University of Minnesota
College of Design
Department of Design, Housing, and Apparel

Foundations: Drawing and Design in 2- and 3-Dimensions

Course Designator: GDes
Course Number: 1311
Section Number: 001
Semester and Year: Spring 2012

Class Meeting Days &Time: MW, 3:00 to 5:10 p.m.
Classroom: B9 McNeal Hall
Credits: 4
Final Exam Date & Time: May 2nd, 11:45 to 2:45 p.m.
Instructor: James Boyd Brent
Office Location: 246e McNeal Hall
Office Phone: 612 624 1731
Email: jboydbre@umn.edu
Office Hours: Monday 10:30 a.m. to 11:30 a.m.

Course Description:
What is drawing?
Drawing is a form of communication, closely related to sight and touch, relying more on lines and shapes on a surface than on text or on sound. As well as being a way of representing something, more significantly (especially in an age of readily available cameras) it is a way of communicating something selective about that thing—drawing is personal and subjective in the way that it presents a refined thought, rather than telling us the whole picture. It can also be a way in which a designer thinks: through drawing ideas can emerge and be thought out: sense can start to be made out of complexity and indefiniteness. It can also be a way of communicating abstract ideas, emotions, and feelings: examples of these include describing a process, conveying movement, describing a texture, and giving visual form to how we think and how we feel about ourselves and the world.

What is the role of drawing?
As well as visually portraying forms, ideas, feelings, and concepts, drawing can also be a way of finding out more about these things for oneself. So there are two sides to drawing: it’s a way of visually explaining things to other people (illustrations, visualizing ideas and concepts in quick sketches, diagrams, maps, and so on) and it can also be a way of finding more about something oneself or drawing out an idea like drawing water out of a well—so drawing can be an aid to thinking.

How do designers use drawing?
Drawing is used in many disciplines: for example, medicine, engineering, architecture, scientific enquiry, aeronautics, and so on. Visual thinkers use drawing to explain or articulate things visually, so it’s integral to all design disciplines. Designers use drawing to work out ideas. They also use it to increase their sensitivity to visual language.

Drawing skills
-help people be better design thinkers
-help designers tap into their intuition and creativity
-encourage confidence, playfulness, and inventiveness
-help move designers quickly through a succession of ideas and iterations of a design problem
-help designers be in control of their own creative process
-help with the first step of the design process, literally to “draw out an idea” from the creative mind

Because learning drawing skills is about increasing sensitivity to seeing as well as learning why we see the world the way we do, this process is also related to developing one’s cultural understanding. This
development includes appreciating and understanding drawing and design from other cultures as well as your own culture, and by extension understanding how our own cultural perspective affects the way we see and represent things.

This course will provide each student with a broad conceptual framework for exploring two- and three-dimensional design. It includes drawing instruction, an introduction to different forms of visual communication (formal, perceptual, symbolic, and technical), the use of design process, and creative problem solving.

**Required and Recommended Materials:**
Course Textbook (available at the St Paul Bookstore)
*Drawing as Expression* by Sandy Brookes

You will need these every class:
Art gum, Mars Plastic eraser, kneaded eraser
Range of pencils (H, 2H, HB, B, 2B, 4B, 6B, and 8B pencils) and variety of other drawing tools
Large pad good quality drawing paper 18" by 24"—Raritan or Strathmore 400
Sketchbook 9" by 12" (Strathmore)

You will need these for specific classes:
Drafting or artist’s tape
4 sheets 22” x 30” Stonehenge
4 sheets 18” x 24” Canson mid-tone drawing paper
Vine charcoal, charcoal pencils (6B, 4B, 2B), and graphite sticks (2B, 6B)
Soft white artist’s chalk or white conte' crayon
Micron 0.1 pen
Portfolio (large enough for 18”x24” drawings)
Pushpins, and box of paper clips
Ruler

Optional supplies:
Box for art supplies
Drawing board
Other materials as needed

**Student learning outcomes:**
On completion of this course students should have gained confidence in the following perceptual problems and be able to:

- Draw accurately from observation
- Use drawing to visualize ideas
- Effectively use value to portray texture, space, and volume
- Use value relationships to add dynamism to a composition
- Understand how to "see" abstract shapes and patterns
- Understand how to analyze designs/drawings in terms of design principles, and to put these principles into practice in their own designs/drawings
- Use a variety of drawing mediums and to be responsive to the differences between them
- Develop ideas between two- and three- dimensions
- Develop a professional approach to the execution of creative visual work

There's a cultural component to this class, and at the end of this course students will be able to:
- More fully appreciate to their own individual cultural perspectives, and appreciate how this influences the way one creates visual imagery
- Appreciate the importance of cultural understanding in drawing and design

Technically, students will have learned to be more proficient in the following ways:
-Using both line and value to express shape as well as volume.
-The craft of drawing with a pencil
-How to "finish" a drawing.
-How to abstract forms.
-Drawing the effects of light.
-Capturing a sense of space and depth through an understanding of linear and atmospheric perspective.

**University of Minnesota Student Learning Outcomes**

*Can identify, define, and solve problems:*  
Students will learn how to identify elements and principles of design and to apply them in drawing assignments.  
Students will learn to define criteria for evaluation of the effectiveness of their design solutions, in critiques of their own and others’ work.

*Can communicate effectively:*  
Students will make oral and visual presentations of their work throughout the semester and participate in critiques with their peers and with the instructor.

**Release of Work Statement:**  
Students understand that enrollment in this course grants consent for their work to be selected for inclusion in college or departmental publications (online or in print). Your instructor may select to use your work to represent her/his skills as an instructor in a teaching portfolio (online or in print).

**Expectations:**

**Attendance:**
You are expected to attend all class sessions, be punctual and not leave class early, present your work at critiques, participate in critiques of your own and others’ work, and show respect for your colleagues at all times. Work not presented at critiques will be deemed late—late work is work that will be accepted up to one week after the due date but will be graded one letter grade less than otherwise earned. You are expected to participate in the class blog and to contribute to the class—your final grade will reflect your contribution to the class as well as the quality of your work. There will be a studio clean up every three weeks and very thorough clean up at the end of the semester—all these clean ups are mandatory and count towards your course grade.

**Workload:**
You are required to complete all in class and out of class assignments, and you will also be asked to hand in all preliminary sketches, sources, etc. Work will need to be done outside of class studio time—an average of six to twelve hours per week (in addition to the 6 hours on class contact time).

**Grading structure:**
You will be graded throughout the semester in visual projects.  
Work is graded according to the following criteria:

- **technique** – neatness, care in the making and execution of work, and excellence in its final presentation, specifications of the assignment.
- **concept** – ideas behind the work, creativity, creative problem solving (this includes getting feedback from your peers and from me).
- **assignment objectives** – how successfully the criteria of the project have been fulfilled.
- **design** – layout, use of design principles, composition.

Each criterion accounts for roughly a quarter of the grade for each project. The overall grade for the semester is determined by adding up the points accrued in each project. 10% of the final grade will be for class participation, which, as mentioned above, will be determined by how much you contributed to the class.

**Accepting and returning assignments:**
Assignments should be handed in—they will be graded and returned within ten days.

**Grading late work:**
Late work within one week of due date will be accepted but will incur a third of a grade point penalty—after one week the penalty will be one full grade point.

**Policy for missed exams:**
Any tests or exams can be made up provided prior notice of absence is given and arrangements made in advance

**Makeup work for legitimate absences:**
Work not handed in because of legitimate absences can be made up, but must be completed within two weeks of the original due date

**Extra credit options:** n/a

**PEDs in classroom:**
Use of laptops is encouraged but the instructor may restrict or prohibit the use of personal electronic devices in his or her classroom, lab, or any other instructional setting.

**Use of class notes and materials:**
The faculty of the University encourages students to take and share notes in their classes, laboratories, and the many other instructional settings in which they participate as they pursue their education at the University. Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. The faculty recognizes that collaborative note-sharing and discussion helps students learn.

**Scholastic dishonesty and student conduct code:**

**Sexual Harassment:** [http://www1.umn.edu/regents/policies/humanresources/SexHarassment.pdf](http://www1.umn.edu/regents/policies/humanresources/SexHarassment.pdf)

**Statement on climate of inclusivity:**
You are expected to be attentive during class, ask questions if you do not understand something, and to offer your opinion. You are also expected to listen respectfully to other students and to me when speaking. The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs and facilities without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Racism, sexism, homophobia, classism, ageism and other forms of bigotry are inappropriate to express in this class. Reports of harassment are taken seriously, and there are individuals and offices available for help.

**Academic freedom and responsibility:**
[http://www1.umn.edu/regents/policies/academic/Academic_Freedom.pdf](http://www1.umn.edu/regents/policies/academic/Academic_Freedom.pdf)

**University grading standards**
A = outstanding, B = very good, C = good/average - meets course requirements, D = meets course requirements, but work below average, F = fails to meet course requirements

**Disability statement**
Reasonable accommodations will be provided for students with documented disabilities. Please contact the instructor to work out the details for any necessary accommodation at the beginning of the semester. You will also need to work with the Office of Disabilities Services, 12 Johnston Hall, 612-626-1333.

**Availability of disability and mental health services:**
If you have any special classroom requirements please contact one of the offices listed below. They will work with you and, if necessary, they will contact the instructor to work out the details for any necessary accommodations.

- Student Academic Success Service  
  340 Appleby Hall, Mpls  
  612-624-3323
- Counseling/Consulting Services  
  199 Coffey Hall, St. Paul  
  612-624-3323
- Disability Services  
  180 McNamara, Mpls  
  612-626-1333
- Center for Writing  
  10 Nicholson Hall, Mpls  
  612-626-7579

**Course work**

Course work consists of two main components:

1. **In class and out of class drawings/design projects**: these are done in your 18”x24” drawing pad, and on specific drawing papers, or with some other specified materials. These projects include the full value modeled organic forms drawing, and the final McNeal Hall drawing, as well as drawings of the figure. This also includes preliminary sketches for some of these drawings and other work done in your 9”x12” drawing pad, as well as marks for the mid-term vocabulary quiz.  
   = 90% of final course grade

2. **Contribution to the class**: active class participation, being on time/not leaving early, and also daily attendance.  
   = 10% of final course grade

**Course Schedule (in-class work)**

**Section 1:**  **Contour/Line**: shape and abstraction (observational drawing, drawing and design concepts and principles, sighting techniques).

*Jan*  
18 introduction  
23 contour drawing  
25 contour drawing /gesture drawing  
30 positive/negative shapes—drawing from imagination

*Feb*  
1 contour drawing—hatching/cross-hatching  
13 chiaroscuro drawing of costumes on toned paper  
15 drawing of costumes

**Section 2:**  **Light & Shadow/Value**: texture and abstraction (value, texture, light, modeling form, abstraction using principles of design).

*Feb*  
20 portrait  
22 organic form drawings in class  
27 in class still life.  
29 in class still life.  

*March*  
5 linear perspective/box drawings  
7 McNeal hall 3-d drawing  
12 Spring break  
14 Spring break

**Section 3:**  **Depth, Space, and Volume**: McNeal Hall drawings and the Figure.

19 McNeal hall line drawings  
21 Mc Neal hall line drawings  
26 McNeal hall full value drawing  
28 McNeal hall full value drawing

*April*  
2 figure drawing  
4 figure drawing skeleton drawing/proportion  
9 figure drawing  
11 figure drawing  
16 figure drawing

**Section 4:**  **Revisions and Presentation**

*April*  
18 figure drawing
Semester drawing/design projects

Line drawing of four hands.
Line drawing of three shoes/mechanical objects.
Negative space drawing (chairs, etc.).
Line drawing in class, emphasizing space.
Contour drawing outside (18” x 24”).
Drawing from Nature project—sixteen 3” x 3’ abstractions from nature.
Line drawing using cross-hatching.
In class charcoal still life with drapery.
Contour drawing of classmates.
Contour drawing of McNeal Hall.
Modeled organic form drawing—half sheet Stonehenge (15” x 22”).
"Inside/outside”—pen and ink, quarter sheet Stonehenge paper (6” x 4” picture plane).
Three-dimensional design problem.
McNeal Hall full value drawing (15” x 22” to 22” x 30” Stonehenge).
McNeal Hall two-dimensional design.
Gesture and contour drawings of the figure.
Structural drawings and planar analysis of the figure.
Personal project—portrait/self-portrait.
Sustained drawing of the figure with drapery.
In class portrait drawing—18” x 24” Canson toned paper.

Preliminary sketches

These accompany specific assignments and are done in your small drawing pad (9” x 12”), and sometimes includes notes. Also there are times when you are asked to take notes in class.

Drawing Vocabulary

Elements of Design

line - a mark on the picture plane, that has length.
shape - a closed two-dimensional form that is either clearly delineated or implied.
space - the entity that exists or seems to exist between forms.
value - the degree of light or dark.
texture - the surface character of a form.
color - the response in our visual perception to light - red, orange, yellow, green, blue, indigo, violet, as well as value.

Unifying Principles of Design

repetition - visual grouping according to similarity.
variety - suggesting unity in a design by varying it’s elements.
rhythm - creating an ordered sense of direction and movement throughout the picture plane.
balance - distributing the weight of the elements in the design.
emphasis - creating a focal point within the picture plane, creating a hierarchy of emphasis.
economy - creating a sense of unity by eliminating any elements that distract from the essence of the idea.

Grouping Principles (according to the Gestalt theory of perception)
similarity - visual grouping according to similarity.
proximity - visual grouping according to elements or forms that are close together.
continuity - grouping forms or elements that continue along the same line or in the same direction.
closure - the tendency for us to read an open or incomplete form as if it were closed or complete.
projection - our tendency to find meaning in patterns and shapes, our desire to find meaning, to create order out of chaos.

Depth Perception Cues
scale– relative size of forms creates sense of depth.
overlapping– overlapping of one form by another creates sense of depth.
vertical location– the nearer an object is to the horizon line (in its vertical location), the further away it is from the viewer.
Atmospheric perspective– stronger value contrasts usually pull a form forward, softer value contrasts make them recede into the distance. This includes texture and detail—we see more texture and detail in the foreground, less in the distance.
Linear perspective– the use of geometry to describe the spatial relationship of forms. This includes foreshortening (foreshortened forms draw the eye back into space).
Shadows– cast shadows and attached/core shadows – the perception of both types of shadows indicates depth.

Effects of light on an object: highlight, reflected light, attached shadows, cast shadow.

Additional drawing terms
Attached/core shadows - the shadow existing on the part of an object that is turned away from the light.
Cast shadows - the shadow that one object “casts” over another object or surface.

The functions of cast shadows in a drawing:
  a. to show the three-dimensional shape of object on which they fall
  b. to indicate a sense of depth
  c. to indicate direction of light.

Chiaroscuro - “light dark” (Italian), implies a dramatic use of tonal contrast in a drawing.
Composition - the arrangement of values, shapes, lines (the elements of design) throughout the picture plane.
Figure/ground relationship – the relationship between the positive shape/shapes in the image, and the negative space that surrounds it/them.
Flat value - an area of value that is consistent over the whole area.
Hatching and cross-hatching - a kind of shading using parallel lines.

The function of lines:
  a. to show overlapping forms, contours of forms
  b. to define edges
  c. to define outlines
  d. to indicate texture
  e. as a means of shading (hatching and cross-hatching).

Local value - this is the value that is intrinsic to a particular object (for example, a black hat is dark, a white hat is light).
Negative space - this is the shape of the space around an object.
Objective reality - this is what we know, or think, an object to be like.
Optical reality - this is how an object actually appears to our visual perception.
Picture plane - the two-dimensional area that contains the picture (usually rectangular).
Shading - the application of value in a drawing.
Sight measuring - using a pencil or a ruler to compare the width with the height of an object, or to compare the size of one object with another, or to gauge angles.
Tonal balance - this is the balance of values throughout the picture plane.
Value - relative light or dark.
The value of an object - the relative lightness or darkness that an object appears to be.
The color of an object - the hue (red, orange, yellow, green, etc.) that the object appears to have; its local color.
Visual acuity - the ability to see shapes, and to draw them accurately.
Bibliography
Kenneth W. Auvil  
William Berry  
Drawing the Human Form,  Van Nostrand Reinhold.
C. Betti and T. Sale  
Jeffrey Camp  
Draw - how to master the art, Dorling Kindersley, 1993.
Francis Ching  
Francis Ching  
Cynthia Dantzic  
Burt Dodson  
Keys to Drawing, North Light Books, Ohio 1999.
Betty Edwards  
Drawing on the Right side of the Brain.
Nathan Goldstein  
Kenneth J. Hiebert  
Robert Kaupelis  
Stephen Longstreet  
Cynthia M. Dantzic  
Drawing Dimensions- a comprehensive introduction, Prentice Hall.
Kimon Nicolaides  
Jacklyn St. Aubyn  
Fritz Schider  
Atlas of Anatomy for Artists, Dover publications.
Ian Simpson  
The Complete Drawing Course, Running Press.
Anthony Toney  
P. Zelanski, M. Fisher  

I want to encourage you all to read about drawing and to constantly be aware of the use of drawing in the visual world around you — in advertising, clothing, graphic design, film and video, fine art.