
Jewelers and Precious Stone and Metal Workers

(O*NET 51-9071.00, 51-9071.01, 51-9071.06, 51-9071.07)

Significant Points

- About half of all jewelers are self-employed.
- Jewelers usually learn their trade in vocational or technical schools, through distance-learning centers, or on the job.
- Prospects for bench jewelers and other skilled jewelers should be favorable; keen competition is expected for lower-skilled manufacturing jobs, such as assemblers and polishers.

Nature of the Work

Jewelers and precious stone and metal workers use a variety of common and specialized handtools and equipment to design and manufacture new pieces of jewelry; cut, set, and polish gem stones; repair or adjust rings, necklaces, bracelets, earrings, and other jewelry; and appraise jewelry, precious metals, and gems. Jewelers usually specialize in one or more of these areas and may work for large jewelry manufacturing firms, for small retail jewelry shops, or as owners of their own businesses. Regardless of the type of work done or the work setting, jewelers need a high degree of skill, precision, and attention to detail.

Some jewelers design or make their own jewelry. Following their own designs or those created by designers or customers, they begin by shaping the metal or by carving wax to make a model for casting the metal. The individual parts then are soldered together, and the jeweler may mount a diamond or other gem or may engrave a design into the metal. Other jewelers do finishing work, such as setting stones, polishing, or engraving, or make repairs. Typical repair work includes enlarging or reducing ring sizes, resetting stones, and replacing broken clasps and mountings.

Bench jewelers usually work in jewelry retailers. They perform a wide range of tasks, from simple jewelry cleaning and repair to moldmaking and fabricating pieces from scratch. In larger manufacturing businesses, jewelers usually specialize in a single operation. *Mold and model makers* create models or tools for the jewelry that is to be produced. *Assemblers* solder or fuse jewelry and their parts; they also may set stones. *Engravers* etch designs into the metal with specialized tools, and *polishers* bring a finished luster to the final product.

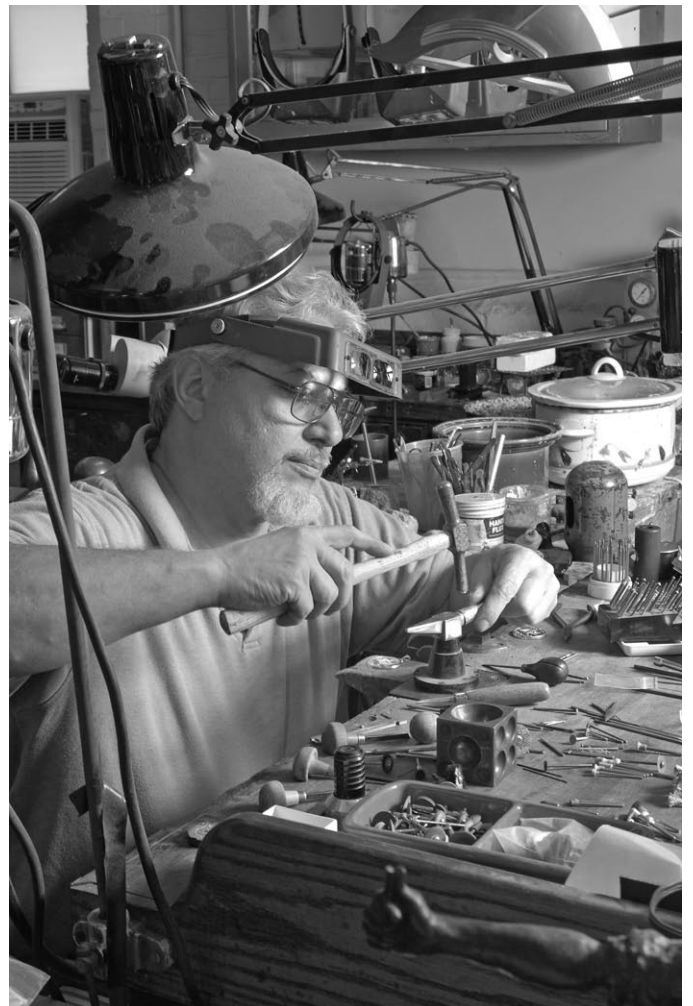
Jewelers typically do the handiwork required to produce a piece of jewelry, while *gemologists* and laboratory graders analyze, describe, and certify the quality and characteristics of gem stones. Gemologists may work in gemological laboratories or as quality control experts for retailers, importers, or manufacturers. After using microscopes, computerized tools, and other grading instruments to examine gem stones or finished pieces of jewelry, they write reports certifying that the items are of a particular quality. Many jewelers also study gemology to become familiar with the physical properties of the gem stones with which they work.

Jewelry appraisers carefully examine jewelry to determine its value, after which they write appraisal documents. They determine the value of a piece by researching the jewelry market, using reference books, auction catalogs, price lists, and the Internet. They may work for jewelry stores, appraisal firms, auction houses, pawnbrokers, or insurance companies. Many gemologists also become appraisers.

In small retail stores or repair shops, jewelers and appraisers may be involved in all aspects of the work. Those who own or manage stores or shops also hire and train employees; order, market, and sell merchandise; and perform managerial duties.

New technology is helping to produce jewelry of higher quality at a reduced cost and in a shorter amount of time. For example, lasers are often used for cutting and improving the quality of stones, for applying intricate engraving or design work, and for inscribing personal messages or identification on jewelry. Jewelers also use lasers to weld metals together in milliseconds with no seams or blemishes, improving the quality and appearance of jewelry.

Some manufacturing firms use computer-aided design and manufacturing (CAD/CAM) to facilitate product design and automate some steps in the moldmaking and modelmaking process. CAD allows jewelers to create a virtual-reality model of a piece of jewelry. Using CAD, jewelers can modify the design, change the stone, or try a different setting and see the changes on a computer screen before cutting a stone or performing other costly steps. Once they are satisfied with the model, CAM pro-



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Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-16	
				Number	Percent
Jewelers and precious stone and metal workers.....	51-9071	52,000	51,000	-1,200	-2

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

duces it in a waxlike or other material. After the mold of the model is made, it is easier for manufacturing firms to produce numerous copies of a given piece of jewelry, which are then distributed to retail establishments across the country. Similar techniques may be used in the retail setting, allowing customers to review their jewelry designs with the jeweler and make modifications before committing themselves to the expense of a customized piece of jewelry.

Work environment. A jeweler's work involves a great deal of concentration and attention to detail. Trying to satisfy customers' and employers' demands for speed and quality while working on precious stones and metal can cause fatigue or stress. However, the use of more ergonomically correct jewelers' benches has eliminated most of the strain and discomfort caused by spending long periods over a workbench.

Lasers require both careful handling to avoid injury and steady hands to direct precision tasks. In larger manufacturing plants and some smaller repair shops, chemicals, sharp or pointed tools, and jewelers' torches pose safety threats and may cause injury if proper care is not taken. Most dangerous chemicals, however, have been replaced with synthetic, less toxic products to meet safety requirements.

In repair shops, jewelers usually work alone with little supervision. In retail stores, they may talk with customers about repairs, perform custom design work, and even do some selling. Because many of their materials are valuable, jewelers must observe strict security procedures, including working behind locked doors that are opened only by a buzzer, working on the other side of barred windows, making use of burglar alarms, and, in larger jewelry establishments, working in the presence of armed guards.

Training, Other Qualifications, and Advancement

Jewelers usually learn their trade in vocational or technical schools, through distance-learning centers, or on the job. Formal training enhances employment and advancement opportunities.

Education and training. Jewelers usually learn their trade in vocational or technical schools, through distance-learning centers, or on the job. For those interested in working in a jewelry store or repair shop, vocational and technical training or courses offered by public and private colleges are the best sources of training. In these programs, which can vary in length from 6 months to 1 year, students learn the use and care of jewelers' tools and machines and basic jewelrymaking and jewelry-repairing skills, such as designing, casting, and setting and polishing stones.

Technical school courses also cover topics such as blue-print reading, math, and shop theory. To enter some technical school programs and most college programs, a high school diploma or its equivalent is required. However, some schools

specializing in jewelry training do not require graduation from high school.

Colleges and art and design schools offer programs that can lead to the degree of bachelor of fine arts, or master of fine arts, in jewelry design. Various institutes offer courses and programs in gemology. Programs cover a wide range of topics, including the identification and grading of diamonds and gem stones.

Computer-aided design is becoming increasingly common, and students—especially those interested in design and manufacturing—may wish to obtain training in it; however, most employers will provide such training.

Most employers feel that vocational school and technical school graduates need up to a year of additional supervised on-the-job training or an apprenticeship to refine their repair skills and learn more about the operation of the store or shop. In addition, some employers encourage workers to improve their skills by enrolling in short-term technical school courses such as fabricating, jewelry design, jewelry manufacturing, wax carving, and gemology. Employers may pay all or part of the cost of this additional training.

In jewelry manufacturing plants, workers traditionally develop their skills through informal apprenticeships and on-the-job training. The apprenticeship or training period lasts up to 1 year, depending on the difficulty of the specialty. Training usually focuses on casting, setting stones, making models, or engraving. In recent years, a growing number of technical schools have begun to offer training designed for jewelers working in manufacturing. Employers in manufacturing may prefer graduates of these programs because they are familiar with the production process and require less on-the-job training.

Other qualifications. The precise and delicate nature of jewelry work requires finger and hand dexterity, good hand-eye coordination, patience, and concentration. Artistic ability and fashion consciousness are major assets, particularly in jewelry design and jewelry shops, because jewelry must be stylish and attractive. Those who work in jewelry stores have frequent contact with customers and should be neat, personable, and knowledgeable about the merchandise. In addition, employers require workers of good character because jewelers work with valuable materials.

Certification and advancement. Jewelers of America offers four credentials, ranging from Certified Bench Jeweler Technician to Certified Master Bench Jeweler, for bench jewelers who pass a written and practical exam. Certification is not required to work as a bench jeweler, but it may help jewelers to show expertise and to advance.

Advancement opportunities are limited and depend greatly on an individual's skill and initiative. In manufacturing, some jewelers advance to supervisory jobs, such as master jeweler

or head jeweler, but for most, advancement means earning higher pay for the same job. Jewelers who work in jewelry stores or repair shops may become managers; some open their own businesses.

Those interested in starting their own business should first establish themselves and build a reputation for their work within the jewelry trade. Once they obtain sufficient credit from jewelry suppliers and wholesalers, they can acquire the necessary inventory. Also, because the jewelry business is highly competitive, jewelers who plan to open their own store should have sales experience and knowledge of marketing and business management. Courses in these subjects are often available from technical schools and community colleges.

Employment

Jewelers and precious stone and metal workers held about 52,000 jobs in 2006. About 51 percent of these workers were self-employed; many operated their own store or repair shop, and some specialized in designing and creating custom jewelry.

About 22 percent of wage-and-salary jobs for jewelers and precious stone and metal workers were in retail trade, primarily in jewelry, luggage, and leather goods stores. Another 17 percent of jobs were in jewelry and silverware manufacturing. A small number of jobs were with merchant wholesalers of miscellaneous durable goods and in repair shops providing repair and maintenance of personal and household goods. Although jewelry stores and repair shops were found in every city and in many small towns, most jobs were in larger metropolitan areas. Many jewelers employed in manufacturing worked in Rhode Island, New York, Chicago, Dallas, Florida, or California.

Job Outlook

Employment of jewelers and precious stone and metal workers is expected to experience little or no change. Prospects for bench jewelers and other skilled jewelers should be favorable; keen competition is expected for lower-skilled manufacturing jobs, such as assemblers and polishers.

Employment change. Employment of jewelers and precious stone and metal workers is expected to experience little or no change, declining 2 percent between 2006 and 2016.

The increasing numbers of affluent individuals, working women, double-income households, and fashion-conscious men are expected to keep jewelry sales strong. The population aged 45 and older, which accounts for a major portion of jewelry sales, also is on the rise. However, most jewelry manufacturing has already moved abroad, and this trend is expected to continue.

Nontraditional jewelry marketers, such as discount stores, mail-order and catalogue companies, television shopping networks, and Internet retailers, have expanded the number of buying options and increased their sales volume. However, these establishments require fewer sales staff, limiting employment opportunities for jewelers and precious stone and metal workers who work mainly in sales.

Traditional jewelers may continue to lose some of their market share to nontraditional outlets, but they will maintain a large customer base. Many buyers prefer to see and try on jewelry before purchasing it or enjoy the experience of shopping in a

store. Jewelry stores also have the advantage of being able to offer personalized service and build client relationships. Additionally, new jewelry sold by nontraditional retailers will create demand for skilled jewelers for sizing, cleaning, and repair work. There may also be increased demand for bench jewelers as baby boomers seek customization and repair of heirloom jewelry.

Job prospects. Despite little or no change in employment, opportunities should be favorable for bench jewelers and other skilled jewelers. New jewelers will be needed to replace those who retire or who leave the occupation for other reasons. When master jewelers retire, they take with them years of experience that require substantial time and financial resources to replace. Many employers have difficulty finding and retaining jewelers with the right skills and the necessary knowledge. Opportunities in jewelry stores and repair shops will be best for graduates from training programs for jewelers or gemologists.

Keen competition is expected for lower-skilled manufacturing jobs that are amenable to automation, such as assemblers and polishers. Jewelry designers who wish to create their own jewelry lines should expect intense competition. Although demand for customized and boutique jewelry is strong, it is difficult for independent designers to establish themselves.

The jewelry industry can be cyclical. During economic downturns, demand for jewelry products and for jewelers tends to decrease. However, demand for repair workers should remain strong even during economic slowdowns because maintaining and repairing jewelry is an ongoing process. In fact, demand for jewelry repair may increase during recessions, as people repair or restore existing pieces rather than purchase new ones.

Earnings

Median annual wage-and-salary earnings for jewelers and precious stone and metal workers were \$29,750 in May 2006. The middle 50 percent earned between \$22,390 and \$40,160. The lowest 10 percent earned less than \$17,760, and the highest 10 percent earned more than \$54,940.

Most jewelers start out with a base salary, but once they become more proficient, they may begin charging by the number of pieces completed. Jewelers who work in retail stores may earn a commission for each piece of jewelry sold. Many jewelers also enjoy a variety of benefits, including reimbursement from their employers for work-related courses and discounts on jewelry purchases.

Related Occupations

Jewelers and precious stone and metal workers do precision handwork. Other skilled workers who do similar jobs include precision instrument and equipment repairers; welding, soldering, and brazing workers; and woodworkers. Some jewelers and precious stone and metal workers create their own jewelry designs. Other occupations that require visual arts abilities include artists and related workers, and various designers—commercial and industrial, fashion, floral, graphic, and interior. Finally, some jewelers and precious stone and metal workers are involved in the buying and selling of stones, metals, or finished pieces of jewelry. Similar occupations include retail salespersons and sales representatives in wholesale trade.

Sources of Additional Information

Information on job opportunities and training programs for jewelers and gemologists is available from:

➤ Gemological Institute of America, 5345 Armada Dr., Carlsbad, CA 92008. Internet: <http://www.gia.edu>

For more information about bench jeweler certification and careers in jewelry design and retail, including different career paths, training options, and schools, contact:

➤ Jewelers of America, 52 Vanderbilt Ave., 19th Floor, New York, NY 10017. Internet: <http://www.jewelers.org>

For information on jewelry design and manufacturing, training, and schools offering jewelry-related programs and degrees by State, contact:

➤ Manufacturing Jewelers and Suppliers of America, 45 Royal Little Dr., Providence, RI 02904.

Internet: <http://www.mjasa.org>

To receive a list of accredited technical schools that have programs in gemology, contact:

➤ Accrediting Commission of Career Schools and Colleges of Technology, 2101 Wilson Blvd., Suite 302, Arlington, VA 22201. Internet: <http://www.accset.org>