

DESIGNING USER INTERFACES

DALHOUSIE UNIVERSITY CSCI 3160*

FALL 2014/2015

Lecture (CRN 12215)

Time: Tues. & Thurs. 17:35–18:55
Room: CompSci Bldg., Auditorium

Tutorial/Laboratory (CRN 13408)

Time: Wed. 17:35–18:55
Room: Rowe Mgmt Bldg., Room 1014

Professor:

Jamie Blustein

Office Hours: Mon., Tues., & Wed., 2:00–3:00 p.m. *and by appointment*

Skype [jamieblustein](https://www.skype.com/people/jamieblustein)

E-mail: (2 addresses) { For urgent and personal matters use
<jamie@cs.dal.ca> *with* [CS3160] at the start of the Subject

{ For assignment submissions and other matters use[†]
<prof3160@cs.dal.ca> with *any* Subject

Class websites: <URL:<https://www.cs.dal.ca/~jamie/CS3160/>> and <URL:<https://courses.cs.dal.ca/>>

Prerequisites[‡]: CSCI 2132 or INFX 1616 or INFX 2690

Co-requisite[‡]: CSCI 2140 or CSCI 2141

Ante-requisite to: CSCI 4126, CSCI 4163, and CSCI 4169

Required

User Interface Design and Evaluation

Textbook:[§] by Debbie Stone *et al.* © 2005.

Published by Elsevier, Inc. as Morgan Kaufmann (ISBN 978 0 120 88436 0).

Recommended

The Non-Designer's Design Book by Robin Williams.

Textbook: Published by Peachpit Press

(*any* edition) (3rd ed. (2008), ISBN 978 0 321 53404 0)

Assessment Final exam 40%

Components: Project 30%

Test (23 October) 20%

Class participation,
Assignments[¶],
Homework, Quizzes } 10%

Syllabus and Course Updates:

The schedule and procedures in this syllabus are subject to change in the event of extenuating circumstances. Errors & omissions excepted. Updates to the syllabus or other materials will be posted to the webpage at <URL:<https://web.cs.dal.ca/~jamie/course/CS/3160/Updates/>>.

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
2014/2015*

The course introduces basic concepts and techniques for design and evaluation of interactive systems — both computerised and otherwise — featuring a strong focus on user centred design.

*3 credit hours, undergraduate class, syllabus version 05 September 2014 (1d).

[†]Both the TA(s) and the professor can send and receive messages from the <prof3160@cs.dal.ca> e-mail account.

[‡]According to *Dalhousie University Undergraduate Calendar 2014/2015*.

[§]Former versions of this course used *The Resonant Interface: HCI Foundations for Interaction Design* by Steven Heim (© 2008; Published by Addison Wesley Higher Education with ISBN 978 0 321 37596 4).

[¶]Assignments include, but are not limited to, the quality of the justification you make in your assessments you make of yourself and your peers in each phase of the project.

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 an iterative user centred software lifecycle consisting of

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

1.2 Tentative Topic List

- Introduction to HCI
 - what is HCI, why we need it
 - how it fits into software design
- Introduction to usability engineering and project
 - Usability Engineering lifecycle models
 - Items of production
- Models of usability
- Basics properties of users
 - sensation, perception, cognition, and motor skills
 - memory, reasoning and information processing, expertise
- Interaction styles
 - Menus,
 - Form fill-in,
 - Command line interfaces,
 - Direct manipulation,
 - Novel interfaces (e.g. haptic feedback)
- Evaluation of user interfaces
 - Testing without users
 - * Guidelines and heuristics
 - * Scenarios and cognitive walkthroughs
 - Prototyping
 - * Paper prototypes
 - * Web prototypes
 - * Code prototypes
- Design methods
 - Formative evaluation
 - User and feature analysis
 - Task analysis
 - Prototyping
- Potential Additional Topics
 - Design for Happiness (Pieter Desmet)
 - Activity Theory for HCI

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

1.3 Unofficial Learning Outcomes

The Faculty's Curriculum and Teaching committee has produced a non-binding list of 'student learning outcomes' for this course. The list from [URL:https://academics.cs.dal.ca/curriculum/manage/course/CSCI/3160](https://academics.cs.dal.ca/curriculum/manage/course/CSCI/3160) as it appeared on 13 August 2012 is below.

- Describe the importance of user interface design and usability in the application development process.
- Select appropriate interaction styles input choices, and navigation types for different interfaces and information spaces.
- Identify the basic properties of users and devices that must be considered when designing and implementing interactive applications.
- Recognize the different models of usability.
- Develop a user interface prototype that considers the basic properties of users and devices.
- Evaluate user interfaces without users.
- Design a user interface in agreement with the standard user interface guidelines and best practices.
- Identify and contrast different user interface design methods.
- Justify the design decisions made for appropriate interface types.
- Apply a user interface design method to develop a user interface prototype.
- Contrast the role of low and high fidelity prototypes in user design and evaluation.
- Construct low and high fidelity prototypes.

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 some work in groups (including student presentations). Our **laboratory/tutorial time** will be used for lectures and discussion about the project, working in groups, review of material from the classroom, quizzes, and work in groups (including student presentations).

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 and tutorial 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 §3.2.4 on page 9).

If you miss a class or tutorial 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 at one of the websites, at the Killam library, or both.

A **tentative list of topics** for us to study is in §1.2 on page 2; the **tenative schedule** is in §4 (pp. 10ff). The topics and their 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. 10ff) 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.

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

2.1 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 2132 (Software Development) or INFX 1616 (Applications of Computing) or INFX 2690 (Integrated Studies I) and the former CSCI 2140 (Data and Knowledge Fundamentals) or CSCI 2141 (Introduction to Database Systems). Of those classes, only CSCI 2141 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 2110 (Computer Science III)
- CSCI 3130 (Intro to Software Engineering)
- CSCI 2132 (Software Development)
- INFX 2640 (Use and Design of Databases)

2.2 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!

2.2.1 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. I can also be available to meet with you using Skype or GooglePlus.

2.2.2 Materials in the Killam Library

Several books (including the textbook by Stone et al.) and videos are on [reserve in the Killam Library](#). All of those materials should be listed by your instructor's surname viz. BLUSTEIN but not necessarily by course name or number.

*Dalhousie University Undergraduate Calendar 2014/2015.

2.2.3 Accommodations to Ensure Accessibility

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 the Advising and Access Services Centre (AASC) then I will be guided by their advice in deciding how you are asked to demonstrate that knowledge.

The AASC asked me to pass on the following statement to my students.

Students may request accommodation as a result of barriers experienced related to disability, religious obligation, or any characteristic protected under Canadian human rights legislation.

Students who require academic accommodation for either classroom participation or the writing of tests and exams should make their request to the Advising and Access Services Centre (AASC) prior to or at the outset of the regular academic year. Please visit www.dal.ca/access for more information and to obtain the *Request for Accommodation* form.

A note taker may be required as part of a student's accommodation. There is an honorarium of \$75/course/term (with some exceptions). If you are interested, please contact AASC at 494-2836 for more information or send an e-mail to notetaking@dal.ca.

Please note that your classroom may contain specialized accessible furniture and equipment. It is important that these items remain in the classroom, untouched, so that students who require their usage will be able to fully participate in the class.

2.2.4 Writing Centre

The Writing Centre has asked me to pass along the following information in the syllabus.

Writing expectations at university are higher than you will have experienced at high school (or if you are entering a master's or PhD program [sic], the expectations are higher than at lower levels). The Writing Centre is a Student Service academic unit that supports your writing development. Make an appointment to discuss your writing. Learning more about the writing process and discipline-specific practices and conventions will allow you to adapt more easily to your field of study.

<p>Dalhousie Writing Centre Main Location (Learning Commons, Main Floor)</p> <p>Monday & Tuesday 10–7 Wednesday & Thursday 10–9 Friday 10–4 Sunday 12–5</p> <p>Sexton (Room A108)</p> <p>Wednesday 6–9 pm Friday 9 am – 12 pm</p>	<p>Black Student Advising (4th Floor SUB)</p> <p>Monday 12–2</p> <p>Weldon Law Library (Basement – Room 114 F)</p> <p>Wednesday 6:00–8:00</p>
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Book an appointment: E-mail writingcentre@dal.ca or call 494-1963 or go to the Dalhousie homepage, log on to [MyDal](#), and select the “Learning Resources” tab. You’ll see the “Writing Centre” BOOK AN APPOINTMENT button.

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

3 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.

3.1 General

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

3.1.1 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 Dalhousie University's current Undergraduate Calendar. I am bound by Faculty of Computer Science regulations that do not allow more than 20% of the students to get *A*-level grades other than in the most exceptional circumstances.

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

3.1.2 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.

It is not just the ideas it is how they are presented that matter. If you find that someone else has an idea that you agree with, then you must acknowledge them for putting that idea forth before you have; and if you express the idea the same way that they did (in words or layout or an image for example) then you must acknowledge them as a quoted source. Furthermore, you must substantially add to what that person has expressed by extending or critiquing their idea, or by applying it to your particular context.

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 §3.1.3 (immediately below).

3.1.3 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?

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

*The section is adapted from the original version which is from the Faculty Resources section of Dalhousie University's Academic Integrity website (<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.

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, '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](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 '™' 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.

3.1.4 Where can I turn for help?

Academic Integrity website — [URL:http://academicintegrity.dal.ca](http://academicintegrity.dal.ca)

Links to policies, definitions, online tutorials, tips on citing and paraphrasing

Writing Centre — [URL:http://writingcentre.dal.ca](http://writingcentre.dal.ca)

Proofreading, writing styles, citations

Dalhousie Libraries — [URL:http://www.library.dal.ca/How/Classes](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](http://ug.cal.dal.ca/UREG.htm#12)

— [URL:http://ug.cal.dal.ca/UREG.htm#13A](http://ug.cal.dal.ca/UREG.htm#13A)

Definitions of 'intellectual honesty' and 'academic dishonesty', respectively

3.2 Regulations specific to this class

3.2.1 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.

Deadlines are at the beginning of class on days when we meet and noon otherwise. Work which is due at the start of the class meeting period but was not submitted to the TA in-class by that time will be late. ***Even if your work is late you should participate in that day's class meeting.***

Late work will be penalized by one grade point* per day (or part thereof) for the first day, and two grade levels per day after that. 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. Saturday and Sunday are each one calendar day.

*One 'grade point' is the difference between an \mathcal{A}^- (A-minus) and \mathcal{B}^+ (B-plus) for example.

3.2.2 Assignments and Homework

Most assignments are to be submitted through the ([URL:https://courses.cs.dal.ca/](https://courses.cs.dal.ca/)) website. **Multi-page hardcopy 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 or through the website** use either Adobe's portable document format (PDF) or plain text. I do not accept Microsoft Word documents.

3.2.3 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 test or 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 exam:

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.

3.2.4 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:

<i>A</i> -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.
<i>B</i> -level	student more often than not productively participates in discussion generated by others.
<i>C</i> -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.
<i>D</i> or <i>F</i>	student does not participate in class discussion, for whatever reason.

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

4 Tentative Lecture Schedule

05 September 2014 (1d)

Unless a change is announced through the updates webpage (at [URL:https://web.cs.dal.ca/~jamie/CS3160/Updates/](https://web.cs.dal.ca/~jamie/CS3160/Updates/)), the deadlines are in the guide (for the project) and the syllabus (for tests, and so on).

Readings for the lectures and in-class discussions are listed in this document;

Readings for the project are in its [guide](#);

Most of the readings that are not in the textbook are available from the website at courses.cs.dal.ca.

The following notation is used

Books

Stone et al. refers to the textbook by Debbie Stone and others

Williams refers to the textbook by Robin Williams

Materials

⊙ : $X \rightarrow Y$ refers to files in the [main website](#).

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 in the website 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.

September							October						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6				1	2	3	4
7	8	9	10	11	12	13	5	6	7	8	9	10	11
14	15	16	17	18	19	20	12	13	14	15	16	17	18
21	22	23	24	25	26	27	19	20	21	22	23	24	25
28	29	30					26	27	28	29	30	31	

⊙ : Introduction → Human Factor Basics

Week 0

04 Sept

Readings

1. syllabus
2. *Stone et al.*: Chapters 3, 4, 6, 7 (esp. §7.4)
3. project guide

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Week 1

9–11 Sept

Readings

- project guide
- Brad Myers's 'Challenges of HCI design and implementation' in *interactions* v.1 n.1 pp.73–83 (esp. sidebar)
<URL:<http://doi.acm.org/10.1145/174800.174808>>
- Stone *et al.*: Chapters 5, 9, 10 (esp. §5.3 & §9.3)
- *Some of Don Norman's User-Centred Terminology* (attached to P.O.E.T. lecture slide handout)

Lecture slides and major topics

⊙ : Introduction → Human Factors Basics

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

⊙ : Introduction → User Centered Design (*P.O.E.T.*)

- User-Centred Design
- Principles of UI design

Tutorial slides and major topics

⊙ : Usability Engineering → UE Lifecycle Models

- usability engineering (UE)
- UE lifecycle models

Week 2

16–18 Sept

Readings**For UCD**

- Stone *et al.*: Chapters 5, 9, 10 (esp. §5.3 & §9.3)
- *Some of Don Norman's User-Centred Terminology* (attached to P.O.E.T. lecture slide handout)

For User & Needs Analyses

- Stone *et al.*: Chapters 2, 3, 7 (esp. §7.4)
- At least one of the additional readings at <URL:courses.cs.dal.ca/>

Lecture slides and major topics⊙ : Introduction → User Centered Design (*P.O.E.T.*)

⊙ : Psychology Basics → Learning & Information Processing (Part I)

- Learning
- Information Processing
- Recall, Recognition
- Expertise, Memory, Representation

Tutorial slides and major topics

1. How to working successfully in groups
2. ⊙ : Usability Engineering → Early Analysis Activities

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

Week 3

23–25 Sept

Readings

- [☉ : User Interface Styles → Some Physical Principles](#) (at courses.cs.dal.ca)
- *Stone et al.*: Chapters 11, 13, 14, 16, 17, app. to Ch. 19 (pp.411-418)
- For tutorial:
 - *Stone et al.*: Chapters 4 and 6
 - At least two of the additional readings at URL:courses.cs.dal.ca/

Lecture slides and major topics

- [☉ : User Interface Styles → Some Types of UI Styles](#)
- [☉ : Introduction → Usability by Andrew Dillon](#)

Lab/Tutorial

- [☉ : Usability Engineering → Early Analysis Activities](#)
 - Task Analysis
 - Risk analysis
 - The Design Team
 - Participatory Design

Exercise/Assignment for 25 Sept. documentary film and Q&A

Project U&N Analyses due

Week 430 Sept –
02 Oct**Readings**

Stone et al.: Chapters 9 and 14

Lecture slides and major topics

- [☉ : User Interface Styles → Some Types of UI Styles](#)
- [☉ : Introduction → Standard & Guidelines I](#)
 - Standards, guidelines, principles, theories
 - Types of standards and guidelines
 - Shneiderman's 8 Golden Rules
 - Overview of interaction styles

Week 5

07–09 Oct

Readings

- *Stone et al.*: Chapters 14 and 15
- *Optional: Williams*: Chapters 1–6

Lecture slides and major topics

- [☉ : Psychology Basics → Gestalt & Design](#) [Part II]
 - Principles of visual design
 - Grid method

Lab/Tutorial

- [☉ : Usability Engineering → Design Documents](#)
 - The design process
 - Concrete and conceptual design
 - Operators and actions

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

⦿ : Misc → About Innovative Interfaces

- ⦿ : Misc → Samples of Team-built User Interface Projects from UofT's KMDI
- see Readings at (URL:courses.cs.dal.ca)

Project Cognitive Hierarchical Task Analysis due this week

Week 6

14–16 Oct

Readings Stone *et al.*: Chapters 20–23 and 26–27**Lecture slides and major topics**

⊙ : Usability Engineering → Formative Evaluation

⊙ : Usability Engineering → Prototyping

Nielsen Norman Group Video: Paper Prototyping: A How-To Training Video [record at [URL:http://www.worldcat.org/oclc/53887908](http://www.worldcat.org/oclc/53887908)]**Lab/Tutorial**

⊙ : Software Development → Testing

- Summative and Formative testing
- Discount (non-user) testing methods
 - expert review (esp. 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 Design Document (with CHTA) due this week**Week 7**

21–23 Oct

Assessment Midterm test this week

Preparation and Review:

1. Your questions *with answers* due Monday
2. Review of your questions on Tuesday

Project Testing Strategy due this week**Week 8**

28–30 Oct

Project Private Demonstrations (Wednesday & Thursday)

November						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Week 9

04–06 Nov

Readings TO BE ANNOUNCED

Lecture slides and major topics TO BE ANNOUNCED

Tutorial/Lab TO BE ANNOUNCED

Project

Week 10

13 Nov

Readings TO BE ANNOUNCED

Lecture slides and major topics

TO BE ANNOUNCED

Week 11

18–20 Nov

Readings TO BE ANNOUNCED

Lecture slides and major topics

TO BE ANNOUNCED

Project Analysis of testing due this week

Week 12

25–27 Nov

Readings TO BE ANNOUNCED

Lecture slides and major topics TO BE ANNOUNCED

Project

1. Presentations and Demonstrations this week
2. Final portfolios due this week

Week X

02 Dec

Review

Project Fairness evaluation due this week

Next week Optional project assessments requested by 10 December

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

5 Anonymous Feedback to Your Professor

To help your professor to help you with your learning I will occasionally ask you for feedback on my teaching and the course. The views you share with me during the course can help me to make adjustments to suit you (the current students).

Please answer the questions honestly and constructively. Feel free to be candid since your responses are anonymous.

5.1 Student Assessment of Test

Student Assessment of Test
Which test: 25 October 2012 Course & Time: CSCI 3160 (UI Design), Fall 2012-2013

Part A

- Did the content you expected to see appear on this test? yes / no
- Did you understand what the questions were asking? yes / no
- List the numbers of the questions you were unclear about:
- Are you satisfied with your responses to most of the test questions? yes / no
- List the number(s) of the question(s) that you weren't satisfied with your answers to:

Part B

Assign a percentage grade on the line after each of the following statements. The grade should reflect how well you believe the test accomplished each objective.

- Test corresponded to textbook content
- Test corresponded to class lectures
- Test related to discussion in class
- Test challenged you to think creatively
- Test included concepts studied in homework
- Test motivated you to question ideas you previously took for granted

Part C

- Grade the test — assign it a letter grade based on its form, content, and fairness:
- What grade do you think you earned on the test?

Continues on other side ...

Instrument adapted from Figure 1 of 'Examinations: Accounting the Positive' by M.Mullan-Pastirick and Olsson in Teaching College: Collected Readings for the New Instructor, Natt and Wiener (ed.), Magna Publications, Inc. (1995).

Part D

- Which part of the test most challenged your thinking? Explain why.
- Which part of the test least challenged your thinking? Explain why.
- If you were to take this test again with only one section remaining the same, which section would you want that to be? Explain why.
- If you were to take this test again and only one section could be changed, which section would you choose? Explain why.

Part E

Student Academic Success Services offers special workshops for critical reading skills and learning from lectures. The workshops require registration. Details are on the WWW at: <http://sds.student.srv.cas.dal.ca/Workshops/>, by telephone at 484-3077 or in person at the office in the Kilam Library's Learning Commons (room G28).

Would you like your professor to arrange a special short workshop or presentation during class time on these topics?

critical reading skills	learning from lectures
<input type="checkbox"/> yes / <input type="checkbox"/> no	<input type="checkbox"/> yes / <input type="checkbox"/> no

The post-test questionnaire will be distributed with the test but you can submit it during the class after the test. Unlike the test, the questionnaire is anonymous.

5.2 Mid-semester Teaching Feedback

Today's Date: _____, _____, 2012 Course: CSCI 3160 (UI Design) / Fall 2012-2013

Mid-semester Teaching Assessment

Please answer these questions carefully. They will help your professor to help you better. If you need more room to explain something you may include an extra page(s) of your own.

This is anonymous — do not include your name or ID #!

- About your time in the classroom**
 - The explanations in class are very helpful
 - The atmosphere for asking questions in class is very good
 - The group work during class is very helpful
 - The pace of the class is very fast
 - I attend _____ of the classes all
- About the methods of evaluation**
 - The amount/length of assignments is too light too heavy
 - The assignments are helpful challenging interesting fun Check all that apply
 - The quizzes (and test) are very easy very hard
- Office hours**
 - If you have not seen the professor during office hours, why not? Check all that apply
 - Some conflict haven't needed to just don't want to scared to
 - If you have seen the professor during office hours, please rate your experience very helpful helpful confusing
- About your learning experience**

So far I am understanding the material not at all very well
- Overall so far, this class is _____** very bad excellent

Continues overleaf

- Something I do not quite understand yet is ...
- What new things do you think the professor should start doing to help you learn the material better?
- What things does the professor do in class that help you to learn the material and that he should continue doing?
- Are there any things that the professor does in class that he should stop doing?

****** Once you have completed this form please print it, and bring the hardcopy to class. Do not include your name or identification number.

I have made more comments on the attached sheet(s)

The questionnaire will be distributed by e-mail. Please complete it using a PDF reader (such as Adobe® Reader®), then print the file with your responses and bring it to class.