User Interface Design

CSCI 3160 (CRN 13701)*

Fall 2010/2011

Meeting Time:	Tues. & Thurs. 10:05 – 11:25am
Meeting Room:	Life Sciences Centre room C208
Professor:	Jamie Blustein
	Office Hours: To Be Announced & by appointment
	Office: #223, Goldberg Computer Science Bldg.
	E-mail: ⟨jamie@cs.dal.ca⟩
	Telephone: +1 (902) 494-6104
Class website:	⟨URL:http://www.cs.dal.ca/~jamie/CS3160/⟩
Prerequisites†:	CSCI 2110 and INFX 2600
Co-requisite†:	CSCI 2140
Ante-requisite:	CSCI 4163
Required Textbook: (*either one*)	*The Resonant Interface: HCI Foundations for Interaction Design* by Steven Heim. © 2008. Published by Addison Wesley Higher Education (ISBN 978 0 321 37596 4). *User Interface Design and Evaluation* by Debbie Stone *et al.* © 2005. Published by Elsevier, Inc. as Morgan Kaufmann (ISBN 978 0 120 88436 0).
Recommended Textbook: (*any* edition)	*The Non-Designer's Design Book* by Robin Williams. Published by Peachpit Press (3rd ed. (2008), ISBN 978 0 321 53404 0)
Assessment Components:	Project 33%
	Test (21 October) 15%
	Final exam 40%
	Class participation, Assignments, Homework, Quizzes 12%

1   Class Content and Goals

'This class deals with concepts and techniques underlying the design of interactive systems. Both human factors and the technical methods of user interface design are covered. Students will learn how to apply various techniques through the design, creation, and testing of a prototype system.'

quoted from *Dalhousie University Calendar 2010/2011*

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*3 credit hours, undergraduate class, syllabus version 10 August 2010 (1a).

†According to *Dalhousie University Undergraduate Calendar 2010/2011.*

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1.1   Teaching Perspective

As the professor my first goal in this class is to raise awareness of the importance of design that accounts for users' physical, behavioural and information processing characteristics and requirements. Experience has shown that failure to deal with such characteristics can lead to wasted functionality, user frustration, inefficient practices, discomfort and error-prone activity.

You (the student) will develop the following basic skills:

- abstract task analysis
- design specification
- user testing

- critical evaluation of results of user testing
- working in small groups to develop a draft of a user interface for specific users with specific needs

A secondary goal is to teach you how to develop interfaces for software and hardware applications in which user experience is a central issue. I will use a hands-on approach to introduce techniques and tools to support a an iterative user centred software lifecycle consisting of

1. requirements gathering
2. design
3. evaluation
4. prototyping
5. testing
6. refinement

1.2   Expectations

My **rôle of your professor** is not to teach as such but to *help you to learn*. You are responsible for your own learning. I will explain and motivate the material. Grades will be based on my assessment of the quality of your work. You must *demonstrate* that you understand *and* can apply the material to succeed in this course. I will give you assignments that will help you to practice and improve your skills. I will try to make the assignments interesting and challenging.

Our **time in the classroom** will be used for lectures, discussions, quizzes, and work in groups.

The typical **student should** spend at least three hours studying for every hour of time in the class meetings. Some of that time will be preparation for lectures, some will be for review, and some will be time spent on the project and assignments. Some weeks more time will be required than in other weeks, but to best use your time I recommend that you spend at least some time *on the day of* a class meeting reviewing your notes and the material that was presented.

I expect you to attend each class meeting, to be on-time, and to be prepared for virtually all of the class meetings. I expect you to participate meaningfully in all of the activities in the classroom. I remind you that part of your grade is based on your participation in the intellectual atmosphere of inquiry in the class (see §2.2.4 on p. 7).

If you miss a class meeting, for any reason, you are responsible for the material covered, any assignments that were given, and any announcements that were made. I will try to make copies of lecture notes, etc. available to you on the CD-ROM you got at the start of the class, on my website, at the Killam library, or all three.

A **tentative list of topics** for us to study is in §3 on page 8. The list and order may change depending on what you (the students as a whole) have as background knowledge and what I feel is necessary for you to get the most out of the project.

Before I lecture about most topics I will assign **readings from the textbook or elsewhere** for you. You should consider that the readings listed in the schedule (§4, pp. 9*ff*) as assigned unless I inform you otherwise. *You will get the most benefit from the class if you complete the assigned reading and make notes before the class meets.* If you cannot complete the reading before the lecture and in-class discussion then you should do the reading carefully after the meeting has met to discuss the topic.

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1.3   Prerequisites

At a minimum I expect students to be familiar with modern computer systems, have some experience writing computer software (preferably interactive programs with a graphical interface), basic problem-solving ability, fluency in written and spoken English to be expected of a successful student after two full years of university education in English.

Formal prerequisites for this class are one of CSCI 2110 (Computer Science III), CSCI 2140 (Data and Knowledge Fundamentals) or INFX 2600 (Integrated Informatics Studies: Structures). Of those classes, only CSCI 2140 can be taken concurrent with this class.

The FCS requires a minimum grade of C^- to satisfy a pre-requisite[*].

Students with experience working in groups might find the collaborative project part of the class easier. An important part of the course is an introduction to concepts in user-centred design and usability engineering. Students with experience, and knowledge of, the fundamentals of software engineering should find the introduction of usability engineering lifecycle models easier than students without formal exposure to those concepts. Many projects that students select for this class are fundamentally about structuring, using, and managing information and knowledge, so it can be to the advantage of prospective students to have a practical understanding of databases and related issues.

Therefore the following courses are **recommended but not required**:

- CSCI 2132 (Software Development),

- CSCI 2140 (Data and Knowledge Fundamentals),

- CSCI 3130 (Introduction to Software Engineering), and

- INFX 2640 (Use and Design of Databases).

1.4   Help

There are many resources to help you in this class: me (your professor), the materials provided by your professor, the textbooks, the lab, certain websites, and the other students. In the end however the responsibility for learning is yours. Details of the various assignments will be discussed in meetings. All students are expected to do their own work!

1.4.1   Office Hours

The office hours listed on the front of this syllabus are times when I will be in or near my office. You may drop-in to discuss anything related to the class during those times. If you want to meet with me at some other times then it is best for you to make appointment, but you can also come to my office in case I have time available right then. You can make appointments in person (e.g., after class meetings or during my office hours), by e-mail or by telephone.

1.4.2   Materials in the Killam Library

Federal law and university policy forbid me from *directly* providing you with photocopies or digital copies of materials from textbooks. Several books (including the textbook by Stone et al.) are on reserve in the Killam Library. Some of the materials for this course are listed as being on reserve for CSCI 6606. All of those books are listed by your instructor's surname viz. BLUSTEIN but *not* by course name or number.

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[*]*Dalhousie University Undergraduate Calendar 2010/2011* p. 255

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2   Policies and Rules

Students are subject to all applicable University and Faculty policies. By your enrollment in this class beyond the first day you are deemed to be fully aware of all such obligations and responsibilities so most of them will not be repeated here.

2.1   General

Your attention is particularly drawn to some of the policies, rules, and regulations that apply to all undergraduate classes.

2.1.1   Grading Scale

I do not assign grades, rather I assess the quality of your work to determine how well you demonstrate your understanding of the topics of the class. The definitions of grade levels are in the Dalhousie University 2010/2011 Undergraduate Calendar. I am bound by Faculty of Computer Science regulations that do not allow more than 20% of the students to get $\mathcal{A}$-level grades other than in the most exceptional circumstances.

Regulations: FCS Council Meetings of 2004-03-23[*] and 2005-05-24.

2.1.2   Accommodation on the basis of disability

Any student wishing to discuss an accommodation on the basis of permanent or temporary disability is asked to register with the The Office of Student Accessibility & Accommodation in their Centre off the patio in front of the Killam library, by telephone at 494-2836, by e-mail at access@dal.ca, or by fax at 494-2042. That Service asked me to pass on their encouragement to students with disabilities 'to register as quickly as possible at the Student Accessibility Services if they want to receive academic accommodations.'

Your grade should reflect how much you can demonstrate you know and can apply about the topics of this class. If you have registered with that Office then I will be guided by their advice in deciding how you are asked to demonstrate that knowledge.

2.1.3   Plagiarism

Plagiarism will not be tolerated in any part of any work presented or submitted to the professor for any reason. You must do your own work and provide proper credit when quoting or paraphrasing the work of others. This policy applies equally to text, images, program code and algorithms. This policy applies to everything that you present or submit (in class meetings, in assignments, etc.) as part of this class. This policy applies to the whole of everything that you present or submit and every part of everything that you present or submit.

You may use any standard style guide you wish so long as you use it consistently. The reference desk at the Killam library or your professor can offer suggestions for style guides. Further details are in the §2.1.4 (on pp. 4*ff*).

2.1.4   Academic Integrity[†]

At Dalhousie University, we respect the values of academic integrity: honesty, trust, fairness, responsibility and respect. As a Dalhousie student and a member of the academic community, you are expected to abide by these values and the policies which enforce them. What is academic integrity?

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[*]'2004-03-23' is the ISO format for the date 23 March 2004.

[†]The section is adapted from the original version which is from the Faculty Resources section of Dalhousie University's Academic Integrity website (⟨URL:http://academicintegrity.dal.ca/Faculty%20Resources/index.php⟩) entitled *Academic Integrity Statement for Syllabus*. The original is dated 16 July 2008. It was copied on 25 September 2008.

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Academic integrity means ensuring that any work you submit is your own and that you have given appropriate acknowledgment to any sources that you consulted. 'Dalhousie University defines plagiarism as the submission or presentation of the work of another as if it were one's own. Plagiarism is considered a serious academic offence which may lead to the assignment of a failing grade, suspension or expulsion from the University.' (from Undergraduate Calendar (2010/2011) section on Intellectual Honesty, p. 22).

Some examples of plagiarism are:

- failure to attribute authorship when using a broad spectrum of sources such as written or oral work, computer codes/programs, artistic or architectural works, scientific projects, performances, web page designs, graphical representations, diagrams, videos, and images;

- downloading all or part of the work of another from the Internet and submitting as one's own

- the submission of an assignment or other work prepared by any person other than the individual claiming to be the author

- submitting work that has been completed through collaboration or previously submitted for another assignment without permission from your instructor

How is plagiarism detected?   Professors and TAs are highly skilled at recognizing discrepancies between writing styles, inappropriate citations, and obvious word-for-word copying. In addition, the Senate has affirmed the right of any instructor to require that student papers be submitted in both written and digital format, and to submit any paper to an originality check such as that performed by Turnitin.com for essay papers, and MOSS for software code. Copies of student essay papers checked by this process will be retained by Turnitin.com.

What happens if I am accused of plagiarism?   Instructors are required to forward any suspected cases of plagiarism to the Academic Integrity Officer (AIO) for the Faculty. You will be informed of the allegation by the AIO and a meeting will be convened. You may contact the Dalhousie Student Advocacy Service who will be able to assist you in preparing a defence. Until the case is resolved, your final grade will be 'PND'. If you are judged to have committed an offence, penalties may include a loss of credit, '$\mathcal{F}$' in a class, suspension or expulsion from the University, or even the revocation of a degree (for more information see Dalhousie's Academic Integrity website).

PND status came into effect 2009-01-21

How can I avoid plagiarism?

- Give appropriate credit to the sources used in all of your assignments

  - Use RefWorks to keep track of your research and edit and format bibliographies in the citation style required by the instructor — ⟨URL:`http://www.library.dal.ca/How/RefWorks`⟩

- If you are unsure about anything, contact your instructor or TA

- Prepare your assignments completely independently

- Make sure you understand Dalhousie's policies on academic integrity

Specifics for CSCI 3160:   You must do your own work and provide proper credit when quoting or paraphrasing the work of others. This policy applies equally to text, images, program code and algorithms. You may use any standard style guide you wish so long as you use it consistently.

The schedule and procedures in this syllabus are subject to change in the event of extenuating circumstances.

When citing webpages you must include the following details:

1. the address of the webpage,

2. the author of the webpage or a note that it is anonymous,

3. the date that the page was last updated or, if that is not available, the date that you read the page and a note to that effect.

Use of images (e.g. logos and icons) by someone else is essentially the same as quoting text. You must provide full citation information for any image that is not your own, even if the image is 'royalty free', you purchased rights to use it, or it includes the trademark symbol $^{'TM'}$ or registered trademark symbol '®'.

If you alter an image by someone else (for example by cropping or blurring it) or you combine two or more images to make a new image then you must identify the source of the original images (just as though you had used them without alteration) and note that you have modified, combined, or modified and combined the images.

☛ **In all circumstances** it is the student's responsibility to ensure that full credit is given and that it is clear whom is being credited for what.

2.1.5 Where can I turn for help?

Academic Integrity website — ⟨URL:http://academicintegrity.dal.ca⟩
   Links to policies, definitions, online tutorials, tips on citing and paraphrasing

Writing Centre — ⟨URL:http://writingcentre.dal.ca⟩
   Proofreading, writing styles, citations

Dalhousie Libraries — ⟨URL:http://www.library.dal.ca/How/Classes⟩
   Workshops, online tutorials, citation guides, Assignment Calculator, RefWorks

Dalhousie Regulations — ⟨URL:http://ug.cal.dal.ca/UREG.htm#12⟩
                        — ⟨URL:http://ug.cal.dal.ca/UREG.htm#13A⟩
   Definitions of 'intellectual honesty' and 'academic dishonesty', respectively

2.2 Regulations specific to this class

2.2.1 Late Policy

Since my comments on your work should influence the next stage of your project it is especially important that I receive your assignments on time.

Late work will be penalized by one grade level* per day (or part thereof) for the first day, and two grade levels per day after that.

Work which is due at the start of the class meeting period but was not submitted to me in-class by that time will be late. Even if your work is late you should attend that day's class meeting. Saturday and Sunday will count as one day for this policy. You may not receive credit for work that is more than three calendar days late.

2.2.2 Assignments and Homework

Multi-page homework submissions must be neatly stapled (or otherwise bound) and your name must appear on the top sheet. Homeworks that are not stapled and documented will not receive full marks. **When sending documents by e-mail** please use either Adobe's portable document format (PDF) or plain text.

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*One 'grade level' is the difference between an $\mathcal{A}^+$ (A-plus) and an $\mathcal{A}^\natural$ (plain A).

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2.2.3   Quizzes, Tests, and Exams

The project guide includes a calendar of milestones for the class, including dates of tests. Exams will be scheduled by the Faculty and University. Quizzes are unlikely to be announced in advance. The dates for the tests are shown on the first page of this syllabus.

There will be no make-ups for quizzes. The quizzes are intended mostly to give you and me and indication of how well you understand material recently covered. If there are three or more quizzes then your lowest quiz score will not be used in the computation of your grade.

No make-up tests will be given without my permission. You will not get my permission without either prior notice of absence, a detailed letter from your physician, or evidence of a serious family crisis that required your attention. Make-up exams and tests may be administered in an essay form.

Unless specifically noted the following conditions will apply to all of your tests and the examination:

1. Your answers will be graded for accuracy, clarity, and completeness. It follows that rambling or excessively lengthy answers cannot earn full marks.

2. Answers which do not clearly refer to specific principles will not earn full marks.

2.2.4   Participation[*]

Your participation will be assessed on your contributions to discussion during class meetings, i.e., your readiness and eagerness to engage actively in discussion, your display of familiarity with the class materials, *and* willingness to ask intelligent and helpful questions. Participation is assessed more by contribution to the intellectual atmosphere of inquiry than by the number of questions, answers or comments.

Uncollegial behaviour will reduce your grade.

Pre-test Review   One component of your participation will be based on the quality of the written questions and answers you submit as homework at the start of the class meeting preceding a test or exam. To help you prepare for tests, each student should submit two or three questions with answers that could appear on the forthcoming test. The class as a whole will take up some of the questions to help review the material prior to being tested on it.

Assessment Scale   Please be aware of the following scale:

$\mathcal{A}$-level	student always has something interesting to say or work through with the help of the other students and professor; needs little or no prodding to participate.
$\mathcal{B}$-level	student more often than not productively participates in discussion generated by others.
$\mathcal{C}$-level	student occasionally participates in discussion, usually with some prodding; does not always demonstrate a grounding in the material, perhaps the student has not read all of the assigned material.
$\mathcal{D}$ or $\mathcal{F}$	student does not participate in class discussion, for whatever reason.

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[*]The description of criteria for your participation grade is based on text used by A.-B. Graff of Nipissing U.

The schedule and procedures in this syllabus are subject to change in the event of extenuating circumstances.

3 Tentative Topic List

1. Introduction to HCI

   - what is HCI, why we need it
   - how it fits into software design

2. Introduction to usability engineering and project

   - Usability Engineering lifecycle models
   - Items of production

3. Models of usability

4. Basics properties of users

   - sensation, perception, cognition, and motor skills
   - memory, reasoning and information processing, expertise

5. Interaction styles

   - Menus,
   - Form fill-in,
   - Command line interfaces,
   - Direct manipulation,
   - Novel interfaces (e.g. haptic feedback)

6. Evaluation of user interfaces

   - Testing without users
     – Guidelines and heuristics
     – Scenarios and cognitive walkthroughs
   - Prototyping
     – Paper prototypes
     – Web prototypes
     – Code prototypes

7. Design methods

   - Formative evaluation
   - User and feature analysis
   - Task analysis
   - Prototyping

8. Potential Additional Topics

   - Design for Happiness (Pieter Desmet)
   - Activity Theory for HCI

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4   Tentative Lecture Schedule

05 July 2010 (1a)

This schedule is subject to change to meet the learning needs of the students. In general, we will follow this order although some of the usability engineering (UE) implementation lectures may move to earlier dates. Those lectures should occur before the project phases to which they are most relevant.

The following notation is used

Books

Heim	refers to the textbook by Steven Heim
Stone et al.	refers to the textbook by Debbie Stone and others
Williams	refers to the textbook by Robin Williams

Materials

$\odot : X \rightarrow Y$ refers to files on the CD-ROM.

To navigate to the appropriate file begin with the *Main Menu*, then go to the *Topics*, then go to the named topic ('X' in the example), then go the material or lecture named ('Y' in the example). *Note* that although much of the material on the CD-ROM are simple PDF files, some of the materials are lists of resources, and some may require access to the Internet. The icons in the menu indicate the file type.

Week 0*   09 Sept

Readings†

either $\begin{cases} \textit{Heim}\text{: Chapter 1} \\ \textit{Stone et al.}\text{: Chapter 1} \end{cases}$

Lecture slides and major topics

$\odot$: Introduction → Human Factors Basics

- Overview of human-computer interaction (human factors)
- Concept of usability

Assignment

Read project guide and syllabus

Week 1   14 & 16 Sept

Readings

1. either $\begin{cases} \textit{Heim}\text{: §2.1, §2.2} \\ \textit{Stone et al.}\text{: Ch. 5 (esp. §5.3), Ch. 9 (esp. §9.3), Ch. 10} \end{cases}$

2. *Some of Don Norman's User-Centred Terminology* (attached to P.O.E.T. lecture slide handout)

Lecture slides and major topics

1. $\odot$: Introduction → Usability (by Andrew Dillon)
   - Usability and why it is important
   - Process-Outcome-Affect model
2. $\odot$: Introduction → User Centered Design *(P.O.E.T.)*
   - User-Centred Design

Assignment

Homework #1 (*Lewis & Reiman*'s exercise 0.1)

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*The dates corresponding to week numbers are in the project guide.

†Students will get the most out of the lecture/discussions if they prepare by reading either Stone et al.'s *User Interface Design and Evaluation* or Heim's *The Resonant Interface before* the class meets.

The schedule and procedures in this syllabus are subject to change in the event of extenuating circumstances.

Week 2   21 & 23 Sept

Readings

either $\begin{cases} \textit{Heim}: §11.1–11.4, §6.5.4 \\ \textit{Stone et al.}: Ch.4 §1.3, Ch.5 §2 \end{cases}$

Lecture slides and major topics

1. same as previous week

2. video demonstrations of user interface projects from KMDI at UofT

3. $\odot$: Psychology Basics $\rightarrow$ Learning & Information Processing Part I

   - Basic psychological understanding of human cognition
   - Learning
   - Information Processing
   - Recall, Recognition
   - Expertise, Memory, Representation

Assignment

Homework #2 (*Lewis & Reiman*'s exercise 0.1 using UCD terms)

Reinforcement

Quiz

Week 3   28 & 30 Sept

Readings

1. either $\begin{cases} \textit{Heim}: Chapters 3 and 4 \\ \textit{Stone et al.}: Chapters 3, 4, 6, 7 (esp. §7.4) \end{cases}$

2. Brad Myers's 'Challenges of HCI design and implementation'
   in *interactions* v.I n.1 pp.73–83 (esp. sidebar)
   ⟨URL:http://doi.acm.org/10.1145/174800.174808⟩

Lecture slides and major topics

1. $\odot$: Usability Engineering $\rightarrow$ UE Lifecycle Models

   - usability engineering (UE)
   - UE lifecycle models
   - Principles of UI design

2. $\odot$: Usability Engineering $\rightarrow$ Early Analysis Activities

   - Needs analysis
   - User analysis
   - Risk analysis
   - Why no one should design for themselves

Project Phase User & Needs Analyses **due**

Assignment Group exercise: Create 'use scenario' for a product found online

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Week 4   05 & 07 Oct

Readings
    HTA handout*

Lecture slides and major topics $\odot$: Usability Engineering → Early Analysis Activities

- Task analysis
- Participatory design
- The design team & centrality
- Types of task analysis

Assignments
    In-class cognitive task analysis group exercise
    Group exercise: Apply prior 'use scenario' for informal assessment of a product found online

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Week 5   12 & 14 Oct

Readings

either *Heim*
or
Stone et al.

> *Heim*:
>
> - Chapter 6 and Appendix B (for standards and guidelines)
> - §2.3 (Interface Styles)
> - Ch. 5 (Design)
>   - We'll revisit §5.4 (about evaluation) later, so you can skim it for now
>   - Less important are Chapters 6, 10–14
>
> In *Stone et al.*:
>
> **Design guidance** Chapters 9, 10, 14, 15
>
> **Interface styles** Chapters 11, 13, 14, 16, 17, app. to Ch. 19
>
>   **less important** Chapers 12, 15, 18, 19 (read at least intros)

Lecture slides and major topics

1. $\odot$: Introduction → Standard & Guidelines (part I)
   - Standards, guidelines, principles, and theories
   - Types of standards and guidelines
   - Shneiderman's 8 Golden Rules
   - Overview of interaction styles
2. $\odot$: Usability Engineering → Design Documents
   - The design process
   - Concrete and conceptual design
   - Operators and actions

Project Phase Task Analysis **due**

Assignment Guidelines group assignment

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*The HTA handout is in the Killam library.

The schedule and procedures in this syllabus are subject to change in the event of extenuating circumstances.

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| Week 6 | 19 & 21 Oct |

Lecture slides and major topics

- catch-up
- review

Test

| Week 7 | 26 & 28 Oct |

Readings

(required)

(a) Walter Maner's *Formative Usability Evaluation*

(b) either $\begin{cases} \textit{Heim:} \\ \quad \text{Ch. 6 (esp. §6.6 – §6.10),} \\ \quad \text{Ch. 9,} \\ \quad \text{Scenario 10.2} \\ \textit{Stone et al.:} \\ \quad \text{Ch. 5 (esp. §5.2),} \\ \quad \text{Ch. 9 (esp. §9.3),} \\ \quad \text{Ch. 13 (esp. §13.2 – §13.5),} \\ \quad \text{Ch. 14} \end{cases}$

(optional) *Williams*: Chapter 1 and Chapters 2–6

Lecture slides and major topics

1. $\odot$: Psychology Basics → Gestalt & Design
   - Principles of human perception
   - Principles of visual design
   - Grid method
   - Colour
2. $\odot$: S/W Development → Testing
   - Summative and Formative testing
   - Discount (non-user) testing methods
     - expert review (especially with heuristics)
     - GOMS
     - cognitive walkthrough
   - Testing with users
     - measures
     - scripts and scenarios
     - types of errors and what they indicate about users' mental models
     - data collection protocols

Project Phase Design Document **due**

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$\boxed{\textbf{Week 8}}$ ──────────── 02 & 04 Nov

Readings

either *Heim*
or
Stone et al.

$\begin{cases} \end{cases}$
Heim:

- §5.3 – end of Ch. 5 (pp. 168–192)

Stone et al.:

- §6.6 (pp. 114–122)
- Case studies
    - **–** Ch. 15 from §15.4.3 (pp. 286–294)
    - **–** §19.5.1 (pp. 398–399)

Lecture slides and major topics

1. $\odot$: Usability Engineering → Prototyping

    - Lecture slides and discussion
    - Nielsen Norman Group Video: Paper Prototyping: A How-To Training Video [record at ⟨URL:http://www.worldcat.org/oclc/53887908⟩]

2. $\odot$: UI Styles → Overview

    - Overview of user interface styles

Project Phase Testing Strategy **due**

$\boxed{\textbf{Week 9}}$ ──────────── 09 ~~& 11~~ Nov

Readings

1. either

$\begin{cases} \end{cases}$
Heim:
Design guidance Chs. 5–7,
Interface styles Chs. 2, 10

Stone et al.:
Design guidance Chs. 9, 10, 14, 15
Interface styles

- Chs. 11, 13, 14, 16, 17
- Ch.19's appendices
- less important: intro and summary of Chs. 12, 15, 18, 19

2. $\odot$: UI Styles → Physical Principles

Lecture slides and major topics

1. $\odot$: UI Styles → Standard & Guidelines (part II)

    - Explanatory models and theories
    - Grammars
    - Shneiderman's O-A-I model

2. Certain Fundamental Physical Principles in HCI

Project Phase Due Private Demonstration to Professor

The schedule and procedures in this syllabus are subject to change in the event of extenuating circumstances.

Week 10 ———————————— 16 & 18 Nov

Lecture slides and major topics

- continued from previous week
- review

Week 11 ———————— 23 & 25 Nov

Readings To be announced / distributed

Lecture slides and major topics

$\odot$: Psychology Basics → Learning & Information Processing Part II

- Basic psychological understanding of human cognition
- Reasoning and the rôle of representation
- Information Processing

Project Phases Due Analysis of Testing Data

Week 12 —— 30 Nov &
02 Dec

Readings To be announced / distributed

Lecture slides and major topics

- Demonstration of 'final' version to professor and the other students
- To be announced

Project Phases Due

1. Project: Final portfolio
2. Project: Fairness evaluation

Week X 07 Dec

Lecture slides and major topics

1. catch-up
2. pre-exam review

The schedule and procedures in this syllabus are subject to change in the event of extenuating circumstances.

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