

# Course Syllabus

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## Course Information

ACN 6341.0W1  
Human-Computer Interaction 1  
Fall 2016

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## Professor Contact Information

Name: Erika Orrick  
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Email: erika.orrick@utdallas.edu  
Office Hours: By Appointment

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## Course Prerequisites, Corequisites, and/or Other Restrictions

none

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## Course Description

Methods and principles of human-computer interaction (HCI), user-centered design (UCD), and usability evaluation. Provides broad overview of HCI and how HCI informs UCD processes throughout product development lifecycle. (3-0) T

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## Student Learning Objectives/Outcomes

After completing this course, students should have accomplished the following course objectives:

1. Gain an initial understanding of human factors theory and research.
2. Obtain understanding of fundamentals of human-computer interaction (HCI) theory and research. Recognize the impact of system design on users' attitudes and behaviors.
3. Become familiar with fundamentals of User Centered Design (UCD) processes for the purposes of employing UCD processes in the analysis and design of systems.
4. Exhibit critical thinking skills and creative design skills in HCI research area.

## Required Textbooks and Materials

Johnson, J. *Designing with the Mind in Mind*, 2 ed. Morgan Kaufman. 2014. ISBN 0124079148.  
Readings as posted on eLearning

## Suggested Course Materials

Norman, D. *The Design of Everyday Things*. Basic Books. 2002. ISBN 065067107.

## Technical Requirements

At a minimum, students should have access to a computer with a modern web browser and typical office productivity software (e.g. Microsoft Office, OpenOffice, Apple iWork.) Students will need a microphone and speakers or a headset in order to participate in the interactive sessions. More advanced tools such as a graphics program and a screen capture tool are suggested, but not required.

A digital camera (camera phone is acceptable) is useful but not required.

Please review additional important technical requirements

<http://www.utdallas.edu/elearning/students/getting-started.html#techreqs> on the Getting Started with eLearning webpage <http://www.utdallas.edu/elearning/students/getting-started.html>.

### **Course Access and Navigation**

The course can be accessed using the UT Dallas NetID account at: <https://elearning.utdallas.edu>. Please see the course access and navigation <http://www.utdallas.edu/elearning/students/getting-started.html#courseaccessandnav> section of the site for more information.

To become familiar with the eLearning tool, please see the Student eLearning Tutorials

<http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html>.

UT Dallas provides eLearning technical support 24 hours a day/7 days a week. The eLearning Support Center <http://www.utdallas.edu/elearninghelp> services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

### **Communication**

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the eLearning Tutorials webpage

<http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html> for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

### **Distance Learning Student Resources**

Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student AccessAbility, and many others. Please see the eLearning Current Students page <http://www.utdallas.edu/elearning/students/cstudents.htm> for details.

### **Server Unavailability or Other Technical Difficulties**

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online eLearning Help Desk

<http://www.utdallas.edu/elearninghelp>. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

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## Assignments & Academic Calendar

This course is composed of seven modules and is designed to take you the entire semester to complete. Each module will span two weeks and you are expected to complete each module within the scheduled weeks, although you may work on the module at any time during those weeks. All assignments, including quizzes and discussion board items, will be due the last Sunday of the module.

Once I have started posted lessons ahead of the assigned date, you are welcome to work ahead.

(Note: DMM denotes *Designing for the Mind in Mind*)

Mod.	Dates	Module Theme/Example Topics	Reading Assignments
1	Aug 22- Sep 4	<b>Overview and Introduction to HCI</b> Introduction to class Definitions Usability Engineering/ UX Process Overview	<b>DMM Ch. 1</b>
2	Sep 5- Sep 18	<b>Human Perceptual Capabilities</b> Vision Hearing Touch	<b>DMM Ch. 4-5</b> <b>DMM Ch. 7</b> <b>DMM Ch. 2-3</b>
3	Sep 19- Oct 2	<b>Human Cognitive &amp; Physical Capabilities</b> Attention/Memory Learning Interface metaphors Physical constraints	<b>DMM Ch. 7-8</b> <b>DMM Ch. 9-11</b> <b>DMM Ch. 13-14</b>
	Oct 3-9	<b>Midterm (online)</b>	
4	Oct 10- Oct 23	<b>Heuristic Evaluation and Usability Testing</b>	<b>Readings as Posted</b>
5	Oct 24- Nov 6	<b>Interaction Design</b>	<b>Readings as Posted</b>
6	Nov 7-20	<b>User Research</b>	<b>Readings as Posted</b>
7	Nov 21- Dec 7	<b>Computer Systems and Interfaces</b>	<b>Readings as Posted</b>
	Dec 9-13	<b>Final exam (online)</b>	

### DESIGN JOURNAL

Each module, you will participate in that module's discussion board about a design you have seen "in the wild." I will indicate each time as to what type of design you are looking for.

In your post, talk about what problem is being solved (user enjoyment is an acceptable answer), what the creator did correctly or incorrectly (using HCI principles you have learned thus far), and what you would change.

These entries should be a paragraph or two long. Please post them to the class eLearning site. If you have drawn something by hand, scanning to pdf is acceptable for posting.

Additionally, you are expected to provide feedback on at least one classmate's post each assignment. These are designed to get you to start thinking critically about both design as both form and function but also how to critique design in a constructive manner.

**Your design journal posts are due on the last Sunday of the module by midnight and your response to at least one classmate is due by the following Tuesday.**

### MODULE QUIZZES

For each module, there will be a short module quiz to test your understanding of the concepts of that module. You are expected to complete each of these.

**The module quizzes are due the last Sunday of the module at midnight. The dates are listed in the syllabus above.**

## **HOMEWORK ASSIGNMENTS**

There will be three or four homework assignments. These assignments will be posted online and will be related to the readings and lectures.

Look on eLearning for due dates.

## **RESEARCH REVIEW**

You are responsible for a close reading and critique of a research article from an academic journal and will provide a written report with their findings. You will choose this reading from something aside from our required readings and get it approved by me. The review should be 3-5 pages in length.

In your paper, you are to describe the following

- what is the point of the paper, in your own words, including experimental method and results found

- what is interesting about the research?

- if there were any problems with the experiment that might have affected the results, what were they?

- where would you go next with this research if you were given the opportunity and/or tell me how you could see this being used.

The list below contains some suggested journals. If you choose one not on this list, please check with me for approval.

- ACM Transactions on Computer-Human Interaction

- CHI Conference Proceedings

- Computers in Human Behavior

- Communications of the ACM

- Displays

- Human-Computer Interaction

- Human Factors

- International Journal of Human-Computer Interaction

- International Journal of Man-Machine Studies

- Proceedings of Human Factors and Ergonomics Society

**The research review is due by midnight on Wednesday, December 2.**

## **EXAMS**

You will have two exams consisting of largely of essay questions covering the topics covered both in the reading and in lecture.

These exams will be open book/note and will be conducted online using eLearning.

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## Grading Policy

Grading is based on a set of a priori criteria: 90% correct for As, 80% for Bs, 70% for Cs, and 60% for Ds. In case we find that our assignments and exams were unusually difficult we may relax these criteria. Grades will be based on the total number of points across the course.

Assignments and exams will be scored as follows:

- 20% class participation (discussion board and weekly quizzes)
  - 15% homework
  - 15% article review
  - 20% midterm exam
  - 30% final exam
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## Course & Instructor Policies

DON'T MISS AN EXAM! Make-up exams will be given only if: (a) you were seriously ill and have verifiable documentation from a physician, or (b) you were detained during the time period of the exam, or (c) you made arrangements prior to the exam to attend an urgent family affair (e.g., funeral). In any of these cases, you must notify me in advance of the scheduled time of the exam (call and leave a voice-mail message if you can do nothing else). Otherwise, you will receive an F. It is the student's responsibility to make sure that an exam is made up within one week of the scheduled time.

LATE WORK will be penalized 10% for each day late. After 3 days, it will not be accepted without a valid university-approved excuse.

EXTRA CREDIT may be available on each exam but is not guaranteed.

Your PARTICIPATION grade is dependent on your activity in the discussion board.

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## Student Resources

Access to many University resources are available to students. Some sources of interest include:

**UTD Distance Learning:** <http://www.utdallas.edu/distancelearning/students>

**McDermott Library:** Distance Learners (UTD students who live outside the boundaries of Collin, Dallas, Denton, Rockwall, or Tarrant counties) will need a UTD-ID number to access all of the library's electronic resources (reserves, journal articles, ebooks, interlibrary loan) from off campus. For UTD students living within those counties who are taking online courses, a Comet Card is required to check out materials at the McDermott Library. For more information on library resources go to <http://www.utdallas.edu/distancelearning/students/libraries.html>

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## Comet Creed

*This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:*

*“As a Comet, I pledge honesty, integrity, and service in all that I do.”*

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## **UT Dallas Syllabus Policies and Procedures**

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the professor.***