

# Explore the Roles of Designers

**D**ESIGNERS' RESPONSIBILITIES and tasks can vary depending on the field. Many designers, however, are involved in creating images, products, or forms that communicate ideas. Each field typically requires knowledge of specific materials or mediums with which the designer works. They require good organizational and communication skills and have had significant influence on the created environment in which we live. Designers can work in a variety of fields, ranging from environmental to production to graphics.



## Objectives:



1. Describe the role of designers.
2. Explain the historical and social influences of designers, architects, and engineers on daily life.
3. Identify career possibilities related to the design field.

## Key Terms:



commercial/industrial designers  
design/engineering technicians  
designers  
fashion designers  
floral designers  
graphic designers / digital technicians  
industrial design  
interior designers  
residential/architectural designers  
technical illustrators

## Understanding the Role of Designers

Being a designer requires possessing a range of knowledge across a variety of fields depending on the specific disciplines involved. It also requires technical and communication skills and abilities necessary to successfully complete tasks.

Designers create things and communicate ideas. They use different media or languages that vary across many industries and that have become vital tools in modern development. Designers need to graphically represent their ideas so they can be manufactured, fabricated, or constructed into products and buildings. This requires the use of graphic or technical drawings. These drawings have developed different industry standards that range

from one type (of design) to the next. Historically, designers created their ideas and communicated them with hand drawings or by making real models. Today, computer aided drafting and design (CADD) systems are used to develop designs and to create models.

Designing involves directing and coordinating the fabrication of models, working drawings, and specifications from sketches or verbal directions. It is the process of refining and developing ideas by using drawings or models. This may be done to conform to client needs, production limitations, or changes in design trends. In the process, designers may need to present their concepts to clients or committees for approval and may need to discuss changes.

Designers need to evaluate the feasibility of their concepts and ideas. Good design takes into consideration aesthetics, function, safety, serviceability, and budget. Many designers keep themselves educated on current trends and technology by attending trade shows, reading publications, and researching competitive products and styles.



**FIGURE 1.** Drafting has developed with technology. Today we have many resources, including computer software that aids in the design process.

### KNOWLEDGE

Knowledge of a range of information is required for designers. This includes specific design techniques, tools, and principles involved in the production of precision technical plans, construction documents (blueprints), drawings, and models. Appropriate knowledge is also required of the materials or medium the designer uses. For instance, fashion designers need to know about textiles and sewing techniques; architectural designers need to know about materials used in buildings; and graphic designers need to know about print and digital media.

Knowledge of arithmetic, algebra, geometry, calculus, and statistics as well as how they are applied can be critical, depending on the design type. The ability to use and construct the English language is also necessary. Without correct spelling, grammar, and composition, text can give inaccurate information. Awareness of production processes and techniques, the refining process, and methods of controlling quality and cost are useful for designers.

## SKILLS AND ABILITIES

Being able to manage your time is essential for designing. Some tasks may take weeks to complete. As a result, communication is critical. You must pay close attention to directions, listen, and understand the points being made. Your ideas and concerns are also important, and you must be able to express them verbally.

Some long and in-depth design documents require good reading comprehension to fully understand what is written. Many factors and alternative approaches to problems can arise. Therefore, being able to make decisions based on strong historic criteria is important (e.g., the ability to think critically and to make judgment calls using logic and reasoning). There may be alternate solutions and approaches to a design problem, so having deductive reasoning skills is essential. These skills can allow you to find more efficient answers and help you choose the most appropriate action to take. Originality or creating clever and unusual ways to solve problems is an important trait for designers. Paying attention to details is critical. Designers must recognize problems and see where things may be inaccurate or inconsistent.



**FIGURE 2.** Some designs (e.g., this interior restaurant) can be complicated and time consuming to produce, thereby requiring much focus and discipline.

## Historical Influences

All of our objects were designed by someone for some reason. Designers drafted their ideas so others could help create them. This is one of the oldest documented professions. We are able to research the lives of primitive cultures through artifacts designed for some purpose. The items tell stories of the cultures that used them.

## PAPER AND TOOLS

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With the advent of paper manufacturing and tools used to make drawings more accurate and legible, designers were able to refine and communicate their ideas. During the Egyptian Empire, these design tools made it possible to build the Great Pyramids of Giza. Since then, a series of changes in technology have allowed for advances in our ability to communicate ideas and to refine designs. These advances led to more complete and accurate object production. During the Roman Empire, some of the most important historical creations were designed (e.g., the Coliseum and Pantheon in Rome and the roads that allowed people to travel and exchange ideas and goods). Designs have been responsible for all of our technological revolutions—from the printing press to the steam engine to the computer.

## EQUIPMENT

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The design of the printing press made it possible to mass produce and distribute knowledge leading up to the Renaissance. During the Industrial Revolution, design innovation allowed us to produce machines and equipment that could refine materials and mass produce objects. During this time, bridges were constructed, the Eiffel Tower was designed, and the first skyscrapers were built.

## TECHNOLOGY

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The most recent revolution—the digital revolution—was a result of designers creating technology that led to the development of modern computers. These changes have provided designers, architects, and engineers with the ability to refine and communicate their ideas even more precisely. CADD has completely revolutionized the design and production industries. All of the modern electronic devices you use—from your TV to your cell phone—have been influenced by the capabilities of these professions.



**FIGURE 3.** The design industry has dramatically changed since digital technology. For example, this computer-generated graphic can easily and quickly be created with CADD.

## Career Possibilities

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Certain training and education may not allow someone the opportunity to specialize or to become familiar with various professions. However, designers have numerous opportunities in a variety of settings.



## FURTHER EXPLORATION...

### ONLINE CONNECTION: Occupational Outlook Handbook

Understanding different aspects of a career is important when making a selection. Many sources can provide you with a range of information about design careers. The U.S. Department of Labor, for example, gives you information about responsibilities, education, salary, and more.

Spend some time examining statistical data on commercial/industrial designers at:

<http://www.bls.gov/oco/ocos290.htm>

## DESIGNERS

**Designers** and **commercial/industrial designers** are people who use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance. In school, it is typically referred to as **industrial design** or product design studies. Designs include cell phones, cars, toys, home appliances, and even sports equipment. These designers combine function and form with artistic talent and product research to create appealing and useful objects. Depending on the specific position, most employers may require a bachelor's degree. The median wage is \$26.23 hourly and \$54,560 annually.

## DESIGN/ENGINEERING TECHNICIANS

**Design/engineering technicians** are people who help to solve technical problems through research and the development of the manufacturing, sales, construction, inspection, and maintenance of objects. They rely on the principles and theories of science, engineering, and mathematics. This field requires most designers to have an associate's degree or a bachelor's degree. The median wage is \$21.09 hourly and \$43,870 annually.

## FASHION DESIGNERS

**Fashion designers** are people who create original clothing and accessories that may follow well-established fashion trends or may use a unique color, pattern, or type of material to develop appealing and comfortable clothing. This field requires most designers to be trained in vocational schools,



**FIGURE 4.** Designers have had influence on all aspects of our lives, including the clothing we wear (fashion designers) and the products we buy (commercial/industrial designers).

through related on the job experience, or at a community college. Depending on the specific position, some employers may require a bachelor's degree. The median wage is \$30.10 hourly or \$62,610 annually.

## FLORAL DESIGNERS

**Floral designers** are people who conceptualize displays and cut and arrange live, dried, or artificial flowers and foliage. They use colors, textures, and shapes to design floral arrangements. This field requires a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's degree may be required. The median wage is \$10.43 hourly or \$21,700 annually.

## GRAPHIC DESIGNERS / DIGITAL TECHNICIANS

**Graphic designers / digital technicians** are people who create graphics to meet specific commercial or promotional needs (e.g., packaging, displays, or logos). A variety of mediums can be used to create artistic and decorative effects. Graphic designers create visual solutions that communicate ideas and information in the most effective way. This may include print, electronic, and other media using a range of methods (e.g., color theory, type, illustrations, photography, animation, and lay-



**FIGURE 5.** A range of design options exist, and most involve creative positions and environments. Although the process is similar, the materials may vary (as seen in these two images of a fashion designer and a graphic designer).



## FURTHER EXPLORATION...

### ONLINE CONNECTION: Occupational Outlook Handbook

Understanding different aspects of a career is important when making a selection. Many sources can give you information about design careers. Spend a few minutes visiting the Web sites below to see a range of statistical data on graphic designers and interior designers:

<http://www.bls.gov/oco/ocos090.htm>

<http://www.bls.gov/oco/ocos293.htm>

out techniques). This field typically requires a bachelor's degree. The median wage is \$19.18 hourly or \$39,900 annually.

## INTERIOR DESIGNERS

**Interior designers** conceptualize, plan, and furnish the interiors of residential, commercial, and industrial buildings. This work can range in scale. The median wage is \$20.32 hourly or \$39,900 annually.

## RESIDENTIAL / ARCHITECTURAL DESIGNERS

**Residential / architectural designers** are people who prepare detailed drawings of designs and plans for buildings and structures according to the specifications provided by an architect. This field typically requires a bachelor's degree and certification by the American Institute of Building Design (AIBD). The median wage is \$26.23 hourly or \$54,560 annually.

## TECHNICAL ILLUSTRATORS

**Technical illustrators** are people who plan, analyze, and create visual solutions in a variety of artistic manners. They can work under a multitude of job titles and can use a range of tools and equipment to produce artistic designs. This typically requires them to develop the most effective way to communicate a message through print, electronic, or other media. They use color theory, type, illustrations, photography, animation, and layout techniques. Their work can range from creating the technical instructions you receive with a product for assembly to creating original paintings or drawings to help demonstrate and communicate information. The median wage is \$20.18 hourly or \$41,970 annually.

### Summary:



Designers create things and communicate ideas. They use different media or languages (across many industries) that have become



FIGURE 6. A technical illustrator may perform a range of tasks, from the layout of technical instructions to the creation of original artwork for album and book covers, marketing images, and posters.

vital tools in modern development. Designing involves directing and coordinating the fabrication of models, working drawings, and specifications from sketches or verbal directions. The job requires time management skills as well as good communication and organizational skills.

All of our objects were designed by someone for some reason. Designers drafted their ideas so others could help create them. The digital revolution and CADD technology has had a great influence on designers, architects, and engineers by giving them the ability to refine and communicate their ideas even more precisely.

There are a range of responsibilities across different fields of design. They can include the development of products (e.g., phones and cars), the design of clothing, floral arrangements, interior design, and the graphic design of any printed or visual forms of information.

### Checking Your Knowledge:

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1. What is the role of a designer?
2. List three areas of knowledge required for designers.
3. List three skills or abilities designers need.
4. Describe four different types of designers.
5. What do graphic designers / digital technicians specifically create?

### Expanding Your Knowledge:

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If you are interested in becoming a designer, research a company. Then call and schedule a visit to the local design office. Prepare a list of questions about job details and educational requirements. Most design firms will be more than happy to talk with you. Be professional, take notes, and inquire about internship opportunities.

### Web Links:

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#### Different Types of Designers

[http://www.career-opportunities.net/articles/view/different\\_types\\_of\\_designers](http://www.career-opportunities.net/articles/view/different_types_of_designers)

#### Types of Game Designers

[http://www.gamecareerguide.com/features/483/types\\_of\\_game\\_.php](http://www.gamecareerguide.com/features/483/types_of_game_.php)

#### Graphic Design Job Descriptions

<http://www.designtalkboard.com/design-articles/job-descriptions.php>

#### Types of Graphic Design Jobs

[http://www.ehow.com/facts\\_5189003\\_types-graphic-design-jobs.html](http://www.ehow.com/facts_5189003_types-graphic-design-jobs.html)

#### Design Career Overview

<http://www.careeroverview.com/design-careers.html>