

# Field of Degree and Earnings by Selected Employment Characteristics: 2011

## American Community Survey Briefs

By Camille Ryan  
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### INTRODUCTION

This brief provides information about the field or major of bachelor's degrees, earnings, and selected employment characteristics for the population aged 25 and over with a bachelor's degree or higher. Data on field of bachelor's degree was first collected in the American Community Survey (ACS) in 2009. Respondents who reported that their highest degree completed was a bachelor's degree, master's degree, professional degree, or doctorate degree were asked to write in the specific major(s) of their bachelor's degree. Respondents with more than one bachelor's degree, or with more than one major field, were allowed to report multiple fields of degree. This brief examines only the first field of degree reported. Identification of the field of degree was collected only for the bachelor's degree.

### GENERAL FINDINGS

#### Detailed Field of Degree and Work Status

There were 59 million people 25 years and older who held a bachelor's degree or higher in 2011 (Table 1). Business continued to be a popular major, with 12 million people who majored in this field. People who majored in business were also among those who were most likely to be employed full-time, year-round (64.1 percent). Education was the second most popular major at 8 million, but education majors were the least likely to be employed full-time, year-round (41.0 percent).<sup>1</sup>

<sup>1</sup> Full-time, year-round is defined as working 50 to 52 weeks per year and 35 hours or more per week. Therefore, teachers who did not work during the summer months would not be considered full-time, year-round.

In addition to business, people who majored in a science and engineering field also tended to have high percentages who were employed full-time, year-round. People who majored in computers, mathematics, and statistics, or majored in engineering were the most likely to report working full-time, year-round and among the least likely to report that they did not work at all.<sup>2</sup> In contrast, most fields that were classified as arts, humanities, or other had lower rates of full-time, year-round employment. Less than half of those who majored in literature and languages (46.0 percent) or visual and performing arts (48.3 percent) were employed full-time, year-round.

#### Detailed Field of Degree, Earnings, and Class of Worker

Table 1 also shows that median annual earnings varied by field of degree and class of worker for those who were employed full-time, year-round. Class of worker is defined according to the type of employment organization of the respondent or whether the respondent was self-employed. Private sector includes both private for-profit and private not-for-profit employment. Government includes local, state, and federal government employment. Self-employed is defined as employment in one's own business, professional practice, or farm.

<sup>2</sup> The percentage of people who majored in computers, mathematics, and statistics and were employed full-time, year-round was statistically different from the percentage of people who majored in engineering and were employed full-time, year-round. The percentage of people who majored in computers, mathematics, and statistics and did not work at all was not statistically different from the percentage of people who majored in multidisciplinary studies and did not work at all. The percentage of people who majored in engineering and did not work at all was not statistically different from those who majored in social sciences or visual and performing arts and did not work at all.

**Table 1. Detailed Field of Bachelor's Degree by Median Annual Earnings and Selected Employment Characteristics for the Population 25 Years and Over: 2011**  
 (For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www.census.gov/acs/www](http://www.census.gov/acs/www))

Field	Work status (percent)		Did not work	Median earnings for full-time, year-round workers (dollars)			Class of worker <sup>2</sup> and earnings for full-time, year-round workers (dollars)					
	Full-time, year-round	Less than full-time, year-round		Total	Men	Women	Private sector		Government		Self-employed	
							Percent	Median earnings <sup>3</sup>	Percent	Median earnings <sup>3</sup>	Percent	Median earnings <sup>3</sup>
<b>Total</b> .....	<b>56.5</b>	<b>21.5</b>	<b>64,396</b>	<b>75,914</b>	<b>54,796</b>	<b>67.4</b>	<b>67,125</b>	<b>23.6</b>	<b>59,929</b>	<b>9.0</b>	<b>62,283</b>	
Science and engineering:												
Computers, mathematics, and statistics. . . .	66.6	16.9	80,180	84,107	67,533	77.9	82,734	16.8	67,344	5.3	62,841	
Biological, agricultural, and environmental sciences . . . . .	61.3	21.3	70,025	77,247	59,646	62.7	71,367	23.2	61,719	14.1	85,744	
Physical and related sciences . . . . .	57.4	18.3	80,037	90,648	61,363	68.3	82,910	21.4	67,077	10.4	91,697	
Psychology . . . . .	53.7	25.7	55,509	66,918	50,880	62.7	53,533	28.8	57,072	8.6	61,567	
Social sciences . . . . .	57.0	21.6	70,197	80,526	57,370	62.7	70,970	25.9	65,887	11.4	75,471	
Engineering . . . . .	64.7	14.2	91,611	93,714	77,714	78.6	94,488	13.6	83,977	7.7	71,178	
Multidisciplinary studies . . . . .	56.4	26.1	55,704	70,886	51,959	64.7	57,334	28.7	53,816	6.6	55,751	
Science and engineering-related fields . . . . .	56.1	24.0	69,615	78,178	65,761	74.8	70,599	18.4	64,257	6.8	70,844	
Business . . . . .	64.1	17.4	66,605	76,130	56,152	75.9	68,465	13.9	61,490	10.2	62,159	
Education . . . . .	41.0	25.1	50,902	57,279	49,053	38.9	47,452	55.8	52,141	5.3	42,068	
Arts, humanities, and other:												
Literature and languages . . . . .	46.0	26.4	58,616	67,044	54,026	63.7	58,887	27.0	58,576	9.3	56,986	
Liberal arts and history . . . . .	52.0	23.4	58,761	62,191	51,548	64.9	56,043	24.5	61,165	10.6	63,481	
Visual and performing arts . . . . .	48.3	30.8	50,484	53,917	46,670	69.7	50,432	16.6	52,738	13.7	42,344	
Communications . . . . .	60.5	24.0	55,859	61,630	51,447	75.9	56,144	15.5	55,562	8.7	52,188	
Other . . . . .	59.4	21.8	52,490	62,196	46,534	55.3	50,675	38.6	57,085	6.1	51,719	

<sup>1</sup> Numbers in thousands.

<sup>2</sup> This distribution does not include those who were unemployed or were unpaid family workers.

<sup>3</sup> Median earnings were calculated for those with earnings greater than zero.

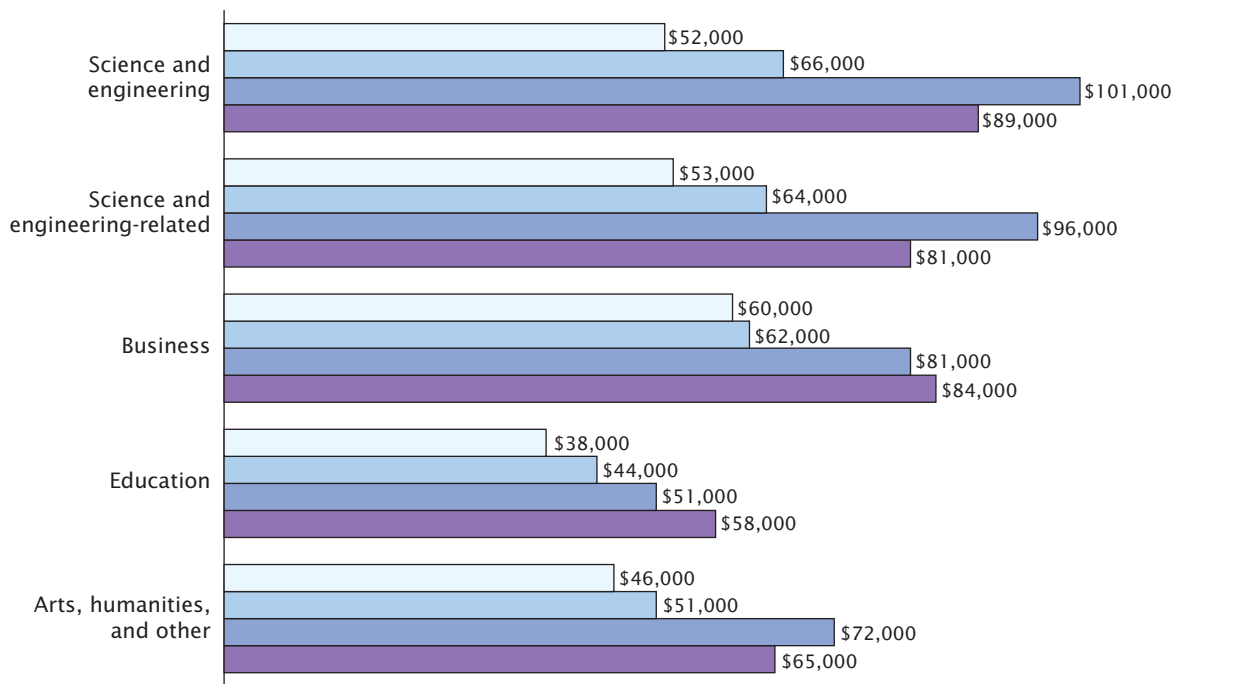
Note: For more information about the margins of error for this table, see Appendix Table 1 at the end of this report.  
 Source: U.S. Census Bureau, 2011 American Community Survey.

Figure 1.

**Median Annual Earnings by Field of Bachelor's Degree by Class of Worker and Educational Attainment: 2011**

(Population 25 years and over, full-time workers. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www.census.gov/acs/www](http://www.census.gov/acs/www))

- Self-employed workers, bachelor's degree
- Wage and salary workers, bachelor's degree
- Self-employed workers, advanced degree
- Wage and salary workers, advanced degree



Note: For more information about the margins of error for this figure, see Appendix Table 2 at the end of this report.  
 Source: U.S. Census Bureau, 2011 American Community Survey.

People who majored in engineering had the highest earnings at \$92,000 per year. They were also the most likely to be employed in the private sector (78.6 percent). Majors with the lowest overall median annual earnings, about \$55,000 or less per year, included such fields as visual and performing arts, communications, education, and psychology.<sup>3</sup>

The fields of degree associated with the highest median earnings for women were the same as those for men, with median earnings of

<sup>3</sup> The median earnings for communication majors were not statistically different than the median earnings for psychology majors or multidisciplinary majors. Also, the median earnings of those who majored in psychology were not statistically different than those who majored in multidisciplinary studies.

engineering majors being highest for both. However, women earned less than men for every field of degree.

Earnings tended to be higher for all fields of degree among those who worked in the private sector compared with earnings of those who worked in government.<sup>4</sup> One exception was earnings for those who majored in education. Full-time, year-round government workers who held bachelor's degrees in this field earned \$52,000 per year, compared with \$47,000 per year among those who worked in the

<sup>4</sup> Median earnings for private sector workers compared with government workers were not statistically different for those who majored in multidisciplinary studies, literature and languages, and communications.

private sector. Education majors were also the most likely to work in government of all fields of degree. More than half of all people who majored in education (55.8 percent) were government employees. This is not surprising given that public school teachers are classified as government employees.

**Broad Field of Degree, Earnings, and Self-Employment**

Figure 1 highlights differences in earnings by broad field of degree for wage and salary workers versus people who were self-employed. It also shows differences for these two groups between those whose highest degree was a bachelor's degree and those who went on to earn an advanced degree, such as

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## What Is the American Community Survey?

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely demographic, social, economic, and housing data for the nation, states, congressional districts, counties, places, and other localities every year. It has an annual sample size of about 3.3 million addresses across the United States and Puerto Rico and includes both housing units and group quarters (e.g., nursing facilities and prisons). The ACS is conducted in every county throughout the nation, and every municipio in Puerto Rico, where it is called the Puerto Rico Community Survey. Beginning in 2006, ACS data for 2005 were released for geographic areas with populations of 65,000 and greater. For information on the ACS sample design and other topics, visit [www.census.gov/acs/www](http://www.census.gov/acs/www).

a master's, professional, or doctorate degree.<sup>5</sup> Earnings are shown for full-time, year-round workers aged 25 and over.

Among those whose highest degree was a bachelor's, wage and salary workers consistently earned more than those who were self-employed. This difference was most apparent among those who majored in science and engineering, where wage and salary workers earned \$66,000 per year compared with \$52,000 for self-employed workers.

Higher earnings for wage and salary workers were not always the

case among those with advanced degrees. Self-employed people who majored in arts, humanities, and other fields earned \$72,000 per year, compared with \$65,000 per year for those who were wage and salary workers. For self-employed people who majored in science and engineering and held an advanced degree, the median annual earnings were about \$100,000 per year. The earnings for self-employed people who majored in science and engineering-related fields and held advanced degrees were not far behind, at \$96,000 per year.

## SOURCE AND ACCURACY

The data presented in this report are based on the ACS sample interviewed in 2011. The estimates based on this sample approximate

the actual values and represent the entire household and group quarters population. Sampling error is the difference between an estimate based in a sample and the corresponding value that would be obtained if the estimate were based on the entire population (as from a census). Measures of the sampling errors are provided in the form of margins of error for all estimates included in this report. All comparative statements in this report have undergone statistical testing, and comparisons are significant at the 90 percent level unless otherwise noted. In addition to sampling error, nonsampling error may be introduced during any of the operations used to collect and process survey data such as editing, reviewing, or keying data from questionnaires. For more information on sampling and estimation methods, confidentiality protection, and sampling and nonsampling errors, please see the 2011 ACS Accuracy of the Data document located at [www.census.gov/acs/www/Downloads/data\\_documentation/Accuracy/ACS\\_Accuracy\\_of\\_Data\\_2011.pdf](http://www.census.gov/acs/www/Downloads/data_documentation/Accuracy/ACS_Accuracy_of_Data_2011.pdf).

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<sup>5</sup> It is important to note that Figure 1 shows only the field of **bachelor's** degree. A respondent who went on to earn a master's, professional, or doctorate degree may not have earned their advanced degree in the same field shown in the figure.

Appendix Table 1.

**Margins of Error<sup>1</sup> for Table 1: Detailed Field of Bachelor's Degree by Median Annual Earnings and Selected Employment Characteristics for the Population 25 Years and Over: 2011**

(For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www.census.gov/acs/www](http://www.census.gov/acs/www))

Field	Total <sup>2</sup>	Work status (percent)			Median earnings for full-time, year-round workers (dollars)			Class of worker <sup>3</sup> and earnings for full-time, year-round workers					
		Full-time, year-round	Less than full-time, year-round	Did not work	Total	Men	Women	Private sector		Government		Self-employed	
								Percent	Median earnings <sup>4</sup>	Percent	Median earnings <sup>4</sup>	Percent	Median earnings <sup>4</sup>
<b>Total</b> . . . . .	<b>172</b>	<b>0.117</b>	<b>0.091</b>	<b>0.095</b>	<b>231</b>	<b>178</b>	<b>199</b>	<b>0.148</b>	<b>151</b>	<b>0.147</b>	<b>303</b>	<b>0.088</b>	<b>301</b>
Science and engineering:													
Computers, mathematics, and statistics . . . . .	16	0.564	0.373	0.440	732	1,585	2,039	0.563	1,179	0.518	1,731	0.290	5,482
Biological, agricultural, and environmental sciences . . . . .	20	0.383	0.357	0.286	925	896	1,101	0.488	587	0.487	636	0.364	5,039
Physical and related sciences . . . . .	17	0.647	0.465	0.545	1,257	936	861	0.699	1,844	0.553	1,704	0.451	5,560
Psychology . . . . .	16	0.521	0.430	0.393	455	1,352	358	0.771	992	0.712	781	0.460	1,187
Social sciences . . . . .	27	0.390	0.316	0.292	443	646	798	0.488	607	0.463	804	0.341	1,975
Engineering . . . . .	22	0.410	0.302	0.343	374	787	2,128	0.398	829	0.352	2,025	0.222	2,039
Multidisciplinary studies . . . . .	6	1.391	1.271	1.087	1,431	3,228	805	1.994	3,167	1.797	2,189	0.943	12,842
Science and engineering-related fields . . . . .	26	0.386	0.298	0.240	620	1,701	335	0.426	279	0.430	1,001	0.239	2,293
Business . . . . .	38	0.219	0.163	0.189	262	300	333	0.280	728	0.259	349	0.185	539
Education . . . . .	31	0.313	0.262	0.310	139	517	306	0.443	571	0.484	169	0.241	2,143
Arts, humanities, and other . . . . .	17	0.548	0.453	0.462	1,090	1,352	997	0.747	1,462	0.697	1,378	0.380	4,715
Literature and languages . . . . .	17	0.505	0.365	0.422	935	584	440	0.638	793	0.589	665	0.372	5,880
Liberal arts and history . . . . .	18	0.643	0.519	0.425	285	1,534	504	0.695	348	0.615	1,203	0.533	3,464
Visual and performing arts . . . . .	17	0.540	0.547	0.429	622	674	421	0.705	748	0.598	1,103	0.404	3,255
Communications . . . . .	17	0.531	0.409	0.370	465	445	394	0.707	398	0.642	627	0.349	1,450

<sup>1</sup> The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value.

<sup>2</sup> Numbers are in thousands.

<sup>3</sup> This distribution does not include those who were unemployed or were unpaid family workers.

<sup>4</sup> Median earnings are calculated for those with earnings greater than zero.

Source: U.S. Census Bureau, 2011 American Community Survey.

Appendix Table 2.

**Margins of Error<sup>1</sup> for Figure 1: Median Annual Earnings by Field of Bachelor's Degree by Educational Attainment and Class of Worker: 2011**

(For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www.census.gov/acs/www](http://www.census.gov/acs/www))

Broad field	Median earnings <sup>2</sup> for full-time, year-round workers (dollars)			
	Highest degree is bachelor's degree		Highest degree is advanced <sup>3</sup> degree	
	Self-employed	Wage and salary	Self-employed	Wage and salary
Science and engineering . . . . .	478	304	648	778
Science and engineering-related fields . . . . .	4,790	753	8,692	455
Business . . . . .	635	210	2,388	1,128
Education . . . . .	3,676	368	2,073	579
Arts, humanities, and other . . . . .	1,277	181	1,759	612

<sup>1</sup> The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value.

<sup>2</sup> Median earnings are calculated for those with earnings greater than zero.

<sup>3</sup> Advanced degrees refer to a master's, professional, or doctorate degree.

Source: U.S. Census Bureau, 2011 American Community Survey.