



broader range of data indicates the entry-level earnings and/or earnings for highly educated and experienced workers. Keep in mind that this information is based on national data. Earnings for those entering the occupation will typically be significantly lower, and earnings in your geographical area may be lower or higher than average.

Detailed Information on the Job Descriptions

As you now know, this book includes job descriptions from three major sources. The first and longest description for each major occupation is from the *OOH*. Following each of those job descriptions are brief descriptions for related jobs from the O*NET. Then come related definitions from the *DOT*. The information that follows gives you details to interpret the job descriptions from the three major sources used in compiling this book.

Understanding the *OOH* Descriptions

OOH job descriptions follow a standard format. The following information will help you interpret each section. As you read this, it will help if you refer to an *OOH* job description in this book.

Job Title and O*NET Job Numbers. The job title is the one most often used in describing the job. This is followed by one or more O*NET numbers for jobs most closely related to the *OOH* job title. Note that you can skip to the bottom of the *OOH* description to find descriptions for each O*NET job number listed here.

We also provide additional information in this section—GOE Interest Areas, GOE Work Group names, and Personality Types—that is not included in the *OOH* descriptions. This information allows you to easily cross-reference other career exploration systems based on the *Guide for Occupational Exploration*'s arrangement that organizes jobs based on interests and based on the Holland personality types used in the Self Directed Search (SDS) and other career assessment inventories and information systems. The information here is based on the O*NET job or jobs that are linked to the *OOH* job title. When multiple O*NET jobs are linked, occasionally they represent more than one Holland personality type or more than one GOE Work Group or GOE Interest Area.

Descriptions of the 16 GOE Interest Areas

- **Agriculture and Natural Resources:** An interest in working with plants, animals, forests, or mineral resources for agriculture, horticulture, conservation, extraction, and other purposes.
- **Architecture and Construction:** An interest in designing, assembling, and maintaining components of buildings and other structures.
- **Arts and Communication:** An interest in creatively expressing feelings or ideas, in communicating news or information, or in performing.
- **Business and Administration:** An interest in making a business organization or function run smoothly.
- **Education and Training:** An interest in helping people learn.

- **Finance and Insurance:** An interest in helping businesses and people be assured of a financially secure future.
- **Government and Public Administration:** An interest in helping a government agency serve the needs of the public.
- **Health Science:** An interest in helping people and animals be healthy.
- **Hospitality, Tourism, and Recreation:** An interest in catering to the personal wishes and needs of others so that they may enjoy a clean environment, good food and drink, comfortable lodging away from home, and recreation.
- **Human Service:** An interest in improving people's social, mental, emotional, or spiritual well-being.
- **Information Technology:** An interest in designing, developing, managing, and supporting information systems.
- **Law and Public Safety:** An interest in upholding people's rights or in protecting people and property by using authority, inspecting, or investigating.
- **Manufacturing:** An interest in processing materials into intermediate or final products or maintaining and repairing products by using machines or hand tools.
- **Retail and Wholesale Sales and Service:** An interest in bringing others to a particular point of view by personal persuasion and by sales and promotional techniques.
- **Scientific Research, Engineering, and Mathematics:** An interest in discovering, collecting, and analyzing information about the natural world; in applying scientific research findings to problems in medicine, the life sciences, human behavior, and the natural sciences; in imagining and manipulating quantitative data; and in applying technology to manufacturing, transportation, and other economic activities.
- **Transportation, Distribution, and Logistics:** An interest in operations that move people or materials.

Descriptions of the Six Personality Types

- **Realistic:** These occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside and do not involve a lot of paperwork or working closely with others.
- **Investigative:** These occupations frequently involve working with ideas and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
- **Artistic:** These occupations frequently involve working with forms, designs, and patterns. They often require self-expression, and the work can be done without following a clear set of rules.
- **Social:** These occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.

- **Enterprising:** These occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. They sometimes require risk taking and often deal with business.
- **Conventional:** These occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

Significant Points. This section contains highlights about key occupational characteristics. Normally, several points are provided for each description.

Nature of the Work. This section discusses what workers do on the job. Duties vary by industry or employer. For instance, workers in larger firms tend to be more specialized, whereas those in smaller firms often have a wider variety of duties. Most jobs have several levels of skills and responsibilities through which workers can progress. Beginners may work as trainees performing routine tasks under close supervision. Experienced workers usually undertake more difficult tasks and are expected to perform with less supervision.

The influence of technological advances on the way work is done is mentioned. For example, the Internet allows purchasers to buy supplies with the click of a mouse, saving time and money. This section of the description also discusses emerging specialties. For example, Webmasters—who are responsible for all technical aspects involved in operating a Web site—comprise a specialty within computer scientists and database administrators.

The “Work Environment” subsection section identifies the typical hours worked, workplace environment, possibility of injury, special equipment, physical activities, and extent of travel required. In many occupations people work regular business hours—40 hours a week, Monday through Friday—but many do not. For example, waiters and waitresses often work evenings and weekends. A work setting can range from a hospital to a mall to an offshore oil rig. Truck drivers might be susceptible to injury, while paramedics have high job-related stress. Semiconductor processors may wear protective clothing, some construction laborers do physically demanding work, and top executives may travel frequently.

Training, Other Qualifications, and Advancement. After knowing what a job is all about, it is important to understand how to train for it. This section describes the most significant sources of training, including the training preferred by employers, the typical length of training, and advancement possibilities. Job skills are sometimes acquired through high school, informal on-the-job training, formal training (including apprenticeships), the armed forces, home study, hobbies, or previous work experience. For example, sales experience is particularly important for many sales jobs. Many professional jobs, on the other hand, require formal postsecondary education—postsecondary vocational or technical training or college, postgraduate, or professional education.

In addition to training requirements, the *OOH* descriptions mention desirable skills, aptitudes, and personal characteristics. For some entry-level jobs, personal characteristics are more important than formal training. Employers generally seek people who read, write, and speak well; compute accurately; think logically; learn quickly; get along with others; and demonstrate dependability.

Some occupations require certification or licensing to enter the field, to advance, or to practice independently. Certification or licensing generally

involves completing courses and passing examinations. Many occupations increasingly have continuing education or skill improvement requirements to keep up with the changing economy or to improve advancement opportunities.

Employment. This section reports the number of jobs the occupation provides and the key industries where these jobs are found. When significant, the geographic distribution of jobs and the proportion of part-time (less than 35 hours a week) and self-employed workers in the occupation are mentioned. Self-employed workers account for about 8 percent of the workforce, but they are concentrated in a small number of occupations, such as farmers and ranchers, childcare workers, lawyers, health practitioners, and the construction trades.

Key Phrases Used in the *OOH* Descriptions

The following information explains how to interpret the key phrases that describe projected changes in employment. It also explains the terms used to describe the relationship between the number of job openings and the number of job seekers. The descriptions of this relationship in a particular occupation reflect the knowledge and judgment of economists in the U.S. Department of Labor’s Office of Occupational Statistics and Employment Projections.

| Changing employment between 2006 and 2016 | |
|--|--|
| If the statement reads | Employment is projected to |
| Grow much faster than average | Increase 21 percent or more |
| Grow faster than average | Increase 14 to 20 percent |
| Grow about as fast as average | Increase 7 to 13 percent |
| Grow more slowly than average | Increase 3 to 6 percent |
| Little or no change | Decrease 2 percent to increase 2 percent |
| Decline slowly or moderately | Decrease 3 to 9 percent |
| Decline rapidly | Decrease 10 percent or more |

| Opportunities and competition for jobs | |
|---|--|
| If the statement reads | Job openings compared to job seekers may be |
| Very good to excellent opportunities | More numerous |
| Good or favorable opportunities | In rough balance |
| May face or can expect keen competition | Fewer |

Job Outlook. This section describes the factors that will result in growth or decline in the number of jobs. In some cases, this book mentions the relative number of job openings an occupation is likely to provide. Occupations that are large and have high turnover rates, such as food and beverage service occupations, generally provide the most job openings, reflecting the need to replace workers who transfer to other occupations or stop working.

Some descriptions discuss the relationship between the number of job seekers and job openings. In some occupations, there is a rough balance between job seekers and openings, resulting in good opportunities. In some occupations, employers may report difficulty finding qualified



applicants, resulting in excellent job opportunities. Other occupations are characterized by a surplus of applicants, leading to keen competition for jobs. Limited training facilities, salary regulations, or undesirable aspects of the work—as in the case of private household workers—can result in an insufficient number of entrants to fill all job openings. On the other hand, glamorous or potentially high-paying occupations, such as actors or musicians, generally have surpluses of job seekers. Variation in job opportunities by industry, size of firm, or geographic location also may be discussed. Even in crowded fields, job openings exist. Good students or well-qualified individuals should not be deterred from undertaking training or seeking entry.

Susceptibility to layoffs due to imports, slowdowns in economic activity, technological advancements, or budget cuts are also addressed in this section. For example, employment of construction trades workers is sensitive to slowdowns in construction activity, while employment of government workers is sensitive to budget cuts.

Projections Data. The employment projections table lists figures from the Bureau of Labor Statistics. It includes 2006 employment, projected 2016 employment, and the 2006–2016 change in employment in both numerical and percentage terms. Sometimes the table has more than one row because it represents several specializations within the occupation. In these cases you can see which specializations have the largest workforces, are expected to grow the fastest, or are expected to create the most new jobs.

Earnings. This section discusses typical earnings and how workers are compensated—annual salaries, hourly wages, commissions, piece rates, tips, or bonuses. Within every occupation, earnings vary by experience, responsibility, performance, tenure, and geographic area. Earnings data from the Bureau of Labor Statistics and, in some cases, from outside sources are included. Data may cover the entire occupation or a specific group within the occupation.

Benefits account for a significant portion of total compensation costs to employers. Benefits such as paid vacation, health insurance, and sick leave may not be mentioned because they are widespread. Though not as common as traditional benefits, flexible hours and profit-sharing plans may be offered to attract and retain highly qualified workers. Less-common benefits also include child care, tuition for dependents, housing assistance, summers off, and free or discounted merchandise or services.

Related Occupations. Occupations involving similar aptitudes, interests, education, and training are listed.

Sources of Additional Information. No single publication can completely describe all aspects of an occupation. Thus, each job description includes mailing addresses for associations, government agencies, unions, and other organizations that can provide occupational information. In some cases, toll-free phone numbers and Internet addresses also are listed. Free or relatively inexpensive publications offering more information may be mentioned; some of these may also be available in libraries, in school career centers or guidance offices, or on the Internet.

Understanding the O*NET Descriptions

For each of the jobs in its database, the O*NET provides detailed information on more than 450 data elements. This is entirely too much material to put into printed form, and much of it is not all that useful for exploring career options. We carefully considered what information would be most helpful and have included several key elements, including each O*NET occupation's number, education or training typically required for

entry, and a short summary description. Overall, we think the information given in each O*NET description will be useful for most readers. Following is a sample O*NET description and brief comments on each element included in the description.

Sample O*NET Job Description

ACCOUNTANTS (O*NET 13-2011.01)—**Preparation:** Bachelor's degree.
Description: Analyze financial information and prepare financial reports to determine or maintain record of assets, liabilities, profit and loss, tax liability, or other financial activities within an organization.

O*NET Number. This provides a unique identification for each occupation. The number can be used to locate the job in a computer database or in other references such as the *O*NET Dictionary of Occupational Titles* book.

Preparation. This lists the level of training, education, or experience typically needed to qualify for entry into this job.

Description. This gives a brief summary description of the job and its basic duties.

Understanding the DOT Descriptions

In order to include the more than 5,100 DOT job definitions that cross-reference to the O*NET jobs, we had to present them in a very compact format. An example of these definitions follows. The DOT job titles are presented in bold capital letters, and each title is followed by a brief summary definition.

Sample DOT Job Descriptions

ACCOUNTANT: Applies principles of accounting to analyze financial information and prepare financial reports. **ACCOUNTANT, BUDGET:** Applies principles of accounting to analyze past and present financial operations and estimates future revenues and expenditures to prepare budget. **ACCOUNTANT, COST:** Applies principles of cost accounting to conduct studies which provide detailed cost information not supplied by general accounting systems. **ACCOUNTANT, PROPERTY:** Identifies and keeps record of company owned or leased equipment, buildings, and other property. **ACCOUNTANT, SYSTEMS:** Devises and installs special accounting systems and related procedures in establishment which cannot use standardized system. **ACCOUNTANT, TAX:** Prepares federal, state, or local tax returns of individual, business establishment, or other organization.

Other Career Information Sources

Here are some of JIST's many career-related references, which you may find useful for exploring these jobs in greater depth or for seeing how they compare to other jobs.

- *O*NET Dictionary of Occupational Titles*
- *New Guide for Occupational Exploration*
- *Salary Facts Handbook*
- *Best Jobs for the 21st Century*
- *200 Best Jobs for College Graduates*
- *300 Best Jobs Without a Four-Year Degree*