

What designers need to know?

Designers need to master a wide variety of skills and concepts. What follows is an overview of the nine categories of investigation you can find in most design programs. Not every category is taught in every undergraduate curriculum—the time is just too short. Each program emphasizes certain subjects and teaches others more broadly.

shows different ways to practice graphic design and serves as a counterpoint to this overview of education. A practitioner does not develop expertise in all aspects of design but selects a special area of interest in a particular kind of communication problem. One designer may love print media and therefore prefer magazine or book design. Another may have a great interest in type design or want to design exhibits. Design education is a preparation for practice, so if a certain kind of design appeals to you, think about what kind of learning supports it. Flip back and forth between this section and as you consider how your education can prepare you for a particular kind of design practice.

Perception, visual organization, aesthetics

Designers think about visual forms and how they are put together to convey meaning. These forms are a kind of visual language. Points, lines, planes, volumes, spaces, areas, textures and colors, as well as how they are used to create symmetry, proportion and rhythm, are basic aspects of the designer's visual vocabulary.

Form and structure analyzes positive and negative forms.

Form analysis examines how two- and three-dimensional forms create a feeling of space.

Structure and system consider various ways to create order in space. For example, grid system is one way to create a sense of harmony and order.

Visual phenomena explores the intuitive response of the audience to form, color and texture.

Composition and visual framing involves deciding what to include in an image and how elements of an image contrast with one another.

Visual abstraction identifies the key features of an object and simplifies them.

Unity of form looks at relationships among design elements, such as proportion, scale, symmetry and contrast.

Visualizing techniques

Designers need to be familiar with basic tools, techniques and processes to produce images, sketches, models and finished work. They need to use tools with skill and sensitivity. Students learn photography, various kinds of drawing, model making and diagramming as ways to develop their ideas.

Photography, although often regarded as a “truthful” rendering of the world, may convey realism or emotion, as demonstrated in these examples.

Visual translation is the process by which the essence of an image is abstracted in a drawing.

Model making explores three-dimensional forms in order to plan and prototype an exhibition or a new product.

Drawing teaches the student to look and to see as well as to put down meaningful marks on paper.

Materials, tools and technology

Technology always plays a role in the process of designing and in communicating information visually. Designers create ideas in two and three dimensions using various materials such as paper and film. They use tools such as computers, camera and airbrushes and work with the technologies of letterpress and video. The designer's selection of materials and tools can change what an image looks like and what it says.

Blending ideas and production techniques

Designers create solutions to design problems. A part of every solution includes communicating how

to get the job done technically: how to get the poster printed or how to create the mechanicals for the package design. The designer must learn to clearly express and transmit ideas and instructions as well as to receive and evaluate feedback. To this end, the student learns to specify technical instructions; to write objectives, briefs and reports; to present ideas verbally, graphically and with audiovisual support; and to listen carefully.

Message and content

Designers address communication problems. They interpret ideas and represent them with images and words. Skill in thinking about and creating meaning with images, type and symbols is essential. The ability to put a persuasive or informational perspective on an idea is also important.

Semantics is the study of how people understand words and images.

Visual metaphor studies symbols. For example, a torch can signal the abstract ideas of victory or freedom.

Persuasion and information examines how to create a memorable visual statement.

Image, symbol and sign explores the ways in which graphic marks, such as handprint or a target, communicate.

Methods, planning and management

These Bill of Rights broadsides demonstrate design planning. Seminars with legal experts helped the students study the judicial processes of the Supreme Court and specific legal decisions. Students then did additional research and experimented with typography, historical imagery and the “re-presentation” of photojournalism to determine how to present their ideas visually to a high school audience. The broadsides communicate difficult concepts by identifying specific elements in the Bill of Rights and the landmark Supreme Court decisions that anchor them.

Design methodology provides a path for the designer in the search for solutions to communication problems.

Design evaluation judges reaction to a design through a testing procedure. For example, observing a child's reaction to a book might answer the questions: Is the book easy to read? Is it appealing? Is meaning communicated effectively?

Design management involves an overview of the process of design, including managing creativity, costs, schedules and quality.

History and criticism

Designers are part of a visual culture that includes art, architecture and design. It is not only interesting but also important to know what has gone before. Designers study the past for inspiration and to understand its themes, styles and technical developments. It is possible to trace how certain ideas, developments in the art and technological advances have influenced particular designers. Criticism helps the designer evaluate the usefulness or beauty of a design.

Design theory

Design theory explores the principles underlying what communicates and why. For example, why does one color communicate happiness to you and fear to someone from another society? What are the ways culture affects the designer and the audience? Design theory seeks to find the unifying principles-which might be intuitive or deliberate-that are the basis for all graphic design. It is where education and practice meet.

Graphic design subjects

Letterform investigations look at the forms of logotypes and letterform found in everyday objects and in typefaces.

Typography examines text messages created for information or expression.

Type and image explores the relationship between the two and the power of each to communicate in relation to the other. Type also becomes images in some applications.

Design systems serve to unify appearance and coordinate production. Visual characteristics, such as the 45-degree angle, the square on its tip, the

color and the torn paper, are played out over many pieces to guarantee an easily recognizable relationship.

Symbol and identity systems seek to specifically identify an object for the public and to use that identity in all communications.

Information design clarifies data, helps orient the viewer and guides the search for what is important by establishing a clear visual hierarchy. These qualities are particularly useful in computer interface design.

Diagrams, graphs and maps distill information to make it easily understood. For instance, a three-dimensional form can show the relationships of solid, liquid and gas.

Publication and print design explores the overall structure-pacing, sequence and hierarchy of information-as well as the particular use of text and image found, for example, in the editorial material of magazines and newspapers.

Book design is concerned with both the exterior package of the book (the cover) and its interior contents (the pages).

Poster design combines words and images in a powerful public announcement, whether for an art exhibit, an election campaign, or a circus.

Film and video graphics organize ideas dynamically in time. They communicate by using images in sequence with narration, music and text.

Computer graphics explores the digital world of highly manipulated imagery.

Package design serves multiple function: to protect, display, dispense, store and announce the identity and qualities of a product.

Environmental signage and graphics helps people find their way through streets and buildings and gives clues to the nature of the environment people find themselves in.

Exhibition and display design seeks to involve an audience in exploring an idea in space and time

through the use of graphics, objects, text, sound effects and participatory opportunities.

Advertising design is calculated to attract attention, make a compelling pitch to an audience and create a desire for the product.

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