Mills College at Northeastern University

ARTG 1001 + 1002 30, Spring 2022
Design Perspectives: An Introduction to Design in the World
Syllabus
http://www.dubberly.com/courses/perspectives_2022_fall/
Hugh Dubberly, email: hugh@dubberly.com

Weekly Schedule — Readings Summary

	Tues	Thrs	
			The class meets Tuesdays 8:45-10:25 am, Thursdays 11:50-1:30 pm
1		09.08	Novak+Gowin, *Learning How to Learn,* pages 15-54.
2	09.13	09.15	Munari, *Design as Art,* pages 25-51.
3	09.20	09.22	Heskett, *Design: A Very Short Introduction,* Chapter 1. Rand, "Design and the Play Instinct," (entire paper).
4	09.27	09.29	Koberg+Bagnall, *The Universal Traveler,* pages 16-100.
5	10.04	10.06	Alexander, *Notes on the Synthesis of Form,* pages 73-83. Dubberly et al, "The Analysis-Synthesis Bridge Model," (entire paper). British Design Counsel, "Double Diamond at 15 Years," web page.
6	10.11	10.13	Simon, *The Sciences of the Artificial,* pages 108-138.
7	10.18	10.20	Rittel, "On the Planning Crisis," (entire essay). [wicked problems]
8	10.25	10.27	Dorst, "Notes on Design: How Creative Practice Works," pages 7-53.
9	11.01	11.03	Papanek, *Design for the Real World,* pages 14-95.
10	11.08	11.10	Buchanan, "Wicked Problems in Design Thinking," (entire paper).
11	11.15	11.17	Bonsiepe, *Interface: An Approach to Design,* pages 18-41. Willis, "Ontological Designing," (entire paper).
12	11.22		Suchman, *Plans and Situated Actions,* pages 1-64.
13	11.29	12.01	Costanza- Chock, *Design Justice,* pages 1-68.
14	12.06		Last class meeting; portfolio of reading notes due.
15	12.13		Final project due. (No final exam.)
	12.19		Grades due

Weekly Schedule — Assignments + In-class Exercises Summary

	Tues	Thrs	
1		09.08	Complete the dictionary/paper challenge (E-1).
2	09.13	09.15	Reflect on the dictionary/paper challenge: What happened? Create a concept map of your view of "what design is." (A-1) Select an object that you like or think is "well-designed." (A-2)
3	09.20	09.22	Outline why the object you selected is "well-designed" etc.
4	09.27	09.29	Select four related objects, defining a "solution space."
5	10.04	10.06	Make a TikTok of the design process. (A-3) Begin a presentation describing the object you selected. Complete the marshmallow challenge (E-2).
6	10.11	10.13	Revise your presentation.
7	10.18	10.20	Presentation due. Select a type of design that interests you. (A-4)
8	10.25	10.27	Begin second presentation, describing one type of design. Create a list of types of design. Clustering Design Types (E-3).
9	11.01	11.03	Expand second presentation. Bring a second list with more types of design. Develop test questions (E-4).
10	11.08	11.10	Second presentation due.
11	11.15	11.17	Begin work on final project (A-F)
12	11.22		Continue work on final project.
13	11.29	12.01	Continue work on final project.
14	12.06		Last class meeting; portfolio of reading notes due.
15	12.13		Final project due. (No final exam.)
	12.19		Grades due

Weekly Schedule — Guest Speakers

	Tues	Thrs	
1		09.08	—
2	09.13	09.15	—
3	09.20	09.22	Jorge Arango, Information Architect https://jarango.com/
4	09.27	09.29	Dietmar Offenhuber, Information Designer https://offenhuber.net/
5	10.04	10.06	—
6	10.11	10.13	—
7	10.18	10.20	Jane Brown, Brand Designer + Creative Director https://janebrowndesign.com/
8	10.25	10.27	Jamie Ikeda, Graphic Designer + Packaging Designer https://jamieikeda.myportfolio.com/
9	11.01	11.03	—
10	11.08	11.10	Maria Guidice, Design Manager https://hotstudio.com/
11	11.15	11.17	Lauralee Alben, Graphic Designer (tentative) https://seachangedesign.com/about.htm?div=people
12	11.22		Susan Yelavich, (tentative) https://susanyelavich.com/
13	11.29	12.01	TJ McLeish, Design Technologist (tentative) https://www.thomasjmcleish.com/
14	12.06		—

Description

This course introduces students to a wide range of perspectives on design as a human activity. It engages students with a rich mix of theories, principles, practices, and histories that constitute our various understandings of design across cultures. It exposes students to the impacts, influences, accomplishments, consequences, possibilities, and limits of design in the world, through lectures, discussions, reflections, recitations, and conceptual exercises. The course is delivered by a weekly combination of lecture and recitation sessions.

Objectives

In this course, students will…

- Explore, know, and connect with the worlds of design, their history, and theory.

- Critically observe, analyze, and document objects, artifacts, sites, and data — in terms of altering form, function, belief, and behavior as well as other dimensions.

- Investigate and understand available paths in design practice.

- Develop abstract thinking and representation to document and reflect on ideas.

- Share thoughts with others and listen to responses. Contribute to generative discourse on theory and practice.

Process

Students will read a series of articles (and book chapters) and then create concept maps or outlines representing the main ideas described in each reading.
The class will discuss the readings and how they relate to one another.

Guests speakers will describe their work.
And students will also make two presentations:
- The first on a designed object of their own choosing.
- The second on a field of design that interests them.

For a final project, students will synthesize what they have learned from the readings, guest speakers, and presentations — to create new map of their own, presented as a poster-size, composite diagram or “concept map”.

Grading

Weekly assignments will be graded plus/check/minus. Assignments receiving a minus should be revised.

The overall course grade will be calculated as follows:
- 25% for in-class participation
- 25% for weekly reading notes (concept maps or outlines)
- 10% for first presentation
- 10% for second presentation
- 30% for final project: concept map "poster"

In-class participation is affected by contributing to discussions;
missed readings and lack of preparation will also be noted.
No incomplete will be given, except in extenuating and unforeseen circumstances,
and you must have already completed a substantial portion of the course,
with a passing grade.

Grade scale from the Academic Catalogue:
A = Outstanding achievement, A– = Less so
B = Good achievement, B+ = More so, B– = Less so
C = Satisfactory achievement, C+ = More so, C– = Less so
D = Poor achievement
F = Failure

Course Policies

Participation is a key part of the class, and participation requires attendance.
Thus, attendance is required, unless a student is sick. Tardiness and unexcused absences will affect grades.

Reading assignments and class discussions: There will be reading assignments each week, available on the internet or handed-out in class. You are expected to complete all readings and related diagrams, before class. You are also expected to actively participate in discussions.

Integrity: You are requested to abide by Northeastern University's Academic Integrity Policy at: http://www.northeastern.edu/osccr/academic-integrity-policy/

###

In-class Exercise 1: Dictionary / Paper Challenge

Materials:
- A ream of standard copier paper (8.5 x 11 inches).
- Three office dictionaries weighing a total of about 10 pounds
- A ruler
- A clock with a second hand
- A white board for recording

Project:
Using just two sheets of paper,
create a structure to support all three dictionaries.

The goal is for the dictionaries to be as high off the surface of a desk as possible.
The structure must be stable enough to stand for at least 30 seconds.

Tape, string, glue, and other materials or fastener are not allowed.

You have 30 minutes.

Suggestions:
Experiment and iterate!
You can only use two sheets of paper at a time.
But you can have as many attempts (and as much paper) as you like.

Reflection:
For the next class, reflect on the dictionary / paper challenge:
- What happened?
- What was the process?
- How might we diagram it?
- What shape might you represent what happened?

Purpose:
- Exercise the design process.
- Reflect on the process in order to build a mental model.
- Make representations of the process.

###

In-class Exercise 2: Marshmallow Challenge

Materials:
- 1 standard-size marshmallow
- 20 sticks of standard dry spaghetti
- 1 yard of masking tape (can be torn)
- 1 yard of string (can be cut)
- Measuring tape

Project:
In teams,
build the tallest free-standing structure —
supporting the whole marshmallow as far off the table as possible.

The structure must stand on its own.
It cannot be held or lean against anything else.
Not all the materials must be used.
No other materials are allowed.

You have 20 minutes for your first structure.

You will have 10 minutes for your second structure.

Purpose:
- Exercise the design process.
- Work in teams.
- Planning vs prototyping
- Consider hidden assumptions

Resources:
https://www.marshmallowchallenge.com/
https://tinkerlab.com/spaghetti-tower-marshmallow-challenge/

Tom Wujec TED Talk: “Build a tower, build a team.”
https://www.ted.com/talks/tom_wujec_build_a_tower_build_a_team

###

In-class Exercise 3: Clustering Design Types

Materials:
- Standard yellow sticky notes (supplied)
- Large poster notes (supplied)
- Sharpies (supplied)
- Your list of different types of design

Project:
Bring with you to class a list of at least one dozen 'types of design'.
Extra credit for more!
And special bonus points for the person who brings the most.

Consider also, how these types might be arranged in relation to one another.

- Step 1:
  Write each type of design on a different yellow sticky note.

- Step 2:
  One-by-one, each student reads their design types
  and places each sticky note on a large map.

- Step 3:
  Rearrange the stickies to form clusters.
  Discuss what stands out?
  What's missing?
  How else might the types of design be grouped?
  What other 'lenses' or 'frames' might we use?

Purpose:
- Better understand the range of types of design.
- Reflect on how the types of design are related?

###

In-class Exercise 4: Develop Test Questions

Materials:
- Standard yellow sticky notes (supplied)
- Large poster notes (supplied)
- Sharpies (supplied)
- Your concept maps or outlines from readings and lectures

Project:
In teams of two, discuss the readings and lectures.
Develop a series of questions that could serve for a mid-term.
Reflect on the main ideas from each reading
and the models discussed in each class.
(We are not having a mid-term; this is an exercise instead.)

Time:
20 minutes.

Share out:
Explain your questions and answers with the entire class.

Purpose:
- Review the materials covered so far.

###

Assignment 1: Getting Started

Project:
Create a “concept map”.
It should describe how you think about design.
That is, what do you think design is?

There is no right answer.
The point of the assignment is to begin to reflect on what you know —
and to set a baseline for further discussions.
It's also something we can compare with at the end of the term.

For more about what concept maps are, please see this article.
http://www.dubberly.com/courses/design_theory_2017/01._a_Learning_How_To_Learn.pdf

For more about making concept, please see this article
http://www.dubberly.com/courses/design_theory_2017/01._b_Creating_Concept_Maps.pdf

Requirements:
- Title, your name, date, assignment
- Label all the links; nodes do not need to be in ovals.
- Check spelling and grammar.
- Format = 8.5 x 11 inches.
- Please bring a printed version to class.

Suggestions:
- Consider this a sketch; don’t think of this as a typography exercise.
- Keep it neat, but don’t obsess over the form; the content is what’s important.
- Adobe Illustrator is a good tool, but other drawing tools may be used.
- Paint programs, such as Photoshop, are not the right tools.
- Plan to spend 1-2 hours on the readings and 3 - 4 hours on the map.

Due:
Thursday, September 13.

Purpose:
- Introduce concept mapping and begin discussions about models.
- Provide a baseline “snapshot” of your model of design.

###

Assignment 2: Object Presentation

Project:
Create a presentation describing an object. Analyze it from a design perspective —
as if you were preparing to design another version.

Week 1
Find something you think is well designed. Consider why you think it is well designed.
Take a photo of it or find a photo online. Be prepared to share and discuss.

Week 2
Consider how it might be improved. What 'grade' would you give it. Why?
Write down your ideas in an outline.

Week 3
Select 4 other objects of the same ‘type’.
Together, your objects should define ‘dimensions’ of the space of possible similar objects.
Represent your 5 objects in a diagram, placing them on coordinates in a 2x2 matrix.
Dimensions of the 2x2 might be quality vs price or size vs complexity or whatever you is relevant to your set of objects.
Print your diagram and bring it to class.

Week 4
Begin a slide presentation about your object; make a first draft.
Include an image of the original object and a description and your 2x2 diagram.
Consider Alexandra Martini’s framework:
- Formal-aesthetic: What does it look like?
- Material-haptic: What is it made of?
- Productive: How is it made?
- Cultural: In what context does it operate?
- Interactive: What relationships does it create?

Week 5
Improve your presentation. ‘Work backwards’ from your finished object
to define the ‘problem’ your object ‘solves’ — or the basic human needs it fills.
- What are the key scenarios of use?
- What are the criteria your object must meet?
- If you were a manager hiring a designer to design your object,
  what would be the instructions or the project brief that leads to your object?

Due:
Thursday, October 20.

###

Assignment 3: Design Process TikTok Video

Resources:
A compendium of models of the design process.
http://www.dubberly.com/wp-content/uploads/2008/06/ddo_designprocess.pdf

You might also be curious to see this TikTok.
https://www.tiktok.com/@edtechclass/video/7086273503443324203?is_from_webapp=v1&item_id=7086273503443324203

And this one has good lyrics, but the visuals aren't helpful.
https://www.tiktok.com/@boestemac/video/6875857336842358021?is_from_webapp=v1&item_id=6875857336842358021

Extra-credit points if you can find other design process TikToks.

Project:
Make your own TikTok of your favorite version of the design process.
Or create your own version of the process.

Your TikTok should break down the design process into steps and explain the steps.
Ideal length is 30 seconds; should not be longer than 3 minutes (180 seconds).

Requirements:
- Post a version online.
- Share the URL with the class.

Due:
Tuesday, October 4.

Purpose:
- Reinforce the design process.
- Improve communications skills.

###

Assignment 4: Design Type Presentation

Project:
Create a presentation describing a particular type of design.
- Consider all the 'types' of design ‘out there.’
- What are you most interested in?
- Select a type of design you would like to report on.

First draft, include:
- Presentation title, your name, and the date
- Name and definition of the type of design.
- List 3 to 7 types of ‘output’ (what does this type of design result in?) plus examples (e.g. graphic designers design posters, books, packages, signage, web pages, etc.)
- List 3 to 7 people who practice (or practiced) this type of design, a photo of them and an example of their work (e.g., for graphic design: Bruno Munari, Paul Rand, Jane Brown)
- Anything else you think would be relevant.

Draft two, also include:
- History (when did it start and a couple of key milestones)
- Related industries
    - How is this type of design connected to business and the larger economy?
    - What types of businesses do these designers serve?
- Means of production
    - Where does this type of design sit in a business?
    - Who do the designers interact with on a daily basis?
    - Who tells them what to do? (what do the designers 'consume' and from who?)
    - Who do the designers direct? (what do the designers 'produce' and for whom? Who consumes the designer's work)
    - What does the designer actually deliver?
    - What do specs or plans or mock-ups look like?
- What are generally recognized as great (or classic) examples of this type of design?
    - Why
- What are 'bad' examples? (this may be your opinion)
    - Why (the key here is to propose some criteria)

Research:
These slides will also require you to do some research — library or internet, e.g.:
https://camd.northeastern.edu/art-design/

Due:
Thursday, November 3.

###

Final Assignment: Semester Summary Poster

Project:
Create a large poster summarizing the readings and lectures from this semester.

The poster should have an organizing principle.
For example, it might be a matrix of diagrams or a timeline or an outline or a concept map.
It could also be a collage.

Be sure to include:
- Key points from each reading
- The models we discussed, such as those describing the design process
- Your thoughts about different ways of 'framing' design
- A title or headline and your name and date.

Format:
- Represent your model in the form of a poster — that is, a large diagram.
- 22" x 34" (plotter print or 4 11x17 pages or 8 standard letter pages)
- Adobe Illustrator would be an excellent tool for creating a PDF.
- Alternatively, you may use online tools, such as Figma, Miro, or Mural.

Suggestions:
- Start by reviewing your notes and the readings.
- This is a writing exercise and a sketch, not a graphic design or typography exercise. Keep it neat and simple.

Due:
Post a draft on Tuesday, December 13, by 10:00 pm PT.

Purpose:
- Provide an opportunity to synthesize what you've learned.
- Extend your thinking into new areas.
- Show how your model of design has changed over the semester.

###

Weekly Reading Required Note Taking

For *each* weekly reading, create a concept map or outline —
describing the key ideas in the reading.

Start by reading the text; highlight key ideas;
make a list of terms to include;
build a structure linking them.

Some readings feature clear models.
Make sure to include any key models in your diagram.

Don't forget a title, your name, date, assignment, citations.

Save all your weekly notes!
You will need them for the final project.

Suggestions:
- Keep it neat, but don't obsess over the form; the content is what's important.
- Adobe Illustrator is a good tool, but other drawing tools may be used.
- Paint programs, such as Photoshop, are not the right tools.
- Plan to spend 1-2 hours on the readings and 1 - 2 hours on the map or notes.

Due:
Each Tuesday, bring a printed version of your notes to class.

###

Weekly Readings — Locations and Prompts

1 09.08 *Learning How To Learn,* Novak, J., and Gowin, B., Cambridge University Press, 1984. Chapter 2, pages 15-54.
http://www.dubberly.com/courses/design_theory_2017/01._a_Learning_How_To_Learn.pdf

2 09.13 *Design as Art,* Munari, Bruno, pages 25-51.
http://www.dubberly.com/courses/perspectives_2022_fall/munari.pdf

Consider:
- What does Munari say about art today?
- What is the relationship of design to art according to Munari?
- Who was Bruno Munari?

3 09.20 *Design: A Very Short Introduction*, Heskett, John, Chapter 1.
http://www.dubberly.com/courses/perspectives_2022_fall/hesket.pdf

"Design and the Play Instinct," Rand, Paul, (entire paper).
https://www.csus.edu/indiv/e/estiokom/design_play_instinct.pdf

Consider how Munari + Rand's views are similar (and different).
And how Heskett may differ from both.
Each has a slightly different (and somewhat similar) lens on design.
How would you characterize their (these) 'points-of-view'?
What do they emphasize?

4 09.27 *The Universal Traveler,* Koberg, D., and Bagnall, J., pages 16-100.
Original copy of the book given to each student.

Skip the side trips.
- How do Koberg and Bagnall describe the design process?
- How is their description of the design process similar to or different from the process we've described earlier?

5 10.04 *Notes on the Synthesis of Form,* Alexander, C., 1964, Chapter 6, pgs 73-83.
http://www.dubberly.com/courses/design_theory_2017/06._a_Alexander_73-83.pdf

"The Analysis-Synthesis Bridge Model," Dubberly, et al., 2008.
http://www.dubberly.com/wp-content/uploads/2016/02/ddo_interactions_bridgemodel.pdf

"Double Diamond at 15 Years," British Design Counsel, web page.
https://www.designcouncil.org.uk/our-work/news-opinion/double-diamond-15-years/

And if you have time, this is interesting
https://www.designcouncil.org.uk/our-work/news-opinion/double-diamond-universally-accepted-depiction-design-process/

"Design Thinking," Brown, Tim, HBR.
https://readings.design/PDF/Tim%20Brown,%20Design%20Thinking.pdf
(This reading is optional, but please look at the diagram on page 6.)

6 10.13 *The Sciences of the Artificial,* Simon, Herbert, pgs 108-138.
http://www.dubberly.com/courses/design_theory_2017/07._a_The_Sciences_of_the_Artificial.pdf
The full book is here: https://monoskop.org/images/9/9c/Simon_Herbert_A_The_Sciences_of_the_Artificial_3rd_ed.pdf

(Start with the section titled "Finding New Problem Representation."
The ideas he describes on 108-109 are super important.
Also, the definition of design in the second paragraph of page 111 is classic.
Please consider carefully the implications of the rest of that paragraph.)

Simon adds to our list of major 'perspectives' or frames on design:
- Design as Art (Munari)
- Design as Play (Rand)
- Design as Problem Solving (Koberg & Bagnall)
- Design as Science (Simon)

7 10.18 "On the Planning Crisis," Rittel, Horst, (1972): 390–396.
http://www.dubberly.com/courses/design_theory_2017/08._b_Rittel:_On_the_Planning_Crisis.pdf

Consider:
- What is a 'wicked problem'?
- How does a wicked problem differ from other types of problems?
- What are examples of wicked problems?

8 10.25 *Notes on Design: How Creative Practice Works,* Dorst, Kees, pgs 7-53.
Original copy of the book given to each student.

9	11.01	*Design for the Real World,* Papanek, Victor, pgs 14-95. https://monoskop.org/images/f/f8/Papanek_Victor_Design_for_the_Real_World.pdf
10	11.08	"Wicked Problems in Design Thinking," Buchanan, R., (entire paper). https://web.mit.edu/jrankin/www/engin_as_lib_art/Design_thinking.pdf (Earlier, you read Horst Rittel's introduction to wicked problems. Buchanan builds on Rittel's ideas and introduces an important model: the four areas of design, also known as "the four orders of design.")
11	11.15	*Interface: An Approach to Design,* Bonsiepe, G., pgs 18-41. http://www.dubberly.com/courses/systems_2017_fall/05._Bonsiepe.pdf "Ontological Designing," Willis, Anne-Marie, (entire paper). https://www.researchgate.net/publication/272139246_Ontological_Designing
12	11.22	*Plans and Situated Actions,* Suchman, Lucy, pgs 1-64. http://bitsavers.trailing-edge.com/pdf/xerox/parc/techReports/ISL-6_Plans_and_Situated_Actions.pdf
13	11.29	*Design Justice,* Costanza- Chock, Sasha, pgs 1-68. https://library.oapen.org/viewer/web/viewer.html?file=/bitstream/handle/20.500.12657/43542/external_content.pdf ###