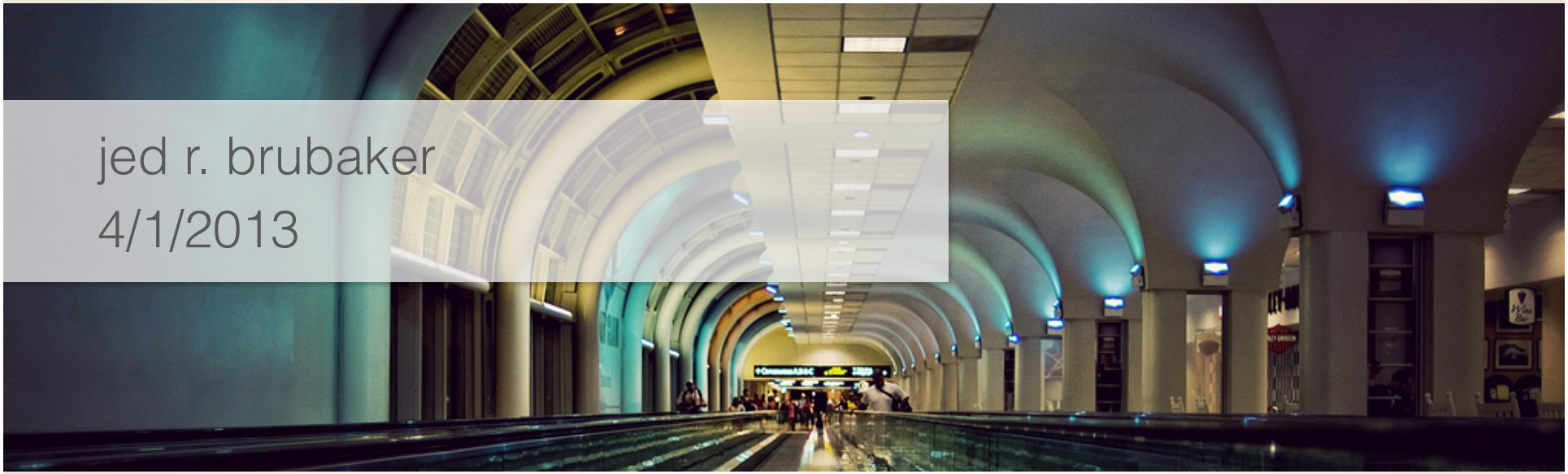
Informatics 132: Course Introduction



jed r. brubaker

4/1/2013

With credit to Julie Kientz, Bruce Walker, Elaine Huang, Gregory Abowd, Beth Mynatt, Jacob Wobbrock, Dave Hendry, Batya Friedman, Andrew Ko, Mark Zachry, Jennifer Turns, Gillian Hayes, and Don Patterson.

*star | SOCIAL & TECHNOLOGICAL ACTION RESEARCH GROUP

CHEWBACCA ROAR CONTEST!!!

$100 BEST IMPERSONATION

CALL 562.265.8561

Leave a voicemail + contact info.

A little bit about me…

- PhD Candidate in Informatics
- Research in human-centered computing, digital identity, social media
- Six years in industry, focus on e-commerce and web-based applications

- Contacting me: Email is best.

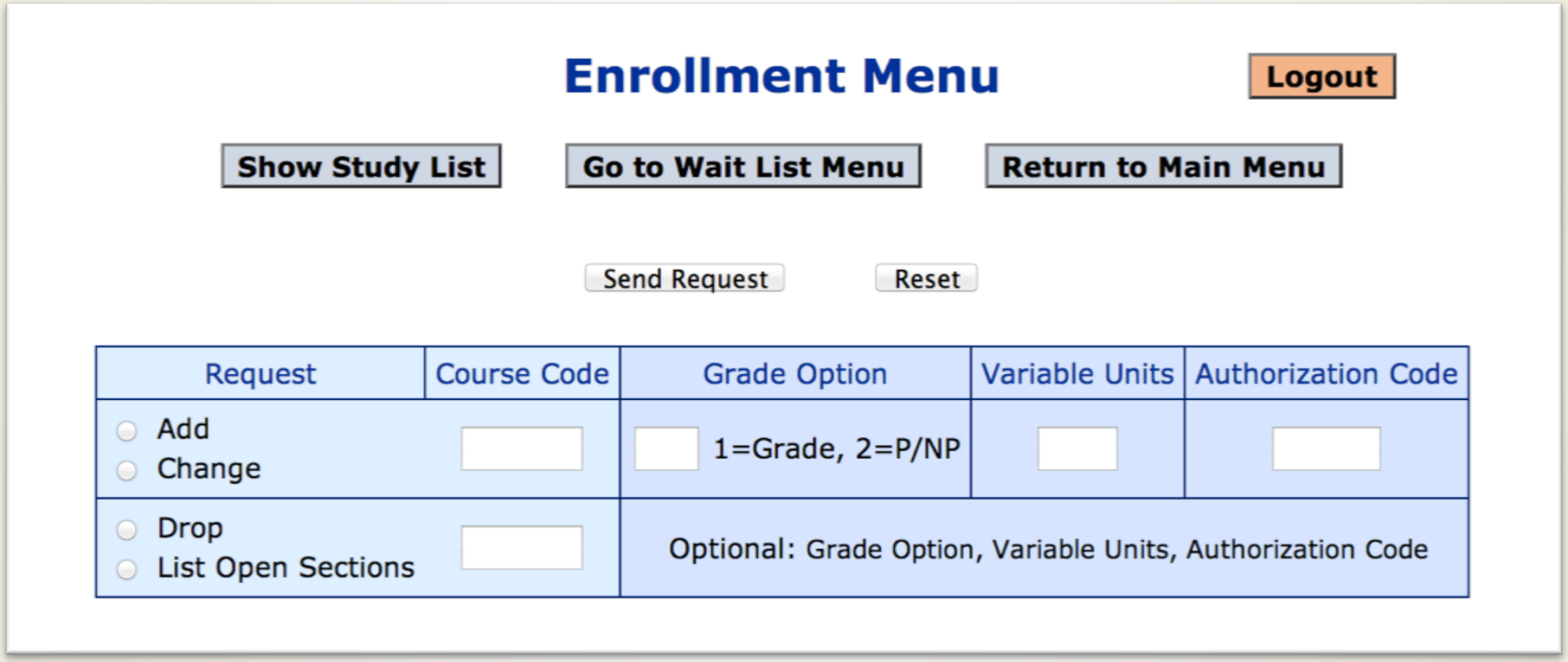
A little bit about you…

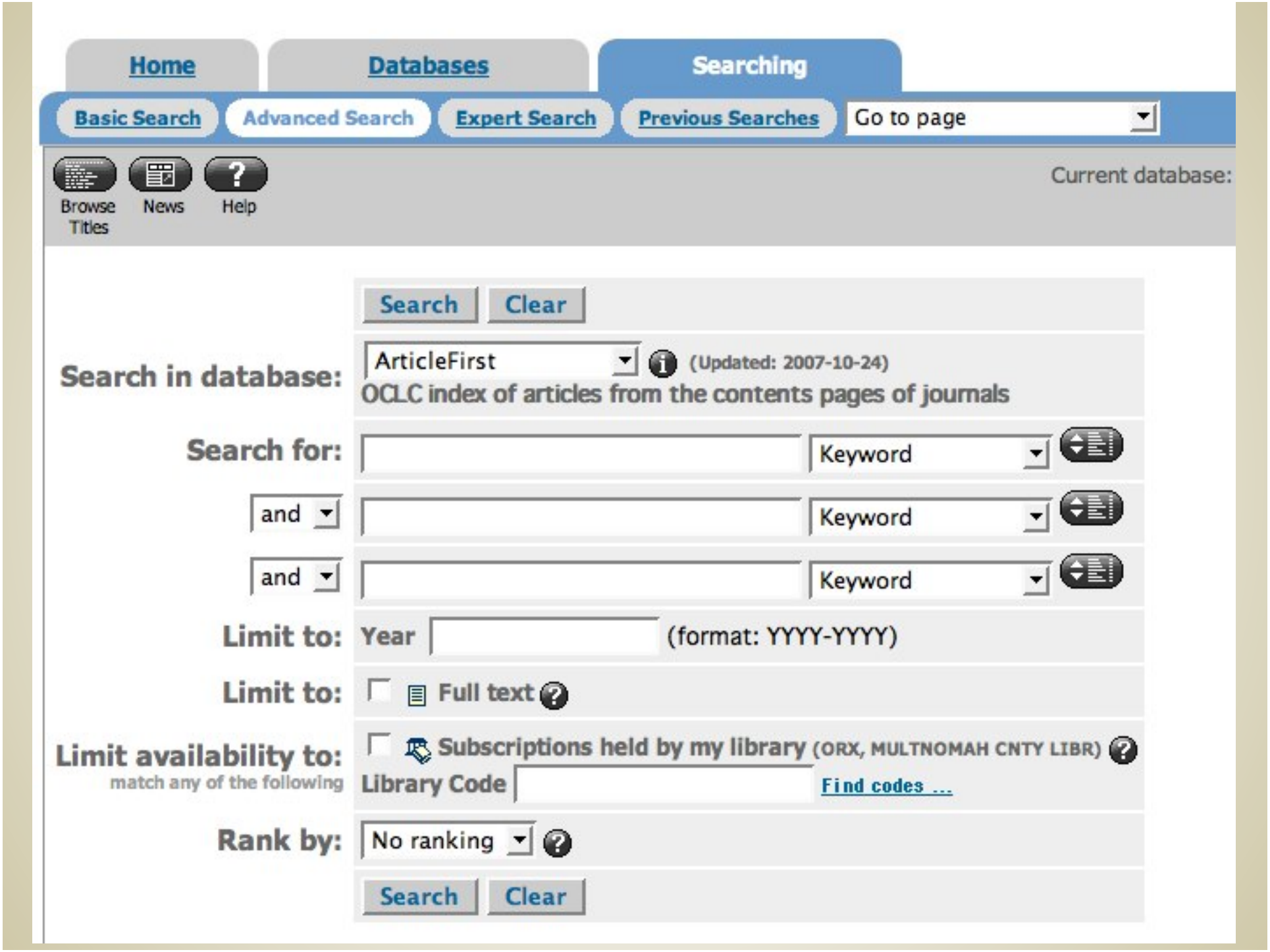
- From a variety of programs:
  ICS, Informatics, CS, Anthropology, Social Ecology, CS Games, Eng. BM, Econ, Biz Econ, BIM, Psych, Literary Journalism, and History. (whoa.)

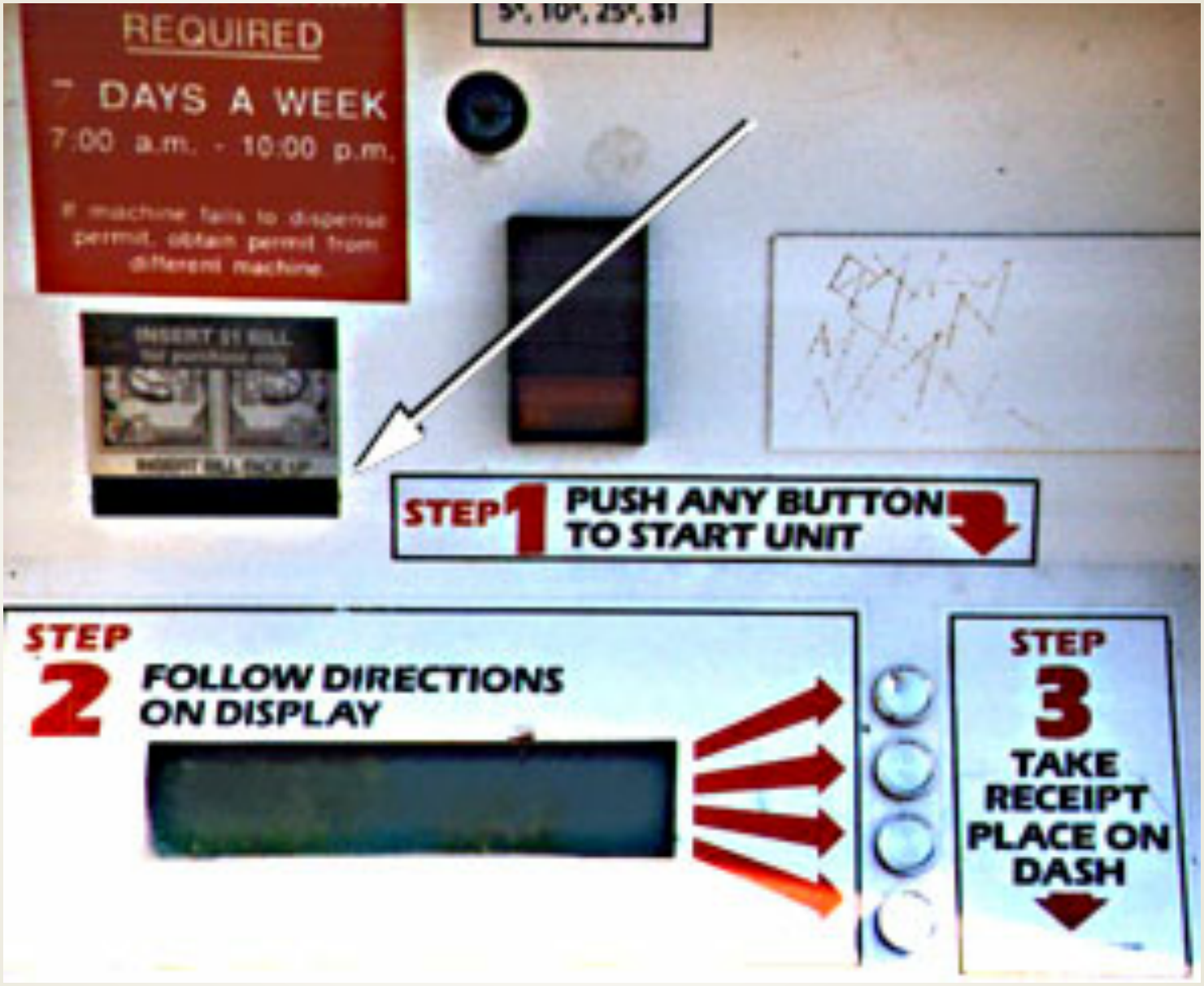
- Seniors, Juniors, and Sophomores

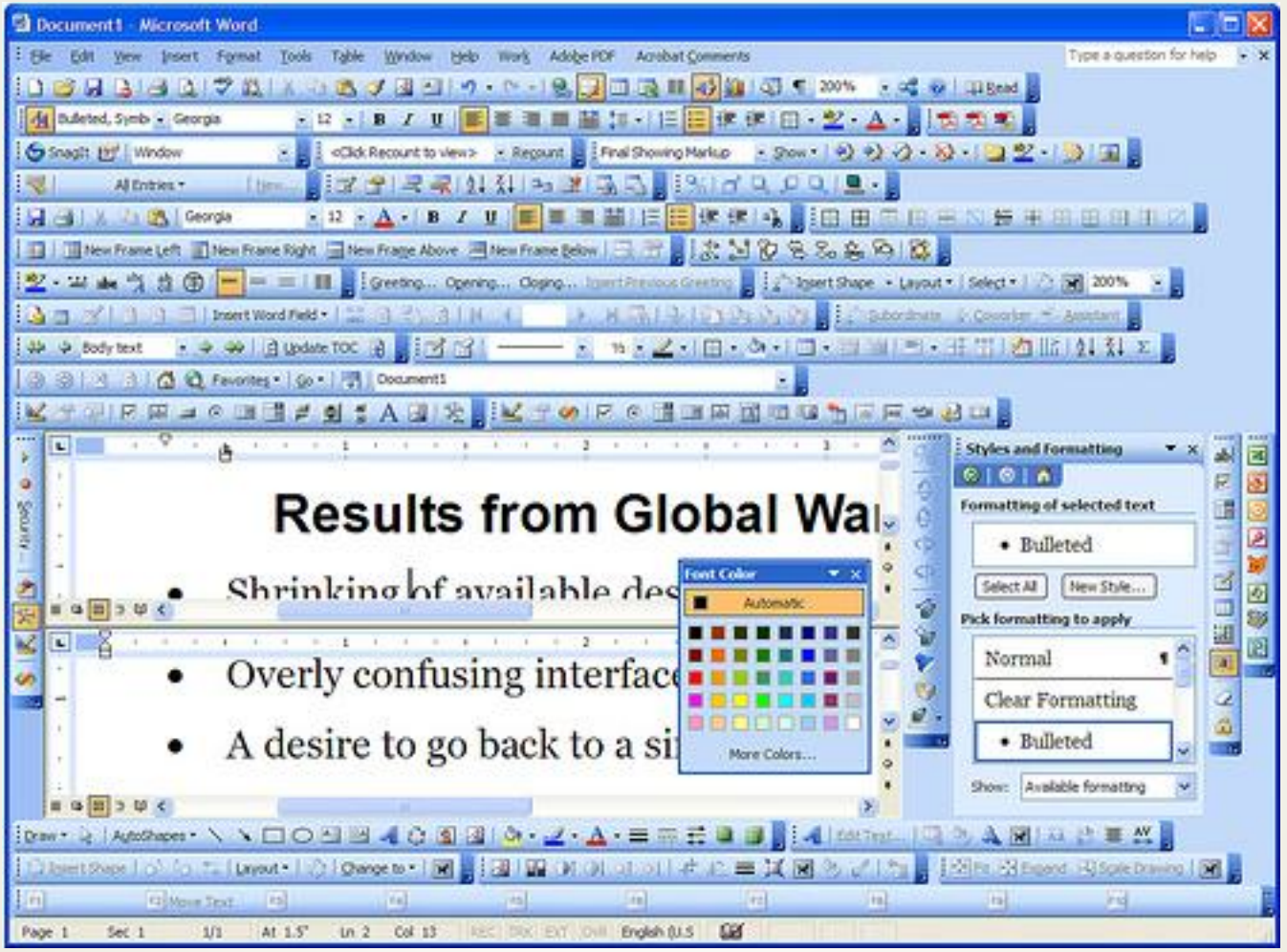
You all recently registered for class, got information about this class online, etc.

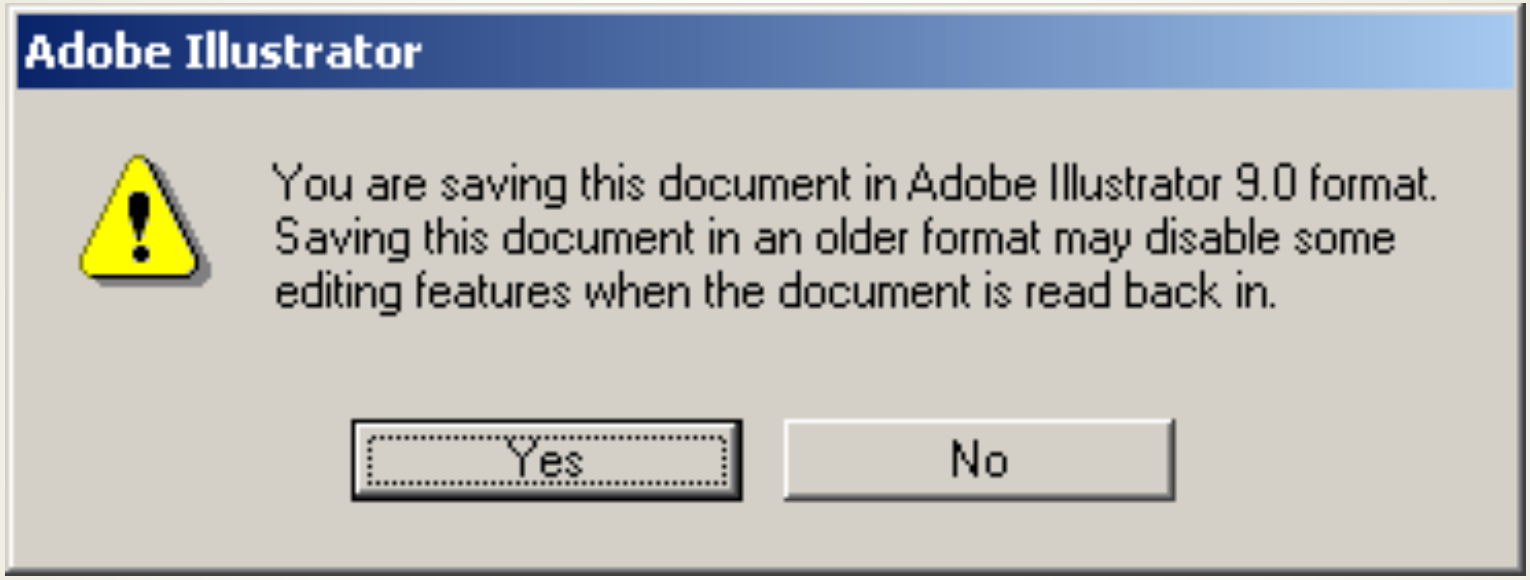
- Was that painful?
- How do you know?
- Sometimes, painful isn't so obvious

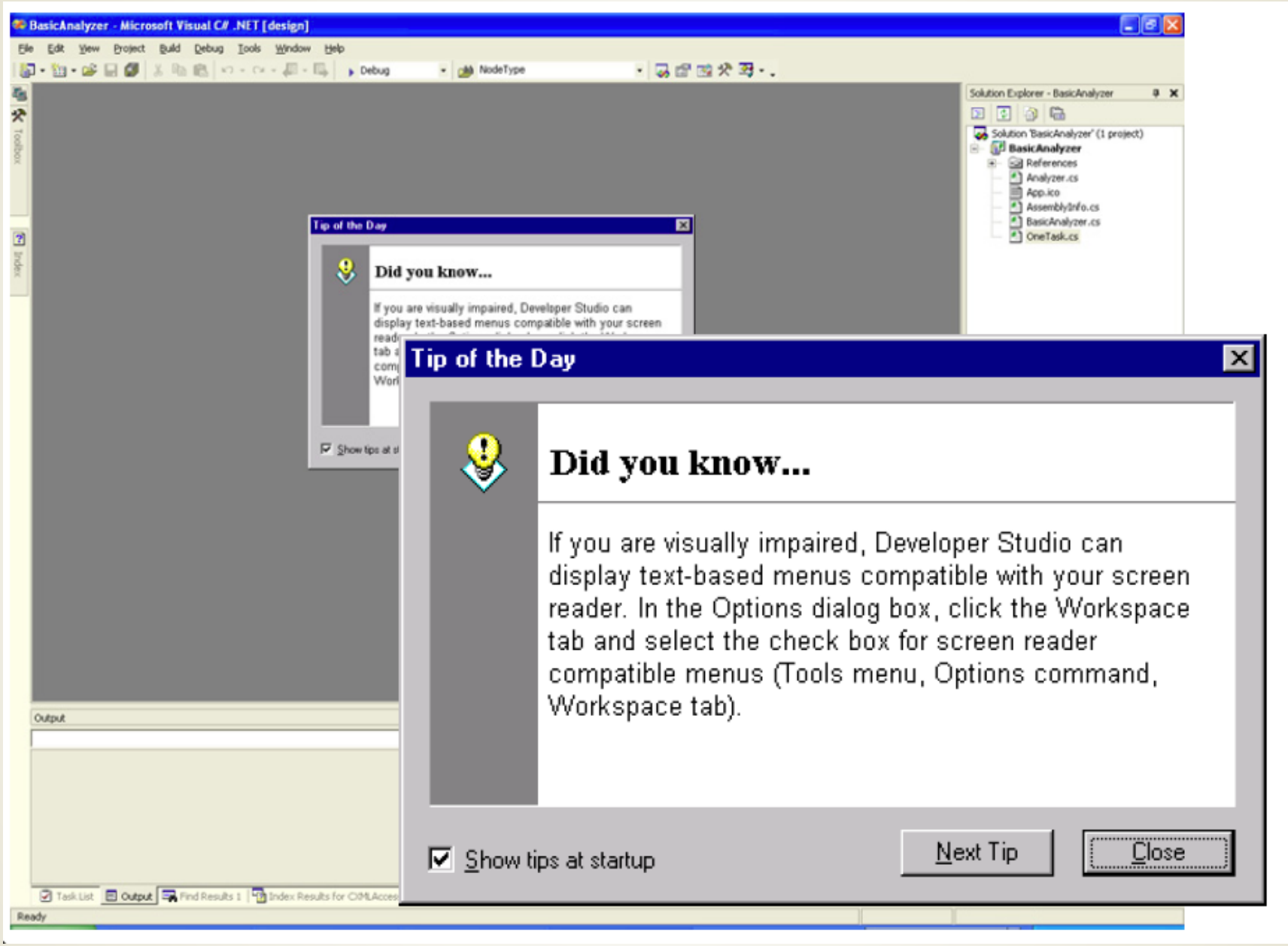

Enrollment Menu
Logout
Show Study List
Go to Wait List Menu
Return to Main Menu
Send Request
Reset
Request
Course Code
Grade Option
Variable Units
Authorization Code
Add
Change
1=Grade, 2=P/NP
Drop
List Open Sections
Optional: Grade Option, Variable Units, Authorization Code


Home
Databases
Searching
Basic Search
Advanced Search
Expert Search
Previous Searches
Go to page
Browse Titles
News
Help
Current database:
Search
Clear
Search in database:
ArticleFirst
(Updated: 2007-10-24)
OCLC index of articles from the contents pages of journals
Search for:
Keyword
and
Keyword
and
Keyword
Limit to:
Year
(format: YYYY-YYYY)
Limit to:
Full text
Limit availability to:
match any of the following
Subscriptions held by my library (ORX, MULTNOMAH CNTY LIBR)
Library Code
Find codes ...
Rank by:
No ranking
Search
Clear


REQUIRED
DAYS A WEEK
7:00 a.m. - 10:00 p.m.
STEP 1 PUSH ANY BUTTON TO START UNIT
STEP 2 FOLLOW DIRECTIONS ON DISPLAY
STEP 3 TAKE RECEIPT PLACE ON DASH


Document1 - Microsoft Word
Results from Global Wa
Overly confusing interface
A desire to go back to a si
Font Color
Automatic
More Colors...
Styles and Formatting
Formatting of selected text
Bulleted
Select All
New Style...
Pick formatting to apply
Normal
Clear Formatting
Bulleted
Show:
Available formatting


Adobe Illustrator
You are saving this document in Adobe Illustrator 9.0 format.
Saving this document in an older format may disable some
editing features when the document is read back in.
Yes
No

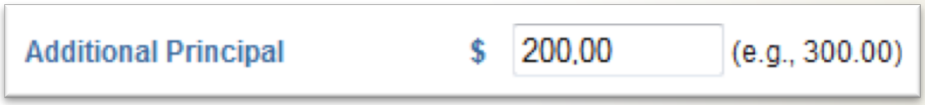

BasicAnalyzer - Microsoft Visual C# .NET [design]
File Edit View Project Build Debug Tools Window Help
Debug
NodeType
Solution Explorer - BasicAnalyzer
Solution 'BasicAnalyzer' (1 project)
BasicAnalyzer
References
Analyzer.cs
App.ico
AssemblyInfo.cs
BasicAnalyzer.cs
OneTask.cs
Tip of the Day
Did you know...
If you are visually impaired, Developer Studio can display text-based menus compatible with your screen reader. In the Options dialog box, click the Workspace tab and select the check box for screen reader compatible menus (Tools menu, Options command, Workspace tab).
Show tips at startup
Next Tip
Close
Output
Task List
Output
Find Results 1
Ready

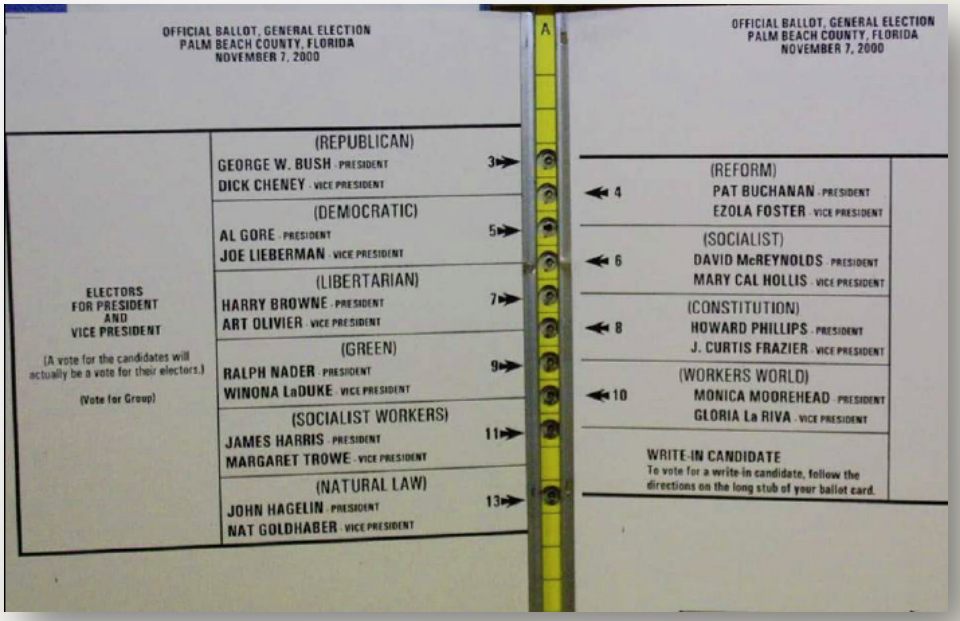
Bad design is everywhere!

Bad design can have big consequences

Money

Social issues





Bad design can have big consequences

- Human Lives
  - Therac-25 Radiation Therapy machine
  - Air traffic accidents

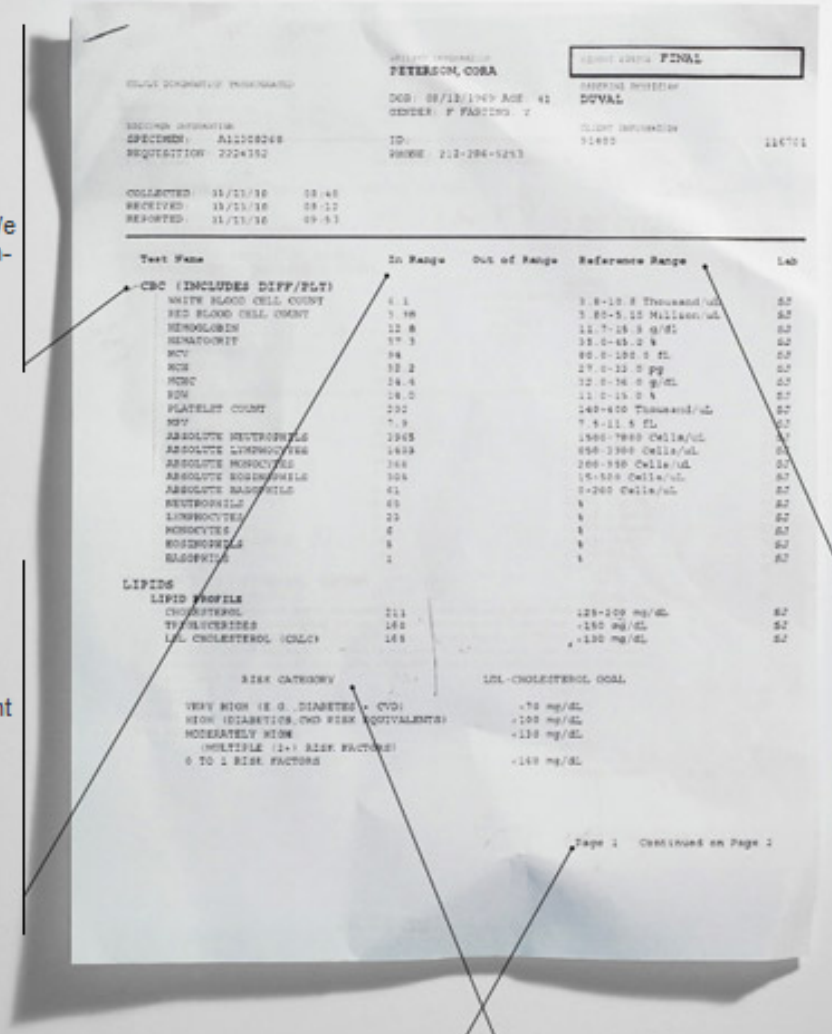
But we can try to help…

NYNEX was going to buy new workstation for their telephone operators

- Each second saved per call saves $3M/yr.
- User modeling discovered it would be 3% slower than original
- NYNEX did not buy workstation
- Prevented mistake, saved $2M/yr

Make It Colorfull
The ubiquity of color printers, email, and PDFs means there's no excuse not to use one of the most effective tools in information design. We adopt a familiar green-yellow-red palette to make it easier to identify what needs immediate attention.

Make It Clear
Doctors presumably know what high or low numbers might mean. But there's no reason not to augment the data with qualitative interpretations for all results above and below "normal." Are your numbers a little low or a lot low? We explain.



Make It Easy
Listing various "reference ranges" on the right of the page, separate from the results, forces the eye to scan back and forth as you evaluate the numbers. We add charts that depict clearly and succinctly where you fit along the spectrum.

Make It Simple
This printout is just the first of four dense pages. The original lists dozens of measurements, potentially too many for even a doctor to comprehend. We summarize the more esoteric tests, focus on the most relevant numbers, and add an overview at the top of the page.

Make It Relevant
Information is useless without explanation and a call to action. So we augment this patient's results with the relevant health risks and offer guidance about what the patient might do to improve her health.

Make It Colorfull
The ubiquity of color printers, email, and PDFs means there's no excuse not to use one of the most effective tools in information design. W adopt a familiar green yellow-red palette to make it easier to identify what needs immediate attention.

Make It Clear
Doctors presumably know what high or low numbers might mean. But there's no reason not to augme the data with qualitative interpretations for all results above and below "normal." Are your numbers a little low or a lot low? We explain.

Make It Simpl
This printout is j original lists doz many for even a the more esoter numbers, and a

Your Test Results

PATIENT: Cora Peterson

GENDER: Female
AGE: 41
DOB: August 12, 1969
ORDERED BY: Dr. Pico Duval

COLLECTED: November 13, 2010, 8:40 a.m.
RECEIVED: November 13, 2010, 8:12 p.m.

Your results at a glance:

- YOUR GLUCOSE LEVELS ARE TOO HIGH, WHICH INDICATES PREDIABETES.
- YOUR VITAMIN D LEVEL IS TOO LOW.
- YOUR CHOLESTEROL LEVELS ARE BORDERLINE HIGH.
- YOUR KIDNEY, LIVER, AND THYROID FUNCTION ARE ALL NORMAL.

Questions?

Contact the physician who ordered this test for further interpretation of the results:

DR. PICO DUVAL
(212) 555-5253

RESULTS:

Comprehensive Metabolic Panel

Glucose (fasting): 125 mg/dL

NORMAL	PREDIABETES	MAY INDICATE DIABETES
< 100	100 to 125	> 125

YOU: 125

Vitamin D

Total vitamin D: 22 ng/mL

DEFICIENCY	INSUFFICIENCY	SUFFICIENCY
< 20	20 to 30	31 to 100

YOU: 22

Complete Blood Cell Count (CBC) Normal for all 20 values, including white blood cell count (a high count can indicate infection).

Urinalysis Normal for all 20 values, including color, appearance, and protein.

Endocrinology Normal for TSH, which is an indicator of thyroid function, and for microalbumin and creatinine, measures of kidney function.

Chemistry Normal for iron, transferrin saturation, and ferritin. (Abnormal levels could indicate anemia, hepatitis, or other problems.)

Lipid Profile

Total cholesterol: 211 mg/dL

DESIRABLE	BORDERLINE	HIGH
< 200	200 to 240	> 240

YOU: 211

HDL ("good" cholesterol): 46 mg/dL

LOW	NORMAL
< 50	> 50

YOU: 46

LDL ("bad" cholesterol): 165 mg/dL

OPTIMAL	NEAR-OPTIMAL	BORDERLINE	HIGH	VERY HIGH
< 100	100 to 129	130 to 159	160 to 190	> 190

YOU: 165

Triglycerides: 160 mg/dL

OPTIMAL	BORDERLINE	HIGH	VERY HIGH
< 150	150 to 199	200 to 500	> 500

YOU: 160

WHAT DO YOUR RESULTS MEAN?

ELEVATED GLUCOSE: The relatively high amount of sugar in your blood is typical of a patient with prediabetes, which can double your risk for heart disease, depending on other risk factors. See *diabetes.org* for more information.

ELEVATED CHOLESTEROL: Your relatively high cholesterol (a waxy substance produced in the liver) may also increase your risk of heart disease, depending on other risk factors. See *heart.org* for more information.

LOWER LEVELS OF VITAMIN D: Your results suggest insufficient vitamin D, which promotes bone density and immune-system function. Women who fit your profile can become deficient within five months if no action is taken. Vitamin D deficiency may increase your risk for osteoporosis, high blood pressure, and certain cancers.

WHAT CAN YOU DO?

CONSIDER YOUR LIFESTYLE. If you are inactive, overweight, and/or a smoker, your risk for diabetes and heart disease rises. Exercising regularly (30 minutes/day) and reducing your weight by 5 to 10 percent lowers your risk of diabetes by 58 percent.

ADDRESS OTHER RISK FACTORS FOR DIABETES AND HEART DISEASE. Dietary changes, like reducing alcohol consumption and increasing fruit and vegetable intake, can decrease your cholesterol and triglyceride levels.

ASK YOUR DOCTOR ABOUT REDUCING YOUR HEART DISEASE RISK. Medications like statins can lower cholesterol and delay the onset of heart disease. Calculate your risk at *hp2010.nhlbihin.net/atpiii/calculator.asp*.

CONSIDER LIFESTYLE CHANGES TO CORRECT VITAMIN D INSUFFICIENCY. These include diet, vitamin D supplements, and more exposure to sunlight.

It Easy
various
ence ranges" on
ht of the page,
ate from the
, forces the eye
n back and forth
evaluate the
rs. We add
that depict
and succinctly
you fit along
ectrum.

and a call
sults with
ce about
ealth.

Summary

- Design is everywhere
- Design is hard
- Most everything is designed
  - Much of it poorly
- Economic ramifications
- Life and death in certain situations
- There is hope!

Agenda

1. Introductions
   - Instructor, You
2. Motivation – Bad Interface Designs
   - More bad designs: http://www.baddesigns.com/
3. Review of syllabus
4. What this course is about
5. Next class

Basic Course Info

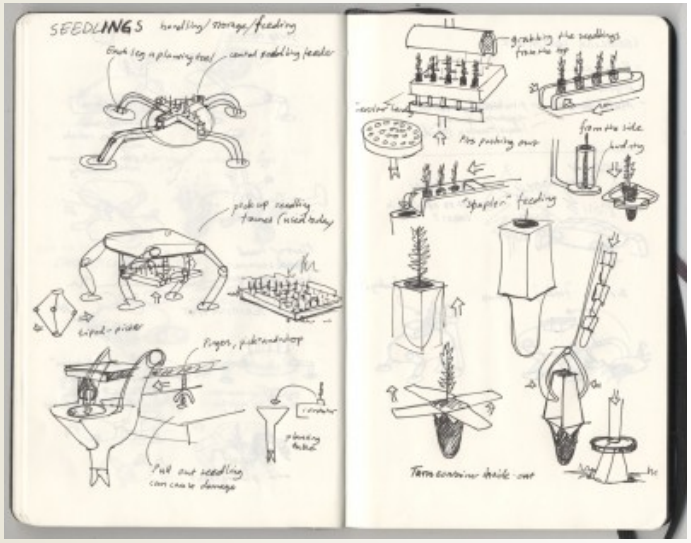
Website:

http://www.jedbrubaker.com/teaching/inf132-sp2013/

Mailing List:

inf132-S13@classes.uci.edu

Materials & Reading



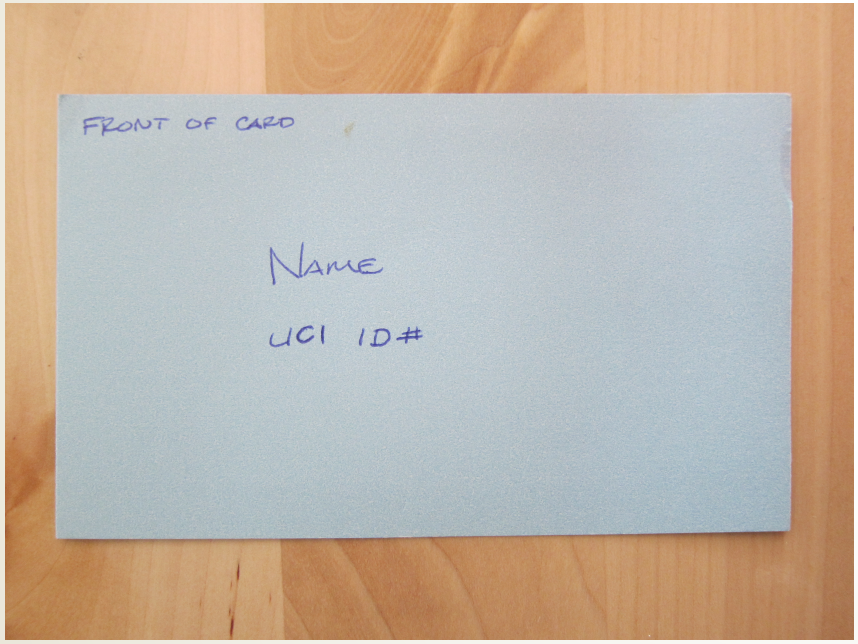
Assessment

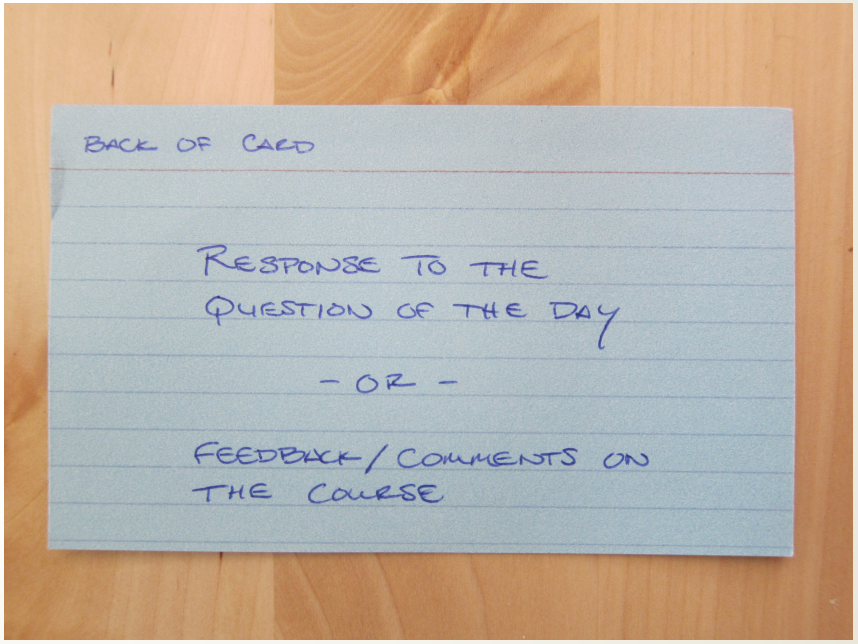
Component	Value
Class Facebook	5%
Attendance & Class Participation	15%
Individual Assignments	15%
Sketching Project	15%
Group Design Project	50%

Participation

1. Treat all with respect – be constructive in all discussions
2. Come to class prepared – read carefully prior to class meetings
3. Be an active listener – be attentive, be engaged, use in-class technology with discretion
4. Ask challenging questions
5. Comment, build on, or clarify others' contributions
6. Help your classmates use technologies
7. Post useful or interesting information to the class discussion list

Class Facebook & Attendance





Assignments

A1: Thinking About Design

A2: Look, Learn, Ask, Try

A3: Paper Prototype

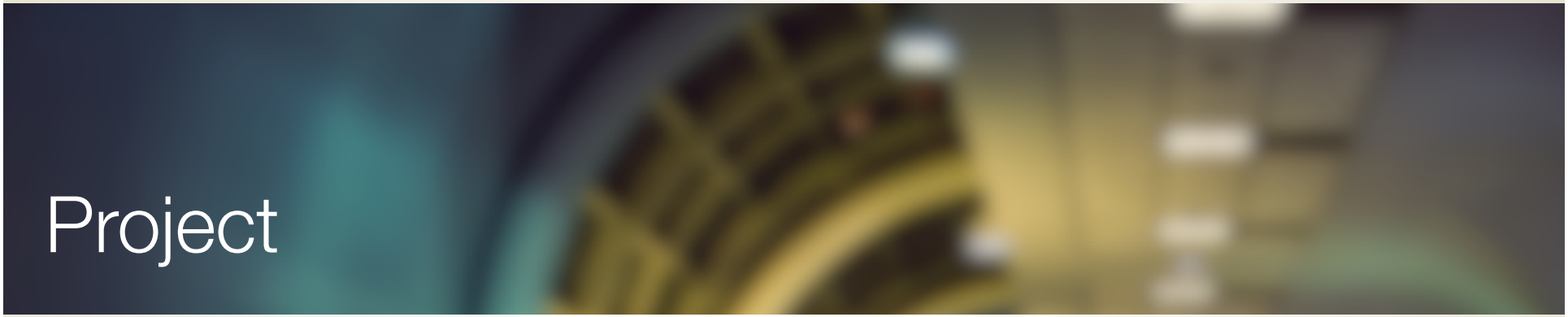
Sketching Project

Think about the products and things you use in everyday life

- They were all designed by someone!
- Designs are rarely perfect the first time

Sketching is an important skill in design

- Quantity + Practice increases ability
- Sketching is an *activity and thought process* and way of *communicating ideas* to others



Project

Group project enabling you to apply the lessons learned in this and other classes to a real problem

- Work in teams of 4
- Teams & project topics determined during week 2
- Class time will be provided for coordinating team efforts

Project Topics

- CHI 2013 Student Design Competition Theme
  - Empowering the Crowd: Changing Perspectives Through Collaboration
- Anything else you're interested in
- More guidance will be given later on

Project Components

Project Component	Value
P0: Design Question & Project Team Form	5%
P1: User Research	30%
P2: Ideation & Sketching	15%
P3: Prototyping	25%
P4: Design Spec & Evaluation	25%

Team Composition

4 members from a diverse team

- You get to choose the teams….
- …but I get some input

By one week from today, I want to see team formation

- At least two different “majors”
- Other kinds of diversity – gender, nationality, etc.

Policies

1. Academic integrity
2. Grading
3. Extensions
4. Late assignments
5. Accommodation
6. Quality of written assignments
7. Attendance
8. Food

My expectations of you…

1. Be here on time
2. Do the readings before class
3. Turn in everything on time
4. Speak up in class
5. Turn off cell phones, no texting
6. No email, IM; web with discression
7. Respect each other
8. There are no stupid questions/ideas

What you can expect of me…

- I will be here on time.
- Your assignments will be graded in a timely manner.
  - Typically within 1-2 weeks
- I will respond to email in a timely manner.
  - Typically within 36 hours; if not, PLEASE RESEND
- If I don't know the answer to your question, I will find out.
- I will treat you as professional colleagues.
- You will have an opportunity to evaluate both me and the course

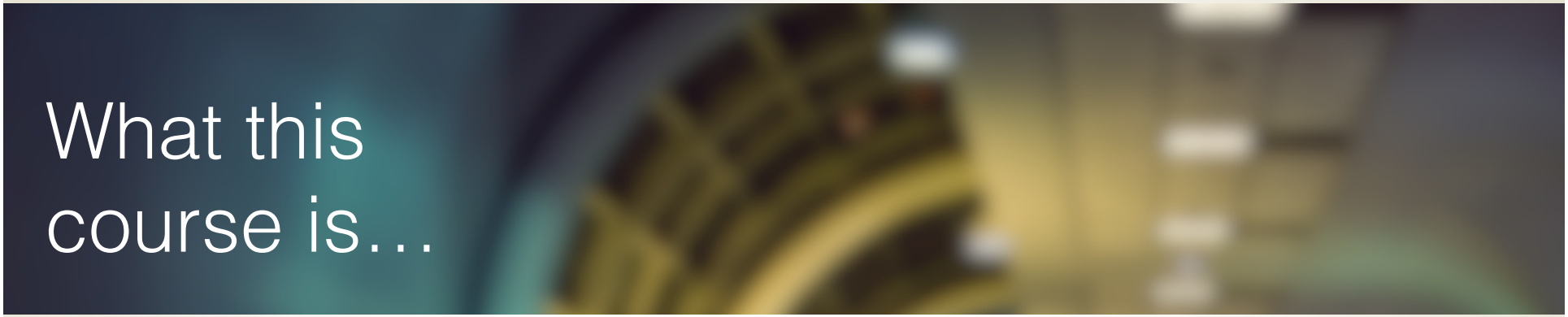
Course Topics

- Design Process, Fundamentals of Interaction
- User Research Methods
- Conveying User Research
- Sketching
- Prototyping
- Evaluation
- Current Trends & Issues

What this course isn't…

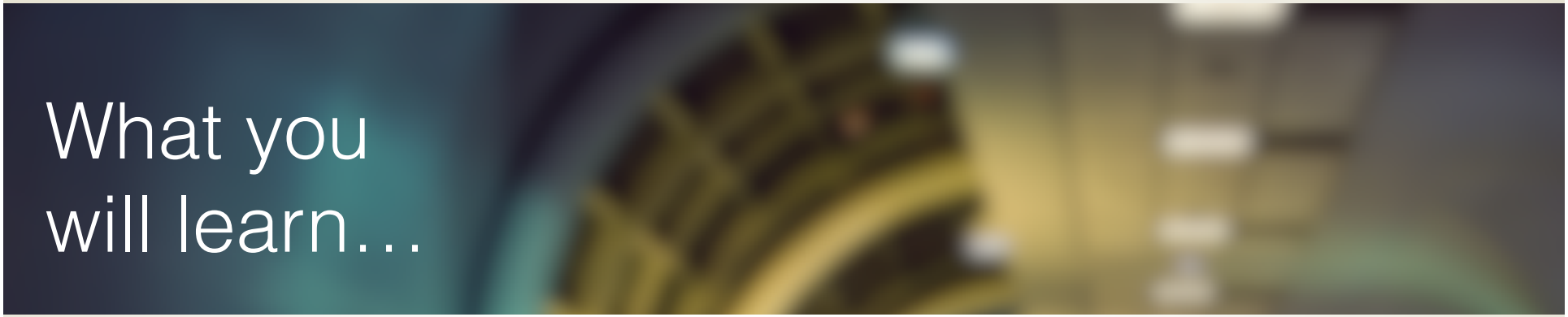
- This course isn't about technology
- It isn't (just) about user interfaces
- It isn't about "user friendly"
- It isn't about programming

What this course is…



- This course is about engaging users to design the human-computer *system*
- It is about *interaction*, not interface
- It is about user *success*
  - "User friendly" is not enough
- Mantra: "The user is not like me!"

What you will learn…



Design

- design process
- design methods
- creating useful and usable things!

Science

- conduct usability evaluations
- empirical methods, how to handle data

Art

- an eye for the good, the bad, and the ugly
- what to do about them

thanks.

questions?