



Course Syllabus

HONR 218V: Digital Sound and Fury on Mac OSX, Spring 2005

Prof. Bruce Jacob

1. Basic Information

Time & Place

Lecture: Wed 2:00–4:30 pm, AVW-4456

Professor

Bruce L. Jacob: AVW-1325, blj@umd.edu

Office hours: *Open-Door Policy*

Class Home Page

<http://www.ece.umd.edu/courses/honr218v/>

Class Email List

honr218v-0101-spring05@coursemail.umd.edu

Class Schedule

This is a weekly schedule of my hours, including class time and scheduled office hours; it also includes other things that make me unavailable. It is subject to change.

| | Mon | Tue | Wed | Thu | Fri | |
|----------|-----|----------------------|---|-----|------------------------|--|
| 8-8:30 | | | | | | |
| 8:30-9 | | | | | | |
| 9-9:30 | | | <i>In office or lab preparing for HONR 218V lecture ...</i> | | | |
| 9:30-10 | | | | | | |
| 10-10:30 | | | | | | |
| 10:30-11 | | | | | | |
| 11-11:30 | | ENEE 759h Lecture | | | ENEE 759h Lecture | |
| 11:30-12 | | | | | | |
| 12-12:30 | | | | | | |
| 12:30-1 | | | | | | Meetings with graduate research assistants |
| 1-1:30 | | | | | | |
| 1:30-2 | | | | | Cray teleconference | |
| 2-2:30 | | | | | | |
| 2:30-3 | | | HONR 218V Lecture AVW-4456 | | | |
| 3-3:30 | | | | | | |
| 3:30-4 | | | | | | |
| 4-4:30 | | | | | | |
| 4:30-5 | | | | | | |

2. Course Overview

Digital Sound and Fury on Mac OSX: Desktop Publishing, Music, Photography, and Video

Nearly everything you see and hear on television, at the movies, on the radio, and in print is digital information, and nearly all of it was created on the computer. Video, audio, images, and music—today, all forms of media are either created directly on the computer or at least post-processed on the computer. Even if an item of content (e.g., movie, photo, illustration, song, magazine article, textbook) does not begin life in the digital form, it almost certainly ends up that way.

Fortunately, the tools for creating and manipulating digital content have become more attuned to the sensibilities of artists, so that modern-day software is capable of creating works that span the range of human expression. This course will delve into many of those tools, teaching students the basics of sequencing and digital audio, software synthesizers and samplers, still image and video editing, graphic design and desktop publishing. We will also analyze some examples of “good” content to learn how to do it well.

3. Course Prerequisite(s)

This is a hands-on lab course; prior experience with Mac OSX is not required but would be helpful.

4. Course Material

There is a small handful of required materials for the course. If you do not already have copies, you must acquire copies of these by the end of the semester:

- William Strunk and E. B. White: The Elements of Style
- Tom Phillips: A Humument: A Treated Victorian Novel, 1970–1975
<http://www.tomphillips.co.uk/humument/>
- Anything by Bach, or any Beethoven symphony #3–9

In addition, there are numerous additional recommended works of art (texts, videos, images, audio recordings, etc):

4.1 Print: Images, Poetry, & Prose

- Isaac Asimov: I, Robot, 1950
- Samuel Beckett: *Waiting for Godot*, 1948
- John Cage: Silence: Lectures and Writings by John Cage, 1961
- Arthur C. Clarke: 2001: A Space Odyssey, 1968
- e. e. cummings: Complete Poems, e.g.
“pity this busy monster,manunkind,”
“this(let’s remember)day died again and”
“a man who had fallen among thieves”
“next to of course god america i”
- Salvador Dali: various paintings, e.g.
“The Tunny Catch,” 1967 & “The Hallucinogenic Toreador,” 1970
“The Persistence of Memory,” 1931
“Archaeological Reminiscence of Millet’s Angelus,” 1935

- T. S. Eliot: “The Love Song of J. Alfred Prufrock,” 1917
- Brian Eno and Peter Schmidt: *The Oblique Strategies*, 1975
<http://www.rtqe.net/ObliqueStrategies/>
- Neil Gaiman: *Sandman*, 1989–1996
- Andy Goldsworthy (“environmental artist”): e.g., *A Collaboration with Nature*, 1990
- Wassily Kandinsky: various paintings, e.g. “Black and Violet,” 1923; “Composition VII,” 1913; “Small Pleasures,” 1913; etc.
- Paul Klee: various paintings, e.g. “Dream City,” 1921; “Ancient Sound, Abstract on Black,” 1925; “Embrace,” 1939; etc.
- Gustav Klimt: various paintings, e.g. “The Kiss,” 1907
- C. S. Lewis: *The Screwtape Letters*, 1942
- Frank Miller: *Batman: The Dark Knight Returns*, 1986; *Ronin*, 1987
- Alan Moore: *Swamp Thing* #21–50, mid-80’s; *Watchmen*, 1987
- V. S. Naipaul: “Reading and Writing,” 1999 (?); *In a Free State*, 1971; etc.
- Pablo Picasso: *lots* of paintings (obvious ones include “Guernica,” 1937)
- Ayn Rand: *Atlas Shrugged*, 1957; *The Fountainhead*, 1943
- Georges Seurat: pointillism, e.g. “Sunday Afternoon on the Island of La Grande Jatte,” 1884–86; “Gray Weather, Grande Jatte,” 1888; etc.
- Dave Sim & Gerhard: *Cerebus*, 1977–2004
- J. R. R. Tolkien: *The Hobbit*, 1937; *The Lord of the Rings*, 1954–5
- Vincent van Gogh: various paintings, e.g. “Mountains at Saint-Remy,” 1889; “The Starry Night,” 1889; etc.

Particularly good/influential science fiction, fantasy, etc.

- Douglas Adams: the *Hitchhiker’s Guide* 5-book “trilogy,” 1979–1992
- Isaac Asimov: the *Foundation* trilogy, 1951–1953; etc.
- Margaret Atwood: *The Handmaid’s Tale*, 1986
- Iain Banks: *Consider Phlebas*, 1987; *Use of Weapons*, 1990; *Excession*, 1996; etc.
- Ray Bradbury: *Fahrenheit 451*, 1951; *Something Wicked This Way Comes*, 1986; etc.
- William Gibson: *Neuromancer*, 1984; *Mona Lisa Overdrive*, 1988; etc.
- Robert A. Heinlein: *Stranger in a Strange Land*, 1961; etc.
- Ursula K. Le Guin: the *Earthsea* trilogy, 1968–72; *The Left Hand of Darkness*, 1969
- Michael Moorcock: the various *Eternal Champion* collections
- George Orwell: *Animal Farm*, 1946; *1984*, 1949
- Ayn Rand: *Anthem*, 1946
- Gene Wolfe: *The Book of the New Sun*, 1980–87; *The Book of the Long Sun*, 1993–96

Books on Design and Layout/Form Guidelines

- Roger Parker: Looking Good in Print
- Edward Tufte: The Visual Display of Quantitative Information
- Robin Williams: The Non-Designer's Design Book
- Chuck Green: Graphic Workshop
- Gail Finke and Clare Warmke: Powerful Page Design

4.2 Audio Recordings

- J. S. Bach: *Art of Fugue*, 1740–; *Goldberg Variations*, 1741; *St. Matthew Passion*, 1729
- Beethoven: *Symphony 3* (“Eroica”), 1805; etc.
- David Bowie: *Space Oddity*, 1969; *Hunky Dory*, 1971; *Ziggy Stardust*, 1972; *Aladdin Sane*, 1973; *Diamond Dogs*, 1974; *Young Americans*, 1975; *Station to Station*, 1976; *Low*, 1977; *Heroes*, 1977; *Lodger*, 1979; etc.
- Johannes Brahms: *Double Concerto*, 1887
- David Byrne and Brian Eno: *My Life In The Bush Of Ghosts*, 1979
- Miles Davis: *Bitches' Brew*, 1969
- Brian Eno (Roxy Music, 1972–; solo projects 1973–)
- Peter Gabriel: *(III)*, 1980; *(IV)* (“security”), 1982; *So*, 1986; *Passion*, 1989; *Us*, 1992
- George Gershwin: *Rhapsody in Blue*, 1924
- George Handel: *Water Music*, 1717
- Zoltan Kodaly: *Duo for Violin and Violoncello*, 1914
- Karlheinz Stockhausen: *Kontakte*, 1959
- Igor Stravinsky: *The Rite of Spring*, 1913
- Antonio Vivaldi: *The Four Seasons*, 1716 (e.g. Trevor Pinnock “English Concert”)
- The B-52's: *The B-52's*, 1979
- The Beatles: in particular the following evolution of sound over two and a half years: *Help!*, 1965; *Rubber Soul*, 1965; *Revolver*, 1966; *Sergeant Pepper's Lonely Hearts Club Band*, 1967
- Devo: *Q: Are We Not Men?* 1978
- Genesis: *The Lamb Lies Down on Broadway*, 1974
- King Crimson: *In the Court of the Crimson King*, 1969; *Discipline*, 1981
- Mahavishnu Orchestra: *The Inner Mounting Flame*, 1970
- Pink Floyd: *The Dark Side of the Moon*, 1973; *The Wall*, 1979
- The Velvet Underground & Nico: *The Velvet Underground & Nico*, 1967
- Yes: *Fragile*, 1972; *Close to the Edge*, 1972; *Tales From Topographic Oceans*, 1974

4.3 Video

- Luc Besson: *The Fifth Element*, 1997
- Jon Favreau & Doug Liman: *Swingers*, 1996
- Matt Groening et al.: *The Simpsons*, 1989–
- Stanley Kubrick: *2001: A Space Odyssey*, 1968; *A Clockwork Orange*, 1971
- George Lucas: *Star Wars*, 1977
- Daniel Myrick & Eduardo Sánchez: *The Blair Witch Project*, 1999
- Trey Parker and Matt Stone: *South Park*, 1997–
- Ridley Scott: *Blade Runner*, 1982; Apple’s *Macintosh* ad/announcement, 1984
- Charles Schulz: *A Charlie Brown Christmas*, 1965
- Kevin Smith: *Clerks*, 1994; etc.
- Whit Stillman: *Metropolitan*, 1990; *Barcelona*, 1994
- Quentin Tarantino: *Reservoir Dogs*, 1992; *Pulp Fiction*, 1994; etc.
- Genndy Tartakovsky: *Samurai Jack*
- Roger Waters: *Pink Floyd The Wall*, 1982
- Orson Welles: *Citizen Kane*, 1941
- Monty Python: *Monty Python and the Holy Grail*, 1975
- Pixar/Disney: *Toy Story*, 1995; *Finding Nemo*, 2003

These examples are chosen simply because I like them—I think that they represent “good” content in that they have had tremendous impact on their respective fields. The list is by *no means* complete, for two reasons: (1) it is off the top of my head, and (2) I have pretty narrow tastes. :)

5. Class Work

The semester is divided into four quarters, each corresponding to a different medium: **desktop publishing & presentation** (basically how to arrange words & pictures to effectively convey your thoughts), **audio** (concentrating primarily on music and soundscapes), **images** (both photographic and illustration), and **video** (which sort of combines everything else, with the added element of progression through time).

You have four primary assignments: (1) acquire a library of “good” content; (2) propose one or more additions to each sub-section in the list of recommended artwork above, with justification for each addition; (3) weekly hands-on assignments to familiarize yourself with the software and hardware; (4) quarterly projects that each explore one or more tools in more depth than the weekly assignments.

5.1 Build a (small) Library

As mentioned your first assignment is to acquire, no later than the end of the semester, the items on the short list of required, “must-have” materials. These include *the* book on good writing technique (so you should already have it), a combined example of poetry and image, and an example of music¹. If I can think of a must-have example of video, I reserve the right to add another item to the “required” list. :)

5.2 What Do You Like, and Why?

I have given you a (very) short list of content that I happen to think is good and/or influential, broken into three classes: *print* (including all of prose, poetry, image — because, as a few examples show, it can be very hard to distinguish these three media sometimes), *audio*, and *video*.

Over the course of the semester, I want you to give me one or more examples in each of these media that *you* think are good and/or influential, and for each item I want a brief (one paragraph) description of *why* you think the way you do: why is it better than its contemporary peers? who/what has it influenced? etc. Remember that this course cares about *form* just as much as *content*, so feel free to give examples such as a particular magazine, book, or website layout, ignoring its content. The main purpose of this is for you to think critically about your own tastes: understanding why you like something is an important first step if you ever want to create works that have impact.

5.3 Weekly Assignments

Every week, roughly, we'll be looking at a new software tool. For each tool, I will give you an assignment that is basically an excuse for you to go into the tool and see how it works, figure out what you can do with it, etc. The assignments will also be designed so that you experiment within a creative medium and/or explore some aspect of design within that medium. Note that many schools offer *entire-semester* courses on many of these tools (i.e. a course that spends an entire semester on a single tool), so by definition we're not going to get into much depth by treating each one in a single 2.5-hour lecture. It is up to you to explore these tools on your own.

Weekly Assignment #0

The first assignment is to let me know what you want to get out of this course. You have a week to get me your initial thoughts, but you are welcome to make suggestions throughout the semester. Tell me: What do you want to learn? a technique? a software package? details about a particular medium? I will try to accommodate as many of your goals as possible ... but bear in mind that there are roughly 25 students in the class and only 14 lectures.

5.4 Quarterly Projects

To give you an opportunity to focus in more detail than in the weekly assignments on whatever software tools or development techniques you find most interesting, we will also have quarterly projects that are student-defined. Each project will address a different medium: desktop publishing, audio, images, and video. In these projects you will not be restrained or limited in any way (you can even use other software packages), except that I want the projects to be more substantial than the weekly projects in your use of a particular tool, technique, or creative medium.

Note: you will use the application *Keynote* to present your quarterly projects to the class. Keynote is capable of handling text, graphics, audio, and video, so anything that you create is imported easily. This is done to get you used to using presentation software effectively, both in creating a talk and in giving it. *Each presentation should be 1–2 minutes long* (since there are roughly 25 students and we'd like to finish class before dark).

1. Beyond the Bach and/or Beethoven works, I also highly recommend getting a copy of Pink Floyd's *Dark Side of the Moon*, if only for the reason that it is the largest selling record of all time.

6. If You Learn Nothing Else ...

then learn this: there are a few obvious ways to ensure that your content is good, or at least not pathetically bad, including the following (we will discuss these in detail during the semester and, if possible, discuss many more as well):

- **Use and Develop Themes:** Establish primary themes early and clearly. Return to them; expand them, and expound upon them. Note, however: though repeating visual, verbal, and audio motifs is a good way to hook the audience, make sure it is not blind repetition. The audience is sophisticated, quickly recognizes simple cut & paste, and can tire of it.
- **Detail Never Hurts (up to a point):** One sure way to keep the attention of the audience is to have detail in the work. Though many good counter-examples exist (e.g., Zen ink drawings), it takes exquisite skill to create something that is both simple *and* profound. Though it is possible to “busy up” a work of art, it tends to be more interesting than the alternative (and longer-lasting—e.g., Gaudi).
- **Canonical Forms:** Begin with canonical forms at first (e.g. sonata form, sonnet form, fugue, iambic pentameter, journey/discovery, variations on a theme, etc.), and once you have established the starting point, then digress; your work has more impact if it relates to something familiar.
- **Define the Borders of your Space:** This is important: whether the space is time, canvas, or pages of paper, your work should have a definite structure that is recognizable at least in a subconscious way.
- **Asymmetry & Symmetry:** Asymmetry is good in space (unbalanced designs work well); symmetry works well in time (easier for listener to follow).
- **Revolutionize Occasionally:** Many pieces that are the first to explore something (a topic, an instrument, a technology, a methodology, a “look,” a “sound,” etc.) are remembered for a very long time and help to shape future popular culture.

7. Tentative Lecture Schedule

The following is a tentative schedule of topics for lecture, tools to explore, and (first thoughts on) assignments to cover. It is only tentative—if over the course of the semester it becomes apparent that more time is warranted on certain topics or software packages, I will change the schedule to accommodate that fact.

| Week of | Topics | Readings | Assignments |
|---------|--|--|---|
| Jan. 24 | Introduction to course & design Desktop Publishing: Framemaker Examples: “revolutionary” art, e.g. <i>Rite of Spring</i> , 1984 <i>Macintosh Ad</i> , “Intruder,” <i>Kontakte</i> , King Crimson, Cummings, Goldsworthy, Eno, Seurat, etc. | Eno: <i>The Long Now</i> Naipaul: <i>Reading & Writing</i> Jacob: <i>Algorithmic composition</i> | #0: <i>What do you want to learn in this class?</i> #1: <i>Business cards & letterhead</i> |
| Jan. 31 | Desktop Publishing: Framemaker Analysis: symmetry, asymmetry Examples: | | #2: <i>Re-do your business cards & letterhead</i> |

| Week of | Topics | Readings | Assignments |
|---------|---|--|--|
| Feb. 7 | <p>Desktop Publishing: <i>QuarkXpress</i></p> <p>Layout & Presentation: <i>Keynote</i></p> <p>Analysis: use of themes in visual material</p> <p>Examples: <u>Caps for Sale</u>; <u>In the Small, Small Pond</u>; CE flyer</p> | <p>Pink Floyd: <i>The Dark Side of the Moon</i></p> <p>Byrne & Eno: <i>My Life In The Bush Of Ghosts</i></p> <p>Eno:</p> | <p>#3: Album cover & inside notes, magazine spread & inside content; include at least one thing that you cannot do in <i>FrameMaker</i></p> |
| Feb. 14 | <p>Audio: Input & Output</p> <p>Analysis: ambient sound and its use in music, <i>music concrete</i></p> <p>Examples: Score for “Robert”</p> | <p>Pink Floyd: <i>The Wall</i></p> <p>Yes: <i>Fragile</i></p> <p>Gershwin: <i>Rhapsody in Blue</i></p> <p>ELO: <i>Out of the Blue</i></p> | <p>Q1: Layout Project due</p> <p>#4: Record 3 water, 3 voice, and 3 mechanical sounds; put into linear format, single audio file</p> |
| Feb. 21 | <p>Audio: <i>GarageBand & Soundtrack</i></p> <p>Analysis: use of themes in music</p> <p>Examples: Score for “Jokes”</p> | <p>Stockhausen: <i>Kontakte</i></p> <p>Cage: <i>Lecture on Nothing</i></p> <p>The Beatles: (<i>white album</i>)</p> <p>Reznor/Bowie selections</p> | <p>#5: Layered soundscape using sounds from asst. 4 plus 8 new sounds (can be music or audio)</p> |
| Feb. 28 | <p>Audio: <i>Pro Tools</i></p> <p>Analysis: how to create temporal structure</p> <p>Examples: “Miniluv Rm. 101”</p> | <p>Yes: <i>Close to the Edge</i></p> <p>[Yes: <i>Tales from Topographic Oceans</i>]</p> <p>Jacob: <i>Hegemon Fibre</i></p> | <p>#6: An example of musique concrete</p> |
| Mar. 7 | <p>Audio: <i>Logic</i></p> <p>Analysis: thematic development in music</p> <p>Examples: “Under the Ceiling of Sky”</p> | <p>Phillips: <i>A Humument</i></p> | <p>#7: Orchestrated piece using 8 or more synth/sampled instruments</p> |
| Mar. 14 | <p>Images: <i>iPhoto</i> (and <i>QuickTime</i> for animation)</p> <p>Analysis:</p> <p>Examples:</p> | | <p>Q2: Audio Project due</p> <p>#8: Take 3 “still” life, 3 action, and 3 personal shots; eliminate red-eye; compare color vs. B&W; put into book format</p> |
| Mar. 21 | <p>Spring Break</p> | | <p>(no class)</p> |
| Mar. 28 | <p>Images: <i>Photoshop</i></p> <p>Analysis:</p> <p>Examples:</p> | | <p>#9: Edit (improve, manipulate, etc.) 3 “still” life, 3 action, and 3 personal shots; put into layout using <i>Quark</i></p> |
| Apr. 4 | <p>Images: <i>Bryce</i></p> <p>Analysis:</p> <p>Examples:</p> | | <p>#10: Surreal landscape, signs of intelligent life</p> |
| Apr. 11 | <p>Images: <i>Illustrator</i></p> <p>Analysis:</p> <p>Examples:</p> | | <p>#11: Draw something mechanical/industrial or something biologically inspired</p> |

| Week of | Topics | Readings | Assignments |
|---------|--|----------|---|
| Apr. 18 | Video: <i>iMovie & iDVD</i> Analysis: Examples: | | Q3: Images Project due <i>#12: Record in 3x4 format 3 "still" life, 3 action, and 3 personal video scenes; arrange & put to music</i> |
| Apr. 25 | Video: <i>Final Cut Express</i> Analysis: Examples: | | <i>#13: Re-do #12 in 16:9 for same/similar scenes; add text-animation overlays and custom audio (e.g. narration)</i> |
| May 2 | Video: Animation Analysis: Examples: | | #14: |
| May 9 | Images & Video: 3D Modeling Analysis: Examples: | | |
| May 16 | Exam Week | | Q4: Video Project due |

8. Borrowing Equipment and Media

I have some equipment and media (books, CDs, videos) that you may “check out” and borrow. Examples:

Equipment

- Digital camera (Kodak DC280)
- Digital camcorder (Canon Optura 30, does reasonable widescreen)

Media

- Design books
- Many of the examples listed earlier

You may borrow an item for up to 4 hours at a time, or longer (including overnight) if a group of at least two people will share the item. Bear this in mind when it comes time to find/take pictures and video ... if you do not have your own camera and want to avoid a rush, you will need to find stock footage or plan ahead.