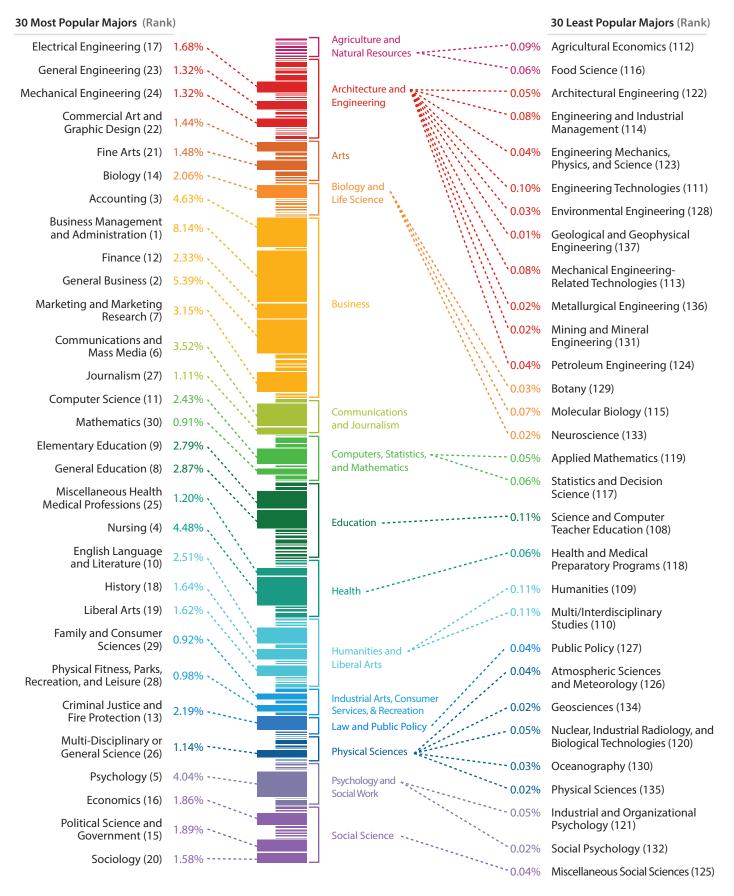
GRADUATE DEGREE HOLDERS



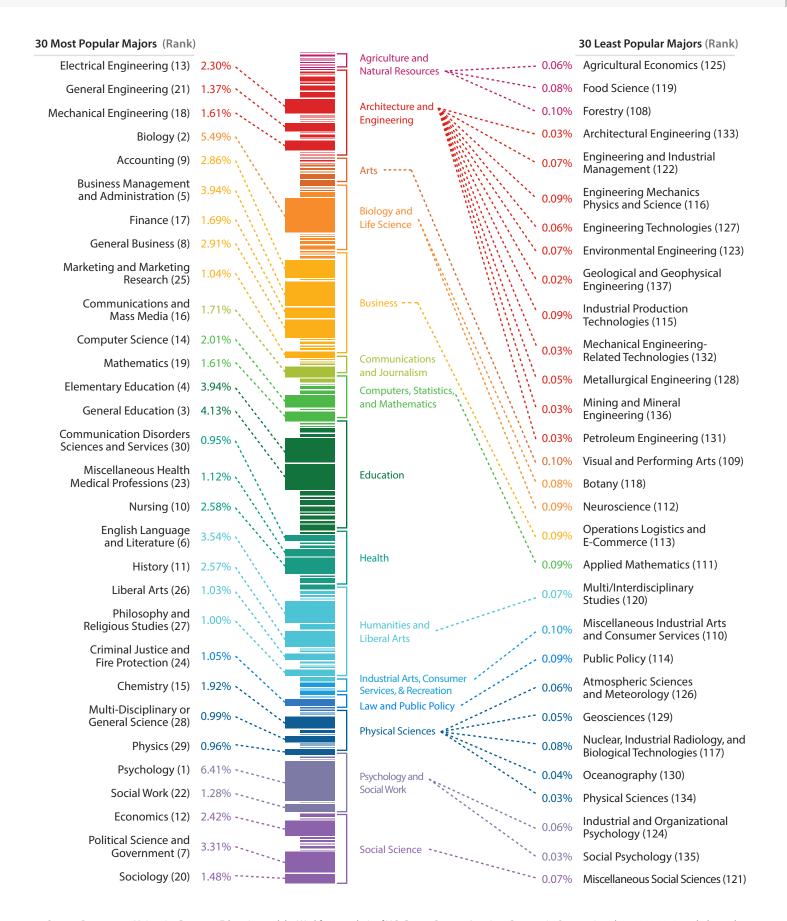
Rank	Major	Median Earnings	\$97,000
5	\$112,181 Aerospace Engineering		
7	Chemical Engineering	\$108,603	
22	Civil Engineering	\$100,618	
6	111,861 Electrical Engineering	\$	
10	Engineering and Industrial Management	\$108,191	
11	Engineering Mechanics Physics and Science	\$106,839	
17	General Engineering	\$103,173	- 5
4	\$113,930 Geological and Geophysical Engineering		
19	Industrial and Manufacturing Engineering	,498	\$101,
12	Mechanical Engineering	\$106,839	
8	Metallurgical Engineering	\$108,603	
13	Mining and Mineral Engineering	\$105,771	
26	Miscellaneous Engineering	98,410	\$9
1	\$128,430 Petroleum Engineering		
30	Biochemical Sciences	,358	\$97,
15	Zoology	\$104,259	
25	Business Economics	\$99,536	
21	Finance	,453	\$101,
29	Operations Logistics and E-Commerce	,395	\$97,
14	Applied Mathematics	\$105,644	
18	Computer Engineering	,498	\$101,
24	Computer Science	\$99,915	
23	Statistics and Decision Science	\$100,465	
2	\$128,207 Health and Medical Preparatory Programs		
3	\$117,523 Pharmacy and Pharmaceutical Sciences and Administration		
16	Chemistry	\$103,573	
27	Geosciences	8,394	\$98
28	Nuclear, Industrial Radiology, and Biological Technologies	,395	\$97,
20	Physics	\$101,453	
9	Economics	\$108,603	

MAJORS RANKED BY POPULARITY

BACHELOR'S DEGREE HOLDERS



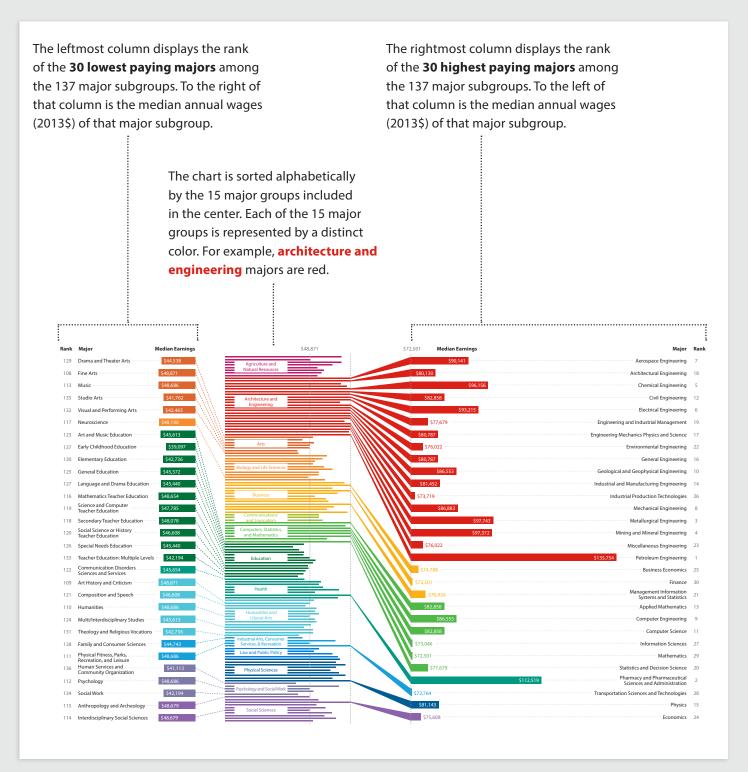
GRADUATE DEGREE HOLDERS



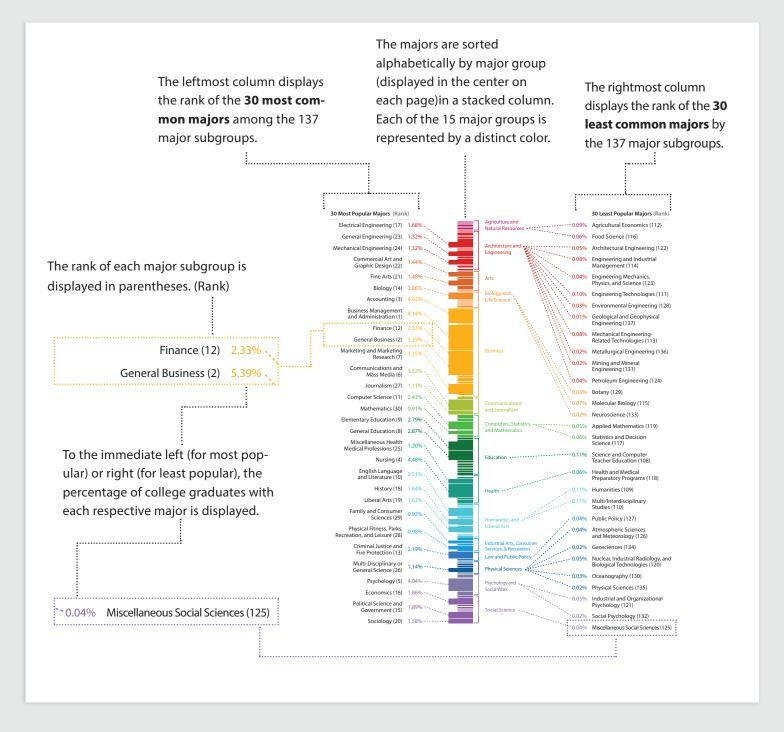
HELP READING OUR CHARTS

LOWEST- AND HIGHEST-EARNING MAJORS

This chart shows the 30 highest paying majors and the 30 lowest paying majors.



This chart shows the 30 most common majors and 30 least common majors for Bachelor's degree holders and graduate degree holders.



The Economic Value of College Majors can be accessed at cew.georgetown.edu/report/valueofcollegemajors



THE ECONOMIC VALUE of COLLEGE MAJORS

GEORGETOWN UNIVERSITY



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