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## Occupational Employment and Wages in Madison — May 2016

Workers in the Madison Metropolitan Statistical Area had an average (mean) hourly wage of \$24.44 in May 2016, not significantly different than the nationwide average of \$23.86, according to the U.S. Bureau of Labor Statistics. Assistant Commissioner for Regional Operations Charlene Peiffer noted that wages in the local area were not significantly different from their respective national averages in 11 of 22 major occupational groups, including healthcare practitioners and technical, production, and transportation and material moving. Three of the occupational groups had wages higher than their respective national averages, including healthcare support and construction and extraction.

When compared to the nationwide distribution, local employment was more highly concentrated in 8 of the 22 occupational groups, including computer and mathematical; business and financial operations; and life, physical, and social science. Conversely, 10 groups had employment shares significantly below their national representation, including sales and related, transportation and material moving, and food preparation and serving related. (See [table A](#) and [box note](#) at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and the Madison Metropolitan Statistical Area, and measures of statistical significance, May 2016**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Madison	United States	Madison	Percent difference <sup>(1)</sup>
Total, all occupations .....	100.0	100.0	\$23.86	\$24.44	2
Management .....	5.1	5.4*	56.74	51.68*	-9
Business and financial operations .....	5.2	7.0*	36.09	31.16*	-14
Computer and mathematical .....	3.0	6.2*	42.25	35.98*	-15
Architecture and engineering .....	1.8	2.0*	40.53	34.93*	-14
Life, physical, and social science .....	0.8	1.9*	35.06	30.86*	-12
Community and social service .....	1.4	1.6*	22.69	21.85	-4
Legal .....	0.8	0.7*	50.95	46.71	-8
Education, training, and library .....	6.2	6.7*	26.21	26.57	1
Arts, design, entertainment, sports, and media .....	1.4	1.7*	28.07	24.14*	-14
Healthcare practitioners and technical .....	5.9	5.9	38.06	41.40	9
Healthcare support .....	2.9	2.2*	14.65	16.14*	10
Protective service .....	2.4	1.8*	22.03	19.48*	-12
Food preparation and serving related .....	9.2	8.1*	11.47	11.56	1
Building and grounds cleaning and maintenance .....	3.2	3.0	13.47	12.91*	-4
Personal care and service .....	3.2	3.1	12.74	12.65	-1
Sales and related .....	10.4	8.7*	19.50	19.39	-1
Office and administrative support .....	15.7	14.7*	17.91	17.98	0
Farming, fishing, and forestry .....	0.3	0.1*	13.37	15.80*	18
Construction and extraction .....	4.0	3.5*	23.51	26.46*	13
Installation, maintenance, and repair .....	3.9	3.2*	22.45	22.44	0

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Madison Metropolitan Statistical Area, and measures of statistical significance, May 2016 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Madison	United States	Madison	Percent difference <sup>(1)</sup>
Production .....	6.5	7.0	17.88	17.72	-1
Transportation and material moving .....	6.9	5.3*	17.34	17.00	-2

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Madison Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.

\* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—computer and mathematical—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Madison had 23,750 jobs in computer and mathematical, accounting for 6.2 percent of local area employment, significantly higher than the 3.0-percent share nationally. The average hourly wage for this occupational group locally was \$35.98, significantly below the national wage of \$42.25.

Some of the largest detailed occupations within the computer and mathematical group included software developers, applications (7,540); computer systems analysts (3,630); and computer user support specialists (2,440). Among the higher paying jobs were actuaries with mean hourly wages of \$46.47 and computer network architects, \$45.72. At the lower end of the wage scale were computer user support specialists (\$23.97) and web developers (\$25.02). (Detailed occupational data for computer and mathematical are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/2016/may/oes\\_31540.htm](http://www.bls.gov/oes/2016/may/oes_31540.htm).)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Madison Metropolitan Statistical Area, above-average concentrations of employment were found in many of the occupations within the computer and mathematical group. For instance, software developers, applications in Madison were employed at 3.5 times the national rate, and computer network support specialists, at 2.5 times the U.S. average. On the other hand, software developers, systems software in Madison had a location quotient of 1.0 in Madison, indicating that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Wisconsin Department of Workforce Development.

### Note

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

## Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES data available from BLS include cross-industry occupational employment and wage estimates for the nation; over 650 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), metropolitan divisions, nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-, 4-, and selected 5- and 6-digit industry levels, and national estimates by ownership across all industries and for schools and hospitals. OES data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

OES estimates are constructed from a sample of about 1.2 million establishments. Each year, two semiannual panels of approximately 200,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, Internet or other electronic means, email, telephone, or personal visit. The May 2016 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2016, November 2015, May 2015, November 2014, May 2014, and November 2013. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 73 percent based on establishments and 69 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Madison Metropolitan Statistical Area included 3,073 establishments with a response rate of 75 percent. For more information about OES concepts and methodology, go to [www.bls.gov/news.release/ocwage.tn.htm](http://www.bls.gov/news.release/ocwage.tn.htm).

The May 2016 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc](http://www.bls.gov/soc) and information about the 2012 NAICS is available at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

### Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Madison, Wis. Metropolitan Statistical Area** includes Columbia, Dane, and Iowa Counties.

### Additional information

OES data are available on our regional web page at [www.bls.gov/regions/midwest](http://www.bls.gov/regions/midwest). Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at [www.bls.gov/oes/current/methods\\_statement.pdf](http://www.bls.gov/oes/current/methods_statement.pdf).

Information in this release will be made available to sensory impaired individuals upon request . Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Madison Metropolitan Statistical Area, May 2016**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Computer and mathematical occupations .....	23,750	2.1	\$35.98	\$74,850
Computer and information research scientists .....	(5)	(5)	33.30	69,270
Computer systems analysts .....	3,630	2.4	36.91	76,770
Information security analysts .....	350	1.3	38.63	80,340
Computer programmers .....	(5)	(5)	35.53	73,900
Software developers, applications .....	7,540	3.5	39.50	82,160
Software developers, systems software .....	1,070	1.0	39.41	81,960
Web developers .....	880	2.5	25.02	52,040
Database administrators .....	570	1.8	36.83	76,610
Network and computer systems administrators .....	1,370	1.3	36.58	76,080
Computer network architects .....	320	0.8	45.72	95,100
Computer user support specialists .....	2,440	1.5	23.97	49,860
Computer network support specialists .....	1,290	2.5	33.42	69,520
Computer occupations, all other .....	890	1.3	36.66	76,240
Actuaries .....	210	3.9	46.47	96,650
Operations research analysts .....	250	0.8	37.09	77,150
Statisticians .....	210	2.3	42.23	87,830

**Footnotes:**

(1) For a complete listing of all detailed occupations in the Madison, WI, see [www.bls.gov/oes/current/oes\\_31540.htm](http://www.bls.gov/oes/current/oes_31540.htm)

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimate not released.