## Chapter 7

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## LEARNING OUTCOMES

After studying this chapter, you will be able to
7-1 identify the elements of design and their use in clothing design.
7-2 classify five basic body types.
7-3 describe the principles of design and their use in clothing design.
7-4 compare how the principles of design relate to the design elements.

## KEY TERMS

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design
elements of design
optical illusion
line
structural lines
silhouette
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decorative lines
shape
form texture principles of design
balance proportion rhythm emphasis harmony
"Design is thinking made visual." —Saul Bass

## Ready to Read

Before reading, skim the chapter and examine how it is organized. Look at the bold or italic words, headings of different colors and sizes, bulleted lists or numbered lists, tables, charts, captions, and boxed features.


EMILI_VISION/E+ via Getty Images
Figure 7.1 A fashion designer uses the elements and principles of design to achieve an attractive result. What factors influence what is considered attractive?

## 7-1 Introduction

A design is an arrangement of elements or details in a product or work of art. Paintings, buildings, and even cities are designs. The clothes people wear are designs. Designing is the art or practice of creating designs.

You may be attracted to a certain outfit because it is welldesigned. The overall effect is pleasing; all the elements seem to belong together. The colors are right, the fabric is right, and the design is right. A fashion designer, who is using the elements and principles of design you will study in this chapter, is carefully planning the outfit in Figure 7.1.

How can knowing about good design help you? First, it will help you to recognize a well-designed garment or ensemble. Second, it will help you select and create the designs that look best on you. With clever use of design, you will be able to show off your best features and design and alter fashionable apparel.

## 7-2 Body Types

There is no ideal body shape when it comes to looking stylish and feeling confident. Understanding differences in natural figure types and body shapes can help enhance your design skills and embrace a positive body image. Body shape is called figure or physique. Figure and physique types are often compared to geometric shapes-particularly the triangle, rectangle, and circle. You may also see them referred to as familiar objects, such as a pear, apple, and hourglass. These geometric shapes and objects represent the common shapes naturally found in the human form (Figure 7.2). The following are the five most common figure and/or physique types:

- Triangle. This shape is narrow on top and wider at the bottom. This means a person's body may be narrower in the shoulders and broader in the hip area. Some people describe this figure as pear-shaped.
- Inverted triangle. This person is larger in the upper body and narrower in the lower body. The shoulders are wider, but the lower half of the body is narrower. The bust or chest is average or on the larger side. This shape may be described as an apple shape.
- Rectangle. A person with this figure type has shoulders, waist, and hips of a similar width. The body shape is consistent throughout, without a defined waist.
- Hourglass. An hourglass is an object that is wider at both the top and bottom, but narrower in the middle. This also describes the hourglass-figure type. This person generally has a larger chest, a defined waist, and wider hips.
- Circle or rounded. This body shape is more rounded around the midsection and chest. The shoulders and hips may appear narrower.
No matter what figure or physique type, people can use the elements and principles of design to enhance their best features.


NatBasil/iStock via Getty Images Plus
Figure 7.2 These common figure types are often compared to geometric shapes. Why is it so important for designers to consider all body types when designing?

## 7-1 Elements of Design

The elements of design are color, line, form, and texture. They are sometimes referred to as the building blocks of design. Each of these elements plays an important role in forming the structure of clothing designs. Sometimes, elements of design are used to create an optical illusion, or an altered image or visual impression presented to the eyes. You can apply your knowledge of the elements of design as you select, buy, or construct clothes.

## Line

Lines give direction to a design and break larger areas into smaller ones. Lines also create movement in a design, carrying the eye from one area to another. They can be vertical, horizontal, diagonal, or curved (Figure 7.3).

- Vertical lines lead the eye up and down. They give the feeling of height, dignity, and strength.
- Horizontal lines carry the eye from side to side. Such lines suggest a feeling of calm relaxation, but can add width.


Vertical


Horizontal


Diagonal


Goodheart-Willcox Publisher
Figure 7.3 These are just a few of the types of lines found in clothing.

Roman Summer/Shutterstock.com
Figure 7.4 Structural lines can be quite visible, as shown by this red dress. What type of clothing always has visible, structural lines?

- Diagonal lines are angled or slanted. They suggest activity, movement, and excitement. Because they are less common, they attract attention.
- Curved lines gently bend. They create the appearance of softness and fullness.
The lines found in garments can be either structural or decorative. Structural lines form as the pieces of a garment are sewn together. Seams, darts, pleats, tucks, or the edges of the garment may form these lines. They are easy to see in plain fabric. Sometimes, structural lines are the main design element in a garment (Figure 7.4).

Decorative lines are applied to a garment to add interest. Braid, fringe, ruffles, edgings, topstitching, lace, tabs, flaps, appliqués, and buttons all form decorative lines. The designer adds these features to a garment to create the design. Sometimes decorative lines accent structural lines. For instance, topstitching along a neckline, seam, or cuff emphasizes the structural lines.

The line most important to a person is the silhouette or outline of the body. Understanding the proportions of a silhouette helps a person decide how to use lines in clothing to enhance appearance (Figure 7.5).

## Using Lines to Create Illusions

Garment lines can create optical illusions. Look at the illustration. Though each rectangle is the same, the one on the right looks longer and narrower than the one on the left.
The clever use of line can give an illusion that people have different body types than they really have. With the correct use of line, a person can look shorter, taller, larger, or smaller.

Goodheart-Willcox Publisher
Figure 7.5 An optical illusion causes your eye to perceive that the left rectangle is shorter than the right one.

## Vertical Lines

Wearing clothes with vertical lines can make a person look taller and narrower. Study the illustrations in Figure 7.6. Notice how the eye moves upward, giving the illusion of height. A vertically striped dress can make a person seem taller because of the unbroken line the stripes create. Likewise, a vertically striped shirt or jacket can make a person seem taller.

The stripes in the fabric can form vertical lines, as can any fabric design that is up and down-circles, dots, or prints. The structural


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Figure 7.6 For a taller and narrower look, select vertical lines that keep the eye moving upward.
and decorative lines of the garment may be vertical. Seams, buttons, pockets, cuffs, and trimmings may be in a vertical line.

Not all vertical lines make a figure appear narrower. If the lines are wide or spaced far apart, the figure will appear larger. This is because the eye goes back and forth between the lines, giving the illusion of more width. In Figure 7.7, notice how the wide panel gives a wider look to the body. The narrow panel has the opposite effect.

## Horizontal Lines

Horizontal lines cause the eyes to move from side to side and tend to make a figure appear shorter and wider (Figure 7.8). If a garment has horizontal stripes, the body may appear wider (Figure 7.9). When an item intersects the horizontal lines, such as a wide contrasting belt, it can make a figure seem shorter because it divides the body into two parts (Figure 7.10). Wide, bold stripes across narrow shoulders give the illusion of broader shoulders.


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Figure 7.7 Not all vertical lines have the same effect. If they are spaced far apart, the figure will appear wider.

## Diagonal Lines

If a garment has diagonal lines and they are nearly vertical, they give the illusion of height. If they are mostly horizontal, they add width. However, the effect is not as strong as with strictly vertical or horizontal lines.

## Curved Lines

Rolled collars on sweaters and round collars on garments are popular uses of curved lines. Pockets, trims, necklines, scarves, and caps or hats can also use curved lines.


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Figure 7.8 For a shorter, more rounded look, select lines that keep the eye moving from side to side.


Figure 7.9 A dress with horizontal lines usually carries your sight line across an outfit. What type of stripes do you prefer?


Alina Koval/Shutterstock.com
Figure 7.10 A belt can act to create a more defined waist, but will also interrupt the flow of an outfit.

Different effects can be achieved by using curved lines. For example, a person's face will appear less square with a rounded neckline. A long neck appears shorter if a person wears a turtleneck or rolled-neck sweater. A V-neckline draws emphasis to a pointed chin, while a high or round neckline softens this feature.

## Form and Shape

The outline of an object is its shape, which is made up of lines. If you stand in front of a lighted area near a wall, you can see your silhouette on the wall as a shadow. When people see you from a distance, they see only your shape.

When a two-dimensional shape takes on a third dimension, it becomes a form or mass. Form is the three-dimensional shape of an object. If an object has height, weight, and depth, it has form. Form makes up the enclosed area of a design. Along with body shape, the clothes people wear help to create form.

Many factors determine what form or silhouette will be in fashion from year to year. One year the form may be a natural look. Clothes may follow the shape of the body. Another year, padded shoulders-which give a squared form-may be popular.

Several forms or shapes are common in clothes. These include the following:

- Natural form. The natural form follows the shape of the body. Clothes fit close and reveal the natural waist and hips.
- Full form. Some clothes, such as a full skirt or pants with wide legs, produce a full form. These clothes tend to visually increase the size of a person's appearance.
- Tubular form. Clothes with a tubular form are more vertical. They include a straight dress without a defined waistline, straight-leg pants, or a suit. The tubular form creates the illusion of height and a narrower form (Figure 7.11).
- Bell form. Clothes that produce the bell-shaped form look good on most people. Flared skirts and pants are examples of bell forms.


## Texture

Texture refers to how a fabric feels and looks on the surface. The yarn, weave, and finish determine a fabric's texture. Some words that describe texture are smooth, dull, rough, shiny, nubby, soft, fuzzy, delicate, crisp, pebbly, scratchy, swishy, and shaggy.

Awareness of physique or figure type can help people choose textured fabrics that help enhance their best features. The following guidelines are helpful to note when choosing texture:

- Fuzzy, loopy, or shaggy surfaces are usually thicker and bulkier. They increase visual size.
- Stiff, crisp textures also increase the illusion of size because the fabric stands away from the body. They can, however, help conceal some body features.
- Soft, clingy fabrics reveal the body's entire silhouette.
- Smooth, flat textures give the illusion of decreased size.
- Shiny textures reflect light and emphasize body curves. They tend to add the illusion of weight or size.
- Dull surfaces tend to decrease size because they absorb light.
- Combinations of textures are interesting. A bulky sweater to emphasize the shoulders can be worn with smooth-textured, slenderizing pants.
Fabrics may have a design woven into them or printed on them, creating a pattern. The fabric may be a stripe, plaid, floral, or geometric print. The design may be large or small, light or dark, bold or subdued. If the pattern or design is large and bold, the texture will be secondary. The applied design will be more important than the texture. Large, bold patterns call attention to the area where they are worn.


## 7-3 Principles of Design

The principles of design are guidelines for combining and using the elements of design (color, form, line, and texture). Balance, proportion, rhythm, and emphasis are the principles of design. When these are used correctly, the result is harmony-the goal of design.

The principles of design are used in creating, altering, and judging a design. Designers also use these principles as they work.

Learning how to use each design principle helps people analyze the clothing designs they select. By assessing certain combinations of colors, forms, lines, or textures, they can make choices that enhance their body types.


Lesya Ovcharenko/Shutterstock.com
Figure 7.12 A classic Western-style shirt is an example of formal balance with both sides of the garment identical on either side of the center.

## Balance

When looking at something that has balance, you see objects that are arranged in an even, pleasing way. There is equal visual weight on both sides of an imaginary centerline. Proper use of the elements of design creates balance in garments and outfits. Color, line, form, or texture can be used separately or together to achieve balance. There are two types of balance: formal and informal.

## Formal Balance

With formal balance, or symmetrical balance, both sides of a garment are identical (Figure 7.12). Formal balance is easy to achieve and observe in garments and outfits. Many shirts, blouses, pants, jackets, coats, and sweaters have formal balance. For example, skirts with the same number of pleats on each side of the center have formal balance. A shirt with an identical breast pocket on each side also has formal balance.

## Informal Balance

Balance can also be achieved when the design elements are different on either side of an imaginary line. This unequal kind of balance is called informal balance, or asymmetrical balance. Informal balance is not as easy to create as formal balance, but it is usually more visually interesting. The sides are not alike; but neither side overpowers the other. With informal balance, there is less monotony while maintaining equal visual weight. Although each side is different, to the eye, the design appears to be balanced (Figure 7.13). A jacket with an off-center closing on one side balanced with a pocket on the other side is an example of informal balance.

## Proportion

Proportion is the relationship of one part to another and of all the parts to the whole. This includes sizes, spaces, shapes, and visual weight. When an outfit has pleasing proportion, it looks right for the person wearing it.

Clothing and accessories should be in proportion to a person's size and body shape. For example:

- If a person has a small body shape or is short, they may want to avoid styles that seem overpowering. Garments with huge pockets, big collars, large buttons, and wide lapels are not in proportion to body size.


## Career Clips

## Stylist

A stylist uses the principles and elements of design to arrange clothing ensembles for photographs, films, social media, red carpet looks and many other events. Stylists have to consider their client's body type and consider how line, shape, form, texture, and other principles and elements of design play a part in the overall look of the outfit they are styling. Another stylist may be working on a photo shoot for a magazine spread and need to consider the cohesiveness of the outfits contained as a whole.

They might also consider the backdrop, props, and lighting when styling the shoot.

Most stylists have a four-year college degree in visual arts or fashion merchandising. During their time in college, they are developing their skills and building a digital portfolio to show their mastery of skills. Stylists' pay range varies based on skill level and demand.

Do you like to style outfits and put different looks together? How do you think you would like styling for a living? Do you have a favorite stylist that you follow on social media? Who are some of their clients?

- If an individual has shorter legs, a short jacket will make their legs appear longer. A longer jacket makes the upper body seem longer and the legs shorter.
- If a person is tall and slender, a large plaid sports shirt looks just right. In contrast, the same shirt will look out of proportion on a smaller, shorter person.
- If a person is smaller, a large handbag or other large accessories will look out of proportion to their size.
- If a person is tall, a wide, large belt looks proportionately appropriate. A narrower belt is more in proportion for a smaller person.
Unequal proportions are usually more visually interesting than equal ones (Figure 7.14). When a jacket or shirt is exactly the same length as the skirt or pants length worn with it, the effect is uninteresting. Stripes on fabrics that are equal in width are not as interesting as those that vary in width. An uneven number (three or five) of buttons on a jacket or coat is more pleasing than an even number (two or four).

Learning to identify good proportion requires examining many garments and outfits. Reviewing pictures in newspapers and magazines or online will give you practice. Study your own clothes and the clothing you see others wear. With practice, you will be able to achieve the best proportion for you.

## Rhythm

Rhythm is the feeling of movement created by line, shape, or color in a design. It causes the eye to move smoothly from one part of the design to another. With rhythm, each part of the design seems to belong to or go with another part.

Rhythm in design is somewhat like rhythm in music. In music, a sound is repeated, a regular beat is heard, and rhythm is produced. However, in design, we see rhythm rather than hear it. Rhythm in design is achieved by repetition, gradation, and radiation of colors, lines, shapes, and textures (Figure 7.15).


Figure 7.15 Rhythm can be achieved in a variety of ways.


Figure 7.16 The repetition of lines and pattern in this skirt creates rhythm, which causes the eye to move across the width of the skirt.

## Emphasis

- Repetition. To achieve rhythm through repetition, lines, colors, forms, or textures are repeated in a design. For example, a designer may choose one color in a plaid for use in trim or buttons. Because of the repetition of color, your eye moves from one area to another and causes you to look at each part of the outfit. Likewise, when lines or patterns are repeated, rhythm is achieved (Figure 7.16). Curved pockets on a coat go with the curves of the coat hem or the rounded lapels. Contrasting trim on a suit may be repeated on both the lapels and sleeve hems.
- Gradation. Varying rhythm through gradation also achieves movement. For instance, stripes may be close together at the top of a sweater and gradually become wider apart at the bottom. Gradation also occurs with other types of movement-from light to dark colors, from small to large sizes or large to small, or from horizontal to vertical lines.
- Radiation. Another way to achieve rhythm in design is by radiation. Radiation occurs when lines extend outward from a central point. In clothing, gathers at the neckline of a sweater or dress create lines toward the waistline. These same gathers also draw the viewer's eye to the person's face because the face is close to the center of interest where the lines form.
With rhythm, your eye moves steadily from one part of an outfit to another part. This is why it is important for plaids and stripes to match at seams. Unmatched stripes and plaids can destroy the rhythm of an outfit. The uneven breaks in the fabric design cause the eye to stop at that point.

Interesting designs have one part that stands out more than any other part. They have a center of interest or emphasis. The eye is drawn to this area, and it is the first thing people see.

Emphasis should be used to draw attention to a person's best features (Figure 7.17). Color, design details, texture, and accessories all help achieve emphasis. Lace, ruffles, and unusual shapes in buttons and trims draw attention to the areas of placement.

Accessories can add emphasis to a plain blouse and skirt or a shirt and pants. A tie, a pin, or neck jewelry can improve the looks of any outfit by providing a point of emphasis.

A contrasting belt emphasizes the waistline. A person who is thicker through the middle may choose another area of their body
to emphasize. For example, a bright print tie or scarf at the neckline pulls attention away from the body shape and draws it to the face.

If a person desires to give the illusion of decreased height, he or she may choose an area of emphasis at the waistline or hemline. To give an optical illusion of increased height, place the area of interest high on the body. This draws the eye upward instead of downward.

## 7-4 Achieving Harmony

Using the elements of design according to the principles of design creates harmony and a pleasing visual image. In achieving harmony, all parts of a design look as if they belong together, as in (Figure 7.18). The line, color, form, and texture harmonize with each other. The design is harmonious when it is well balanced, has a sense of rhythm, and is in good proportion. Everything looks suited to the whole-there is a sense of unity. The design also enhances the coloring, body type, and personality of the wearer.

Consider all parts of an outfit when striving for harmony. Jeans and leather jackets go together. A leather jacket over a fancy party dress is less harmonious. A plaid, cotton flannel sports shirt looks better with the collar open than with a necktie.

Accessories can help achieve harmony in an outfit. However, too many accessories can also spoil the effect. Repeating colors from a garment in an added belt or jewelry can be pleasing.

You can use your knowledge of the elements and principles of design to enhance your best features and select clothing that flatters you. These elements and principles should also be used as you design and construct apparel and textile products. The process of fashion design involves the application of the elements and principles of design. You will use color, line, form, and texture as you brainstorm and sketch fashion ideas.

The elements and principles of design can also be applied as you alter apparel and textile products. Apparel can be altered in width and height and can be redesigned. Using the elements and principles of design, you can give garments and textile products new life.

Even when making small changes to a garment or altering a garment for functionality (such as altering a garment for a person with special needs), keep the elements and principles of design in mind. Fashion designers create harmonious designs using fashion drawing, computer-aided design (CAD) programs, and draping, among other methods.


Figure 7.18 Harmony is achieved when all aspects of an ensemble create a pleasing visual image and all parts of the design seem to belong together. What is harmonious about this collection?

## Chapter 7 Resiew

## Summary

7-1 A design is an arrangement of elements or details in a product or work of art. The clothes people wear are designs.
7-2 Figure and physique types are often compared to geometric shapes, particularly the triangle, rectangle, and circle. These geometric shapes and objects represent the common shapes found in the human figure.
7-1 The elements of design are color, line, form, and texture.

7-1 Lines in garments can be vertical, horizontal, diagonal, or curved. They may be structural or decorative. Lines can create optical illusions that may mislead the eyes.
7-3 The principles of design are balance, proportion, rhythm, and emphasis.
7-4 The goal of good design is harmony. Correctly using the elements and principles of design achieves harmony.
7-4 Fashion designers use the elements and principles of design when designing, altering, and constructing apparel and textile products. Methods such as fashion drawing, CAD, and draping help fashion designers visualize how the elements and principles apply to their designs.

## Review the Facts

1. Explain the difference between structural lines and decorative lines in garments. (7-1)
2. What geometric shape corresponds to a body that is naturally larger on the bottom in comparison to the top? (7-2)
3. Explain how the principles of design relate to the design elements. (7-4)
4. Contrast formal and informal balance. (7-3)
5. Give an example of how to achieve rhythm in a garment. State the type of rhythm used in your example. (7-3)
6. A bright red tie worn with a white shirt is an example of which principle of design? (7-3)
7. Summarize how to achieve harmony in a design. (7-4)

## Think Critically

1. Make inferences. Is there a difference between good design and bad design? Identify evidence to support your inferences.
2. Draw conclusions. If you were a fashion designer, which element of design would you consider most important? Why? Share your conclusions with the class.
3. Make predictions. Review several fashion magazines or websites. Identify which form or silhouette seems to be in fashion for the current season. Predict which factors may influence silhouettes for the following season.
4. Analyze influences. In small groups, research new design and textile technologies, including computer-aided design programs. How, if at all, do these technologies make it easier for designers to implement the elements and principles of design?
5. Determine applications. Working with a partner, choose one garment for a person with special needs and determine how the elements and principles of design play into the design of the garment. How, if at all, could the design be improved?

## Apparel Applications

1. Electronic bulletin board. Plan an electronic bulletin board titled Select the Right Designs. Locate electronic pictures of fabric examples with various textures, lines, forms, and colors. Use a school-approved web application to group them according to different body shapes noted in the text. Post your electronic bulletin board to the class website.
2. Identify fabric effects. Collect fabric samples of textures and designs. Describe each texture and design in class. Identify those that give the illusion of increased size and those that offer a narrowing effect.
3. Photo essay. Create a photo essay illustrating the different principles of design. Use clothing photos from magazines, pattern books, or from print or online catalogs. Mount pictures on paper or insert digital pictures into presentation software. Share your examples with the class. Are your examples excellent, fair, or poor? Support your choices.
4. Using design. Examine your wardrobe. Choose two items that you no longer wear due to something about their design. Working with a partner, identify how the elements and principles of design are used in the two items. How well are they used? Using what you have learned in this chapter, brainstorm alterations you could make to the garments to improve their use of the elements and principles of design. Redesign the garments using fashion drawing and present your drawings to the class.
5. Analyze harmony. Collect 10 pictures of people in various outfits. Decide which outfits have harmony and which do not. Give reasons for your answers. Also decide which outfits would change the appearance of a person's natural shape.

## Core Skills

1. Writing. Choose one of the five basic figure/ physique types. Review the elements and principles of design. Then make a list of colors, garment features, styles, and accessories that would be appropriate for this figure or physique. Create another list of items to avoid. Write a summary explaining your rationale for these choices.
2. Technology. Create a fabric design with a CAD program. Analyze the design. Does it use the elements and principles of design to achieve harmony? Ask class members for comments.
3. Speaking. Presume you work in a clothing retail shop. Your assignment is to find creative ways to highlight points of emphasis in a new line of garments. Choose one garment, identify the point of emphasis, and explain to the class how you will display the garment to its best advantage.
4. Portfolio builder. As a fashion writer for your school newspaper, it has come to your attention that your classmates want to know more about how to choose clothes to enhance their appearance. Write an article about using the elements and principles of design to enhance various figure types and physiques. Save a copy for your portfolio.
5. CTE career readiness practice. Imagine that you have been tasked with writing an article for an online teen newsletter about selecting clothing silhouette, fabric, and design elements for specific body types. Using what you have learned in this chapter, write an engaging, conversational article directed at teens. Your article should provide suggestions for all body types. Trade articles with a partner and help each other edit and revise for correct content, concepts, vocabulary, grammar, punctuation, and terminology.


Using the Elements and Principles of Design
Prepare an FCCLA STAR Event Professional Presentation on a topic related to using the elements and principles of design. For example, you might use the elements and principles to organize a presentation on choosing a low-cost wardrobe for a teen or someone starting a new job.

Use the Professional Presentation guidelines found in the FCCLA Competitive Events Guide. See your advisor for information as needed.

