you are about to enter *a graphic design exhibition.* go ahead now, walk into the gallery. it's a darkened room, not small, and seems to be roughly a cube. on the walls surrounding you are three large-scale projections, each is cycling through what appear to be abstract graphics, scanned pages, short movies. what binds these various bits together? well, you check out where the projections are coming from, and you find three projectors standing on pedestals. on each is an identifying label. the first reads **VIS 215, Graphic Design**. after what appears to be a room number and building name (one eighty-five nassau street) is a meeting time. you surmise, clever visitor, that what's on the projected loop must be the work of a particular class in this university. in fact it is. this first one is 'introduction to graphic design' and it shows a sequence of scans of letter-sized pieces of paper, the results of a collaborative exercise where twelve students work together in the typography studio to compose (with individual metal letters) a text titled, 'the crystal goblet, or printing should be invisible.' this is the first class assignment. the second is to set another text, this time 'the new typography,' using only a photocopier . . . now, you spin around ninety degrees and find a second pedestal. its label says **VIS 216, Visual Form**. you know the score by now, and you can safely assume this is another graphic design class. this is also an introduction, but instead of letters, students deal with graphic forms (logos, icons, signs, and so on). three assignments are shown here. the first asks students to design a graphic symbol which means 'stop' without resorting to either graphic or linguistic convention. impossible, you say! yes, well they are next asked to design a matching symbol that means the opposite: 'go.' the second assignment is related. these are animated gifs, meant to indicate 'wait' or to show that something is 'currently in process.' these are variations on the well-known and not-loved, spinning beach ball of death that the macintosh shows when the system is busy thinking. the final assignment is more open. students are asked to design a 'model' to understand and communicate the differences between r-g-b (additive) and c-m-y-k (subtractive) color. . . deep breath, now turn around again and look towards the third projection. this one feels largest, and likely because what you see on the wall is a giant apple watch. the pedestal is labeled **VIS 415, Advanced Graphic Design**. collected here is the work from two semesters of this intensive, workshop class. the assignment is simple, and lasts the full semester — design a new face for the apple watch which tells the time, and (by design) also changes the way you *read* the time. simple, no? the students begin by considering, with a broad historical scope, how the representation of time effects the ways we understand it and use it. they proceed to design their prototypes which are here, on the wall . . . like the time on this giant apple watch, nothing sits still in this gallery. each projection continues marching along, showing one student at a time. and, each slide show is of a different length and they each play on a loop, so entering the gallery you would (practically) never see the same thing twice. it's been seven years since these classes have been offered on campus and here *now* in this gallery are some of the results — the assembled works of one hundred eighty-four students (listed on the gallery wall and the back of this small booklet) who've studied graphic design at princeton university.

VIS 215, Graphic Design
Princeton University
185 Nassau Room 303
Mon 1:30 – 4:20 pm, 7:30 – 9:40 pm
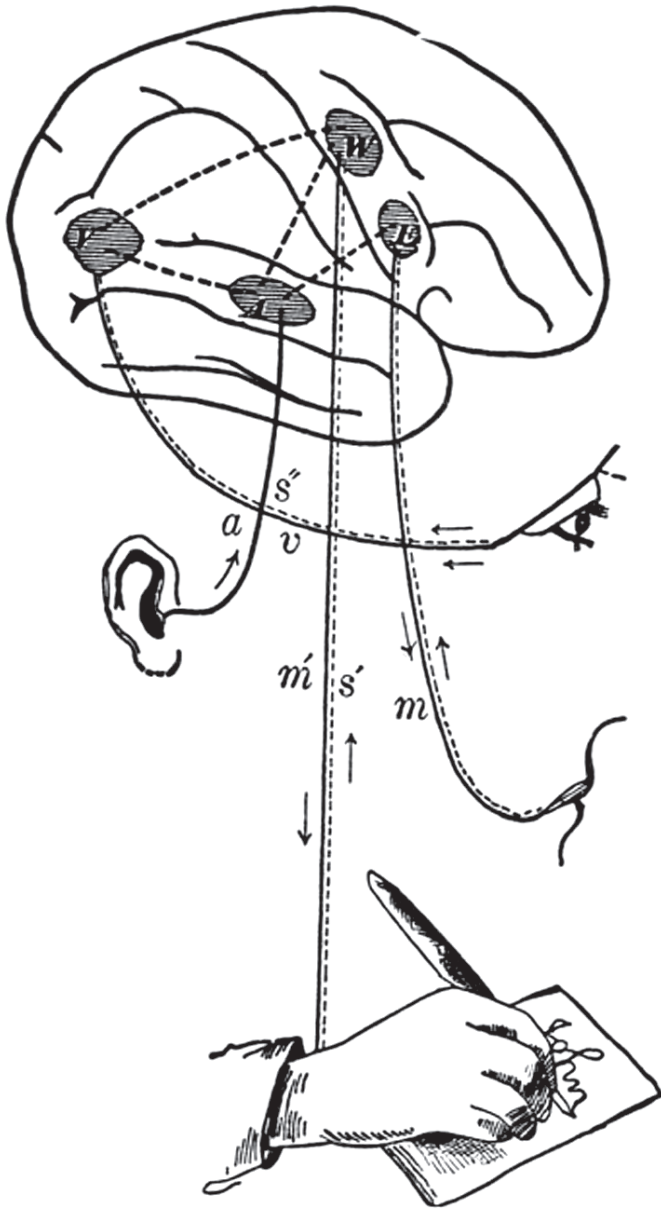www.t-y-p-o-g-r-a-p-h-y.org

T-y-p-o-g-r-a-p-h-y

This class will be organized as either (take your pick) a practical seminar or, a theoretical workshop. It will not be a simple exercise in learning the tools of graphic design but neither will it be a grand tour through its history and theory. Instead the class will be run as half-workshop and half-seminar, usually at the same time.

Graphic design has an equally split personality — it's both the technical execution of writing words (images, ideas) into the world by giving them form; and it is also a way of understanding the world through the forms of its writing. Designer and writer Paul Elliman describes the two-way street concisely: "Writing gives the impression of things. Conversely, things can give the impression of writing." I'd suggest that this reading-and-writing-at-the-same-time, or typography, is the root-level skill of graphic design. So in this introductory class, we will focus on typography by both reading about and making it.

The word "Typography" has split roots as well. Evolved from the Greek, "typos" means "figure" and "grapho" means "I write." This two-sided practice (reading-writing) I've just described is even written directly into the word "typography" itself. If there is one fundamental skill that every beginning graphic design student should master, it is this: to be able to set a text so that the form it is given works together with the substance of the text to produce a third meaning.

In this class you will be asked to complete a series of simple, mechanical exercises meant to foster a skill with and sensitivity to typography. *You will read a series of texts, usually on typography, and typeset much of what you read.* The semester will be divided in three parts, each one revolving around a particular typographic technology — first, you will be using the Typography Studio with hot metal type and letterpress printing; next, you will learn photo-typesetting using a standard xerox machine; finally, you will produce digital typography using contemporary computer typesetting software and laserprinting. These modes of production will be presented in chronological order, as a compressed one semester re-enactment of 500 years of typographic tradition. The idea is to learn something about typography (and therefore, graphic design) by practicing it, and along the way, to understand how typographic techniques have changed over time in order to develop a nuanced facility in using the current digital tools. Remember, these too will be replaced by something not-yet-known soon enough.

This is an art class, therefore the quality of your work depends at least as much on original and inventive formal thinking as it does on thoroughly satisfying the assignments. I will demand active participation in class discussions of both the texts that you read as well as critiques of other students' work. Over the semester, I expect you to develop a comfortable hand in typography as well as a vocabulary and critical faculty to speak about it.

Reading-and-writing-at-the-same-time diagrammed in *The Principles of Psychology*, William James (1890)

three

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Fall 2017

September 18   Introduction
                 Exercise — Arrival . . .

                 Letterpress

September 25   Assignment 1: Letterpress begins
                 Lecture — "T-y-p-o-g-r-a-p-h-y"
                 Class meets in Typography Studio, Room 123
                 Demonstration — Introduction to metal type and
                 the Typography Studio. Begin setting type.
                 Reading — "A Man of Letters," Oliver Sacks

October 2   Assignment 1: Letterpress continues
                 Class meets in Typography Studio, Room 123
                 Continue setting type, proofing and corrections.
                 Demonstration — Joseph Moxon, *Mechanick Exercises* (pdf)
                 Reading — "Modern typography," "Enlightenment origins,"
                 "The nineteenth-century complex," *Modern Typography*,
                 Robin Kinross

October 9   Assignment 1: Letterpress continues
                 Class meets in Typography Studio, Room 123
                 Lock-up and printing.
                 Lecture — "Benjamin Franklin, Postmaster"
                 Demonstration — Beatrice Warde, the American Type Foundry
                 Reading — "The Crystal Goblet," Beatrice Warde,
                 "Apology for Printers," Benjamin Franklin

October 16   Assignment 1: Letterpress ends
                 Re-distribute type into cases.
                 Exercise: A walk down Nassau Street
                 Reading — "Historical Synopsis," "The Grand Design," "Historical
                 Interlude," *The Elements of Typographic Style*, Robert Bringhurst

                 Photocopier

October 23   Assignment 2: Photocopier begins
                 Phototypesetting in class and technical review
                 Film — "Farewell, Etaoin Shrdlu"
                 Reading — "The New Typography," Lazlo Moholy-Nagy

October 30   Fall break

November 6   Assignment 2: Photocopier ends
                 Lecture — "Bruno Munari, Original Xerographies"
                 Reading — "Counter-Blast," Marshall McLuhan,
                 "The Shapes of Words," "Poems and Telegrams," Bruno Munari

four

Computer

November 13	Assignment 3: Computer begins Introduction to finer typographic setting using software including reviews of settings and preferences, word spacing, letter spacing, and justification Lecture — "Muriel Cooper and the Visible Language Workshop" Reading — "On Typography," Herbert Bayer
November 20	Assignment 3: Computer continues In-class work continues Film — "Helvetica," Gary Hustwit Reading — "The Principles of the New Typography," Jan Tschichold
November 27	Assignment 3: Computer continues In-class work continues Walk — Around Old Ivy and Through Time Reading — from *Designing Programmes*, Karl Gerstener
December 4	Assignment 3: Computer continues Individual meetings, class review Lecture — "Mathematical Typography: Knuth, TeX & Metafont" Reading — "My Typographies," Paul Elliman, "2 Antitypes" and "Typography is a Grid," Anthony Froshaug
December 11	Assignment 3: Computer ends Final review
Jaunary 8	Final portfolio due at 1:30 pm

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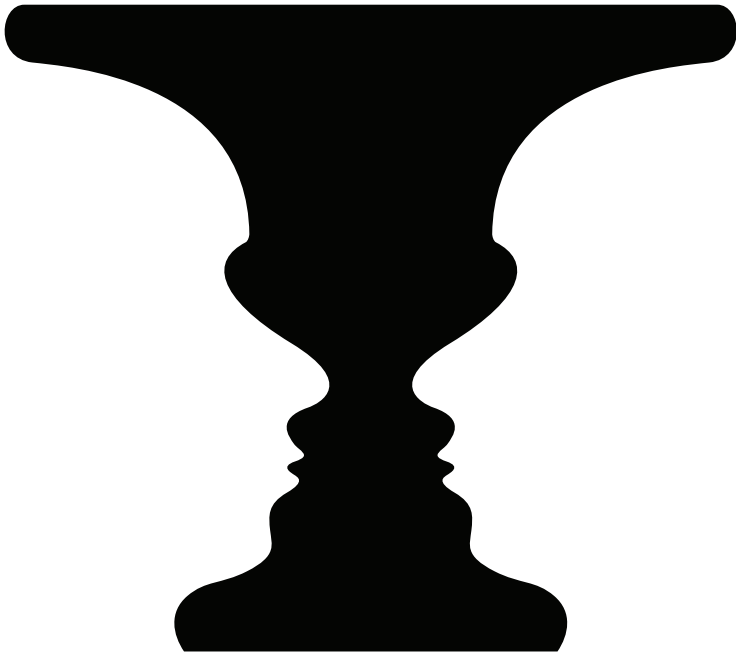www.g-e-s-t-a-l-t.org

G-e-s-t-a-l-t

The whole is greater than the sum of its parts?

According to a tight group of German psychologists gathered around Max Wertheimer in the first part of the twentieth century: No, not really. They suggest that we perceive the world in organized *wholes*, not in parts at all. These wholes are our primary sense reports — they are not contingent on, nor constituted by elementary sensations. So, then, the whole isn't *greater* than the sum of its parts at all, it's simply *different* from the sum of its parts.

This was a break from the dominant scientific rationalism that worked to explain a given reality by analyzing the pieces that construct it: principles were discovered and stacked brick by brick, bean by bean to produce a coherent account. Instead, for Wertheimer and his associates parts are rendered secondary. What matters are wholes, their specific organization — a set of relations, a particular configuration, a form, a shape, *gestalt*. *Gestalt* roughly translates from German as "shape," and it is the proper name given to this account of perception. It has been a central tenet of graphic design for the last 100 years, or approximately as long as the discipline has existed. When design is employed to the careful manipulation of the relationships between distinct visual forms, a synthesis can be realized, with a corresponding multiplier effect to the power of that graphic form to contain and carry meaning.

You're probably familiar with the visual illusion (shown on the next page) of the vase that is also two faces. It was first described by Danish psychologist Edgar Rubin in 1915 while unpacking how our brain distinguishes figure and ground in the visual field. The positive form of the vase carries within its negative space the silhouettes of two human faces in profile. As you read the graphic, it appears first as a vase; but when attention is shifted to the negative spaces, another reading comes forward and the two profiles appear. The figure and ground relation becomes fuzzy and the form flips back and forth at the mercy of our own perceptual capacities. This effect is neither as tricky nor as trivial as it might seem. The vase / face reversal is achieved through careful organization (*design*) of precise graphic form. Balance, shape, line, positive and negative spaces are all motivated to realize the essentially equal balance between these two possible readings. Similar techniques and attention to graphic form are used to encode visual messages of all varieties from corporate logos to public signage. For example, a forward-pointing arrow is produced by the negative space between the "E" and "x" in FedEx, making this logotype instantly recognizable. Or, the octagonal form of a stop sign together with its all caps, sans-serif typography, red ground and white border creates a sign whose visual form, its wholeness or gestalt, trumps its literal message.

This is an introductory graphic design class, aimed at students with no previous background in the subject. The course will demand a commitment to the close reading of graphic forms to foster sensitivity to their slight differences. We will be looking at graphics all around us, from the public environment, electronic media and the flotsam of commercial messaging that we navigate daily. By making your own work and critiquing the work of your classmates, you should build both a formal vocabulary for approaching design and a literal vocabulary for speaking about it.

Rubin's Vase, an ambiguous figure identified in 1915 with conflicting figure-ground perceptual cues

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Fall 2017

September 19   Introduction
                Lecture — "Gestalt, or Wholeness & Graphic Design"
                Exercise — Vase / Face

September 26   Assignment 1
                Project introduction and review of class tools
                Lecture — "A Few Forms"
                Exercise — gestalt qualities, or performing "the dot essay"
                Reading — "Gestalt Theory" and "Laws of Organization in
                Perceptual Forms," Max Wertheimer, "Art, Design and Gestalt
                Theory," Roy R. Behrens

October 3   Assignment 1 continues
                Group review and pin-up of individual projects
                Lecture — "Max Bill and Bezier Curves"
                Reading — "Continuity and Change," "Function and Gestalt,"
                Max Bill

October 10   Assignment 1 (adjusted)
                Individual meetings
                Lecture — "The Language of Visual Thinking"
                Reading — "The Language of Vision," from *Language of Vision*,
                Gyorgy Kepes, "Visual Thinking," Rudolf Arnheim

October 17   Assignment 2
                Review, in-class critique (Assignment 1)
                Lecture — "Currently in process . . ."
                Demonstration — animated gifs
                Reading — *A Primer of Visual Literacy* (excerpt), Donis A. Dondis,
                Interaction of Color (excerpt), Josef Albers

October 24   Assignment 2 continues
                Project review, in-class critique
                Lecture — "Apparent Motion"
                Reading — *Symbols (excerpt)*, Angus Hyland, Steven Bateman

October 31   Fall break

November 7   Assignment 2 ends
                Lecture — "After Effects (on Bruno Munari)"
                Reading — "A Language of Signs and Symbols," *The Triangle*
                (excerpt), Bruno Munari

November 14   Assignment 3
                Project review, in-class critique
                Lecture — "Auto-Vision"
                Reading — "Structure and Movement," Karl Gerstener

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November 21   Assignment 3 continues
                 Class review and discussion
                 ** Visiting designers: Julie Peeters and Scott Ponik **

November 28   Assignment 3 continues
                 Individual meetings and class discussion
                 Lecture — "Desktops, trashcans, and other assorted metaphors
                 or Why computers look like this: On Muriel Cooper and Susan Kare"
                 Reading — "Swedish Campground," on Susan Kare, "Muriel
                 Cooper's Visible Wisdom," Janet Abrams, "Spatial Data
                 Management (Books without pages)," Richard Bolt

December 5   Assignment 3 continues
                 Individual meetings and class discussion
                 Lecture — "The NeXT Intuition"
                 Video — "The whole is more incredible than the sum of its parts."
                 Reading — "The Next Logo" and "Intuition and Ideas," Paul Rand

December 12   Assignment 3 ends
                 Final review
                 Reading — "Language of Vision," from *Design, Writing, Research*,
                 Ellen Lupton and Abbott Miller, "G-e-s-t-a-l-t," from
                 The Serving Library

January 9   Final portfolio due by 1:30 pm

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I-n-t-e-r-f-a-c-e

Dial +44 20 3598 2801, and you'll hear:

> At the third stroke, the time will be six forty-seven and ten seconds.
> . . . [beep] . . . [beep] . . . [beep].

It's a "speaking clock," an automated electronic announcement which provides the current time. The distinct accent belongs to Pat Simmons, a former London telephone exchange employee who spoke the time from 1963 until 1985. Simmons followed Jane Cain, the "golden voice" of the first British telephone time system starting in 1936. That first setup was a room-sized electric mechanism which produced an automated announcement from glass disc recordings of Ms. Cain's voice, reading numbers and sentence fragments. (Dialing "T-I-M" from any UK telephone at the time set this elaborate machine running.) Before this, speaking clocks were delivered live by an operator sitting in front of a clock face, answering phone calls and reading out the time.

Of course what you hear *live* when you call the number above depends on exactly when you call. The voice, well that's not so live; Simmons spoke the clock only from 1963 until 1985 and this service is a software simulation run by enthusiasts at telephonesuk.co.uk. A speaking clock is clearly an anachronism, but, it also provides a crisp model for thinking around something quite contemporary—the interface.

> Whatever "lies between" is called interface, whatever allows us to link two different elements, to reconcile them, to put them into communication.

This definition was offered in 1987 by Italian critic Giancarlo Barbacetto in his introduction to *Design Interface*. In the book, Barbacetto chronicled the Olivetti typewriter corporation's early attempts in designing user controls for photocopiers, computers, typewriters, and calculators. The volume places this design task in a broad cultural and temporal context. Appearing opposite Barbacetto's introduction is a reproduction of the Rosetta Stone, offered up as a kind of original (ur-) interface, a shared surface which facilitates communication between otherwise irreconcilable languages and cultures.

An interface is inevitably a product of its culture—it's made in a specific time and place to be used in a specific time and place and design decisions reflect shared conventions, assumptions, and histories from that setting. An interface designed *now* will not necessarily work 20 years in the future.

"Well, of course," you say. But it is not only technical considerations, rather cultural assumptions which might be an interface's Achilles heel. Imagine trying to explain the iPhone messages interface to someone in 1971, or even in 2004. It's a simple enough interface, but the nuance of how it can be used would be lost in its cultural distance. 30 years in the future, it might be similarly illegible.

"Interface" is an extraordinarily elastic word. Definitions from fields as diverse as chemistry, theatre, fashion, and computer science describe interface as "a shared

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boundary," "a contact surface," "a border condition," and "a process or active threshold." All of these definitions share a central tenet—an interface is a thing itself. Its design decisions change not only what it looks like, but also how it works. And, these interfaces have the possibility of conveying more than simply utility, they may also transmit a point of view.

Interfaces surround us, manifested in compiled code, running on silicon chips, and fronting the computer services we all use, all the time. So, we had better understand at least a little about how they are made.

The June 15, 2015 issue of *Bloomberg BusinessWeek* was given over to a single text by writer and computer programmer, Paul Ford. "Code: An Essay" presents fundamentals of programming languages and techniques for a broad audience, with depth and finesse. In its introduction, Ford offers a concise and surprisingly robust definition of a computer:

> A computer is a clock with benefits.

and continues . . .

> They all work the same, doing second-grade math, one step at a time: Tick, take a number and put it in box one. Tick, take another number, put it in box two. Tick, operate (an operation might be addition or subtraction) on those two numbers and put the resulting number in box one. Tick, check if the result is zero, and if it is, go to some other box and follow a new set of instructions. A computer's processing power is even measured by the rate of its CPU, called "clock speed."

If your computer is (already) fundamentally a clock, then clearly the telephone service you dialed at the beginning of this essay is more of an antique curiosity than a working tool. Even a regular wrist watch seems like a gentile affordance when your phone, your laptop, and every message you send through these already registers the time. And in the face of all this, the Apple Watch arrived. Is it some kind of cutting-edge anachronism?

Well, it does have an extremely challenging interface design problem. Its touchscreen is tiny, screen real estate is limited, batteries are finite, and fingers are not shrinking any time soon. The ways in which Watch OS software solves many of these interface design issues is instructive. The device's screen lights only when you raise your wrist to look at it. The watch's face can be almost instantly swapped out with a strong push and a swipe. The watch reveals its full range of utilities when you press the "digital crown" and this pulls up the Launcher, a kind of iOS home screen seen through a roving digital magnifying lens. From here, the watch fluidly transforms itself into an iPod, a mail reader, weather station, text messager, and so on. What is interesting is not so much what the Watch can do, but rather how what it can do is all packaged behind its familiar clock interface.

[. . .]

Standing more or less alone on a train platform in the small Swiss town of St. Margarethen one morning last spring around 6:00 am, I noticed two station clocks in my line of sight. These clocks were the iconic Swiss Railway Clocks designed by Hans Hilfiker in 1944. It's a graphically concise clock face with no numbers, only bold black strokes marking hours, smaller (still bold) strokes for minutes, and two workman-like arms for the hours and minutes. Seconds, however, are registered by a bright red lollipop of a hand. Its distinctive form was added in 1953 based on the shape of an engineer's signalling disk used to indicate when a train is clear to depart the station.

The resulting clock face design is austere, specific, and exaggeratedly functional. It is so particular that Apple even "borrowed" it for the clock app on iPad before being sued by the Swiss railways and eventually settling on a $22.4M licensing fee. (The offending interface was removed in iOS 7.)

Staring at the two clocks through my morning fog, I noticed that they were perfectly synchronized. I suppose, this shouldn't be surprising, particularly in a train station (and a Swiss train station no less) where inaccurate clocks would have definite consequences on how passengers get where they are going. But as I stood staring at the clock close to me and the one across the tracks on another platform, I noticed something surprising. Each time the second hands reached the top, they paused in a decidedly long click. After which, the two continued again to sweep around the face. The pause, it turns out, allows the clocks to synchronize with one another via an electrical signal passed from a master clock. The second hand stops for ~1.5 seconds to receive and process the signal, leaving only 58.5 seconds to complete the rest of its journey. For the remainder of that minute, the clock is telling a small lie, displaying seconds which are actually not quite seconds.

These clocks, linked and synchronized by radio, implement an accurate and consistent clock system for the railroads. You can be sure that standing on a rural train platform in St. Margarethen or the central station in Zürich, the clock you are looking at tells the same time, and that the engineer driving the train which connects the two also reads the same time.

But what the clock looks like is essential for this to work. Hilfiker's clock face design is typically "Swiss," with minimal articulation, extreme contrast, and clearly rendered functional distinctions that suggest precision, efficiency, simplicity. The bright red second hand can be seen from a distance so you can easily scan that these clocks are in sync. Even the once-a-minute pause, while functional, also *communicates* accuracy.

As I stood looking at Hilfiker's clock that morning (and the blank stare of its graphics looking back), I was using a carefully orchestrated interface—an interface between me and the train yet to arrive, coordinating our communication and assuring me that if I trust it, I'll get where I'm going. In the end, I did.

April 19, 2015 6:02 AM, St. Margethen, Switzerland

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Fall 2016

September 20   Introduction
                Lecture — "I-n-t-e-r-f-a-c-e"
                Exercise — What time is it?

September 27   Assignment 1
                Lecture — "Zapotecs & Pulsars"
                Exercise — A clock, *now* . . .
                Reading — *From Sundials to Atomic Clocks*, James Jespersen
                and Jane Fitz-Randolph

October 4   Assignment 1 continues
                Student presentations begin
                Lecture — "Olivetti's Interfaces"
                Reading — *Design Interface*, Gianni Barbacetto, "By Design,"
                Alice Rawsthorne

October 11   Assignment 2
                Student presentations end
                Lecture — "Bruno Munari, c.1962"
                Demonstration — Swatch, @internet time, and Ivrea
                Exercise — Reading a wave
                Reading — "The Tetracone," "What is this X Hour?," Bruno Munari,
                "Reading a Wave," Italo Calvino

October 18   Assignment 2
                Lecture — "Press Start to Begin (on the Metrocard AVM)"
                Exercise — Please swipe your card . . .
                Demonstration — *12 o'clocks,* John Maeda, Reactive Books
                Reading — *The Interface Experience*, Kimon Keramidas,
                "The Interface," John Harwood

October 25   Field trip, New York City
                "Karel Martens: Recent Work," Clock (2016), studio visits
                Reading — "A Note on the Time," Dexter Sinister, "I am a Handle,"
                Rob Giampietro

November 1   Fall break, no class

November 8   Assignment 2 continues
                Project review, in-class critique
                Lecture — "Hans Hilfiker and the Swiss Railway Clock"
                Reading — "Einstein's Clocks: The Place of Time," Peter Gallison

November 15   Assignment 3
                Group project review
                Reading — "Material design," Google inc., *A Primer of Visual
                Literacy*, Donis A. Dondis

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November 22	Assignment 3 continues Lecture — "You Will (past predictions for future interfaces)" Demonstration — Macintosh debut keynote Reading — *Human Interface Guidelines (WatchOS)*, Apple Computer, "Spatial Data Management," Muriel Cooper, Richard Bolt, Nicholas Negroponte
November 29	Assignment 3 continues Project review, in-class critique Lecture — "Eno, Bloom, and The Clock of the Long Now" Demonstration — Christian Marclay, *The Clock* Reading — "Code: An Essay," Paul Ford
December 6	Assignment 3 continues Individual meetings and class discussion Lecture — "Information Landscapes" Reading — *In the Beginning was the Command Line*, Neal Stephenson
December 13	Assignment 3 ends Final review of all work from the semester with visiting critics
January 9	Final portfolio due at 1:30 pm

JUSTIN ALDERIS, KIANA AMIRAHMADI, RUSSELL ARCHER, ALEJANDRO ARROYO, LYON AUNG, TIM BAUMAN, BRADLEY BERMAN, MADDY BERNSTEIN, MATTHEW BLACKBURN, MOLLY BOLTEN, KARA BRESSLER, RICARDO BROWN, CECILIA BUERKLE, CANDY BUTTON, ERIN BYRNE, TEI CARPENTER, CHRIS CHANG, MICHELLE CHANG, DELMAR CHEN, MENGSI CHEN, RICHARD CHENG, JOSEPH CHOI, AN THIEN CHU, GABRIELLA CHU, ALEXANDER CHUKA, BRYAN CHUN, JACOB COMERCI, CAROLINE CONGDON, KIFFA CONROY, ERIN CURLEY, CAROLINE DAVIS, ALEXANDER DAY, RICARDO DE LOS REYES, BENJAMIN DENZER, FRANCESCO DI CAPRIO, JACKSON DOBIES, ANQI DONG, LOGAN DZIAK, MELODY EDWARDS, EMILY EITCHES, NICK ELAN, CHRISTIE ELFORD, NAZLI ERCAN, JOSE ESCAMILLA, DOMINIQUE FAHMY, ALDEN FAN, CINCIN FANG, MARIS FECHTER, KATHLEEN FENG, FERG FERG, DALMA FOLDESI, MICHAELA FRIEDBERG, MELISSA FROST, MAX GALLIN, EMILY GASS, JOSEPH GAUVREAU, MICHAEL GLASSMAN, ISAAC GOLDMAN, SAMUEL GONZALES-LUNA, KANDASI GRIFFITHS, DENNIS GUO, MATTHEW HAAKE, SUMMER HANSON, DANIEL HE, LILY HEALEY, KELSEY HENDERSON, ELIZABETH HENRY, CAROLA HERNANDEZ-CAPPAS, SABINA HLAVATY, LEILA HOWARD, DORA HUANG, NATASHA JAPANWALA, JESSICA JI, TONY JIN, ANNA KALFAIAN, KEOLA KALUHIOKALANI, MIHIKA KAPOOR, DEVIN KARBOWICZ, BO-WON KEUM, STEPHANIE KIM, SYDNEY MIEKO KING, CODY KITCHEN, MATTEO KRUIJSSEN, ROBERT LAMBETH III, EUGENE LEE, MICHELLE H. LEE, NAOMI LEE, CHRIS LEUNG, LAUREN LEWIS, AMANDA LI, ERIC LI, IEN LI, DIANA LIAO, BING LIN, INGRID LIU, JENNIFER LIU, SUSAN LIU, ADAM LOCHER, TOMMY LOMONT, KATHLEEN MA, DAVID MACKASEY, EMILY MADRIGAL, CAMERON MAPLE, CHITRA MARTI, JULIA MENG, JOSE MEZA, CARA MICHELL, HANNAH MILLER, KATHERINE MILLER, JOHN KYLE MORONE, JESSICA MULLIGAN, LESTER NARE, CALEB NEGASH, JACQUIE NESBIT, FELICIA YAN NG, ADA NGUYEN, ROSALEEN NGUYEN, CHAD NUCKOLS, JOHN O'NEILL, JULIET OH, KAREN OUYANG, NEETA PATEL, MILENA PHAN, SEAN POOSSON, LAURA PRESTON, KATE PRUCNAL, CRYSTAL QIAN, HANSEN QIAN, EMILY REDFIELD, JESSICA REED, COLIN REILLY, MARISSA REYNOLDS, GRACE RICCARDI, SAM RITTER, MATTHEW ROGERS, KATHRYN ROSE, MARYIA RUSAK, HANNAH SAFFORD, ELIAS SANCHEZ-EPPLER, NICOLE SATO, GABRIEL SAVIT, ELI SCHECHNER, JESSE SEEGERS, SUMMER SHAW, DIANA SHI, ANDREW SONDERN, CHLOE SONG, ALICE STANTON, ZACHARY STECKER, HENRY STOLZ, TEHILA STONE, EMILY SULLIVAN, ANDREW SUN, JANET TAMBASCO, EUGENE TANG, ADAM THOMASON, ANDREW TRAN, LAGAN TRIESCHMANN, PAIGE TSAI, EMILY TSENG, NATHAN TYRELL, NEHA UBEROI, JUAN SEPULVEDA VARON, WESLEY VERNE, DREW WALLACE, JAMES WANG, PATRICK WASSERMAN, EMILY WIEBE, MICHAEL WIEST, LOUISA WILLIS, KATHERINE WOLFF, BRENDAN WRIGHT, JEFFREY WU, JULIANA WU, SIMON WU, NATTHAMON WUTILERTCHAROENWONG, CARESSE YAN, YOLANDA YEH, TIANTIAN ZHA, IRVIN ZHAN, DEMI ZHANG, JENNY ZHANG, MAGGIE ZHANG, JONATHAN ZONG

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