Occupational Employment and Wages in Durham-Chapel Hill – May 2017

Workers in the Durham-Chapel Hill Metropolitan Statistical Area had an average (mean) hourly wage of $28.53 in May 2017, about 17 percent above the nationwide average of $24.34, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Janet S. Rankin noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 4 of the 22 major occupational groups, including education, training, and library; and management. Seven groups had significantly lower wages than their respective national averages, including construction and extraction; transportation and material moving; and building and grounds cleaning and maintenance.

When compared to the nationwide distribution, local employment was more highly concentrated in 8 of the 22 occupational groups, including education, training, and library; computer and mathematical; and healthcare practitioners and technical. Conversely, 12 groups had employment shares significantly below their national representation, including transportation and material moving; sales and related; and office and administrative support. (See table A and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Durham-Chapel Hill Metropolitan Statistical Area, and measures of statistical significance, May 2017

<table>
<thead>
<tr>
<th>Major occupational group</th>
<th>Percent of total employment</th>
<th>Mean hourly wage</th>
<th>Percent difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>United States</td>
<td>Durham</td>
<td>United States</td>
</tr>
<tr>
<td>Total, all occupations</td>
<td>100.0</td>
<td>100.0</td>
<td>$24.34</td>
</tr>
<tr>
<td>Management</td>
<td>5.1</td>
<td>5.9*</td>
<td>57.65</td>
</tr>
<tr>
<td>Business and financial operations</td>
<td>5.2</td>
<td>7.1*</td>
<td>36.70</td>
</tr>
<tr>
<td>Computer and mathematical</td>
<td>3.0</td>
<td>6.2*</td>
<td>43.18</td>
</tr>
<tr>
<td>Architecture and engineering</td>
<td>1.8</td>
<td>1.9</td>
<td>41.44</td>
</tr>
<tr>
<td>Life, physical, and social science</td>
<td>0.8</td>
<td>3.1*</td>
<td>35.76</td>
</tr>
<tr>
<td>Community and social service</td>
<td>1.5</td>
<td>1.5</td>
<td>23.10</td>
</tr>
<tr>
<td>Legal</td>
<td>0.8</td>
<td>0.5*</td>
<td>51.62</td>
</tr>
<tr>
<td>Education, training, and library</td>
<td>6.1</td>
<td>10.7*</td>
<td>26.67</td>
</tr>
<tr>
<td>Arts, design, entertainment, sports, and media.</td>
<td>1.4</td>
<td>1.5*</td>
<td>28.34</td>
</tr>
<tr>
<td>Healthcare practitioners and technical</td>
<td>6.0</td>
<td>8.9*</td>
<td>38.83</td>
</tr>
<tr>
<td>Healthcare support</td>
<td>2.9</td>
<td>3.3*</td>
<td>15.05</td>
</tr>
<tr>
<td>Protective service</td>
<td>2.4</td>
<td>1.7*</td>
<td>22.69</td>
</tr>
<tr>
<td>Food preparation and serving related</td>
<td>9.3</td>
<td>8.5*</td>
<td>11.88</td>
</tr>
<tr>
<td>Building and grounds cleaning and maintenance</td>
<td>3.1</td>
<td>2.7*</td>
<td>13.91</td>
</tr>
<tr>
<td>Personal care and service</td>
<td>3.6</td>
<td>2.0*</td>
<td>13.11</td>
</tr>
<tr>
<td>Sales and related</td>
<td>10.2</td>
<td>7.9*</td>
<td>19.56</td>
</tr>
<tr>
<td>Office and administrative support</td>
<td>15.4</td>
<td>13.3*</td>
<td>18.24</td>
</tr>
<tr>
<td>Farming, fishing, and forestry</td>
<td>0.3</td>
<td>0.1*</td>
<td>13.87</td>
</tr>
</tbody>
</table>

Note: See footnotes at end of table.
One occupational group—computer and mathematical—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Durham-Chapel Hill had 18,490 jobs in computer and mathematical occupations, 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 $42.71, compared to the national wage of $43.18.

Some of the larger detailed occupations within the computer and mathematical group included software applications developers (4,280), computer systems analysts (2,790), and computer user support specialists (2,460). Among the higher paying jobs in this group were computer network architects and statisticians, with mean hourly wages of $54.35 and $48.64, respectively. At the lower end of the wage scale were computer user support specialists ($26.13) and computer network support specialists ($30.94). (Detailed data for computer and mathematical occupations are presented in table 1; for a complete listing of detailed occupations available, go to www.bls.gov/oes/current/oes_20500.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 Durham-Chapel Hill Metropolitan Statistical Area, above-average concentrations of employment were found in several of the occupations within the computer and mathematical group. For instance, statisticians were employed at 9.2 times the national rate in Durham, and software applications developers, at 2.4 times the U.S. average. On the other hand, database administrators had a location quotient of 1.3 in Durham, 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 North Carolina Department of Commerce.
Notes on Occupational Employment Statistics Data

With the release of the May 2017 estimates, the OES program has replaced 21 detailed occupations found in the 2010 Standard Occupational Classification (SOC) with 10 new aggregations of those occupations. In addition, selected 4- and 5-digit North American Industry Classification System (NAICS) industries previously published by OES will no longer be published separately. Some of the 4-digit NAICS industries that are no longer being published separately will instead be published as OES-specific industry aggregations. More information about the new occupational and industry aggregations is available at www.bls.gov/oes/changes_2017.htm.

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.

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 2017 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2017, November 2016, May 2016, November 2015, May 2015, and November 2014. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 72 percent based on establishments and 68 percent based on weighted sampled employment. The unweighted sample employment of 82 million across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Durham-Chapel Hill Metropolitan Statistical Area included 2,309 establishments with a response rate of 81 percent. For more information about OES concepts and methodology, go to www.bls.gov/oes/current/oes_tec.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 Durham-Chapel Hill Metropolitan Statistical Area includes Chatham, Durham, Orange, and Person Counties in North Carolina.

Additional information


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, Durham-Chapel Hill Metropolitan Statistical Area, May 2017

<table>
<thead>
<tr>
<th>Occupation (1)</th>
<th>Employment</th>
<th>Mean wages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level (2)</td>
<td>Location quotient (3)</td>
</tr>
<tr>
<td>Computer and mathematical occupations</td>
<td>18,490</td>
<td>2.1</td>
</tr>
<tr>
<td>Computer and information research scientists</td>
<td>30</td>
<td>0.6</td>
</tr>
<tr>
<td>Computer systems analysts</td>
<td>2,790</td>
<td>2.3</td>
</tr>
<tr>
<td>Information security analysts</td>
<td>380</td>
<td>1.7</td>
</tr>
<tr>
<td>Computer programmers</td>
<td>1,180</td>
<td>2.3</td>
</tr>
<tr>
<td>Software developers, applications</td>
<td>4,280</td>
<td>2.4</td>
</tr>
<tr>
<td>Software developers, systems software</td>
<td>1,790</td>
<td>2.2</td>
</tr>
<tr>
<td>Web developers</td>
<td>560</td>
<td>2.1</td>
</tr>
<tr>
<td>Database administrators</td>
<td>320</td>
<td>1.3</td>
</tr>
<tr>
<td>Network and computer systems administrators</td>
<td>1,440</td>
<td>1.8</td>
</tr>
<tr>
<td>Computer network architects</td>
<td>620</td>
<td>1.9</td>
</tr>
<tr>
<td>Computer user support specialists</td>
<td>2,460</td>
<td>1.9</td>
</tr>
<tr>
<td>Computer network support specialists</td>
<td>600</td>
<td>1.5</td>
</tr>
<tr>
<td>Computer occupations, all other</td>
<td>920</td>
<td>1.4</td>
</tr>
<tr>
<td>Operations research analysts</td>
<td>(5)</td>
<td>(5)</td>
</tr>
<tr>
<td>Statisticians</td>
<td>700</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Footnotes:
(1) For a complete listing of all detailed occupations in the Durham-Chapel Hill Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_20500.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.