
Course Title: Introduction to Human Computer Interaction**Course Number: HCI101****Course Prerequisites: none****Credit Hours: 3****General Studies Credits: 0**

I. Course Description:

This course will cover some of the core concepts in HCI relating to users and technology use. These include the notions of the interface, interactivity and interaction. Traditional ways of characterizing these aspects of the relationship between technology and users will also be examined in terms of various usability aspects.

II. Course Goal

The course analyzes and critically evaluates our interaction with computational artifacts from the human perspective. It also investigates human centered models to design for usability, utility, satisfaction, and communication behaviors in human computer interaction.

III. Program Objectives (Core, General Education, Degree):

The outcomes of this course are aligned and developed to support the following Program Objectives. Program Objectives may be supported by multiple courses.

1. General Education

Objective 1: Students employ a diverse set of thinking approaches in appropriate situational contexts to produce successful outcomes.

Objective 2: Students are able to effectively develop, execute, communicate and give verbal presentations in support of project and initiatives.

2. HCI

Contributes towards Objective 1: Investigate emerging human computer interfaces and paradigms and implement them into prototype and products with original interfaces and interactions for web, PC, mobile, handheld, or next generation platforms including all the production materials required in a complete production pipeline.

3. Web and Social Media

Contributes towards Objective 3: Demonstrate customer-centered design, usability, accessibility and localization deployed across multiple platforms and devices.

IV. Performance Objectives:

Upon successful completion of this course, the student will have demonstrated competency in the following objectives:

1. Identify and describe various HCI methodologies, including input and interaction types
2. Articulate the co-dependency of the user and the technology in an HCI system
3. Learn and reflect on key concepts, theories, processes, and frameworks in interaction design, and apply this knowledge to an interactive design process.
4. Analyze how the study of interface / Interactivity / interaction influences the design of an HCI system
5. Apply some user-centered design methods to practical design problems
6. Develop basic prototypes with a range of interaction styles and technologies
7. Apply knowledge and understanding of the interaction design examples in order to analyze their situations and critically evaluate them in oral and written discussions

V. Standardized Assessments:

1. Week 7: Lecture, Discussion and Screening
2. Week 11: Research and Discussion – how to conduct a user study
3. Week 2: Discussion on the importance of design; Week 3: screening of David Carson and discussion

4. Week 5: Assignment – mobile technologies
5. Week 3: Assignment: name passport; Week 4: Assignment: inspirational design
6. Week 8: Assignment; Prototyping; Week 12: Final Project: prototyping the final project
7. Week 15: Presentations and critique of the final project

VI. Performance Evaluation:

Successful completion of this course requires students to obtain an overall cumulative grade of 60% or higher. Rating of the student's success in completing the stated objectives of this course will be based on the following percentiles:

1. Final Project: 40%
2. Individual assignments: 30%
3. Readings: 20%
4. Discussions: 10%

VII. Teaching Strategies:

The University of Advancing Technology actively utilizes the Year-Round Balanced Learning (YRBL) model for addressing different learning styles. The YRBL model consists of five delivery methods that include modified lecture, tutorial teaching, group recollection, student teachback and discovery learning. Students will engage in both synchronous learning activities in regular class periods and asynchronous (possibly online) activities. Group activities and team building are strongly encouraged within the synchronous and asynchronous environments.

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VIII. Instructional Materials and References: Recommended:

1. "Human-Computer Interaction 3/E", Dix, Prentice Hall
2. "Smart Things: Ubiquitous Computing User Experience Design, Mike Kuniavsky"
3. "The UX Book: Process and Guidelines for Ensuring a Quality User Experience", Rex Harston and Pardha Pyla
4. "Design of Everyday Things", Donald Norman
5. "Designing for the Digital Age: How to Create Human-Centered Products and Services", Kim Goodwin and Alan Cooper
6. "Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications", Third Edition, Julie Jacko

IX. Credit Award Rationale:

Course Credit Award: 3 Credits

Class Hours (In Class, Asynchronous):

- Term: 45 Hours
 - 30 hours synchronous (in class)
 - 15 hours asynchronous
- Week: 3 Hours
 - 2 hours synchronous (in class)
 - 1 hour asynchronous

Outside of Class (Reading, Research, Homework, Assignments, Projects, etc):

- Term: 90 Hours
- Week: 6 Hours

X. Course Outline:

INTRODUCTION TO HUMAN COMPUTER INTERACTION

Week 1

- *Weekly Overview: introduction to the course; introduction to HCI*

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Course Overview and outcomes	In Class, 1 hour	Modified Lecture Discovery Learning	Knowledge, Comprehension			
PPT Lecture: Introduction to HCI and Overview	In Class, 1 Hour	Modified Lecture Discovery Learning	Knowledge, Comprehension		HCI101-03	
Introductions: instructor and students	Asynchronous 1/2 hour	Discovery Learning	Knowledge			

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Research two examples of HCI	2 hours	NA	Knowledge, Comprehension		HCI101-07	
Discussion of the findings	1hr	NA	Analysis		HCI101-07	
Readings: textbook – Ch. 1	3hrs	NA	Knowledge, Comprehension		HCI101-03	

Week 2

- *Weekly Overview: History of HCI*

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
PPT Lecture: History of HCI	In Class, 1 Hour	Modified Lecture, Discovery Learning	Knowledge, Comprehension		HCI101-03	
Presentations of your students' HCI examples	In Class, 1 Hours	Teach Back, Discovery	Analysis		HCI101-02	

Screening of the video: HCI	In Class, 1hr	Learning Discovery Learning	Knowledge, Comprehension	HCI101-03
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Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assignment: choose one example of the old HCI technologies to summarize in an essay format	3 hours	NA	Analysis		HCI101-01 HCI101-07	
Discussion: historical perspectives vs. today	1 hours	NA	Analysis, Evaluation		HCI101-03	
Reading for Week 3: textbook	2hrs	NA	Knowledge, Comprehension		HCI101-03 HCI101-07	

Week 3

- **Weekly Overview: Overview of Design**

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discuss the assignment	In Class, 1 Hour	Discovery Learning	Knowledge, Comprehension		HCI101-03 HCI101-07	
PPT Lecture: Overview of Design	In Class, 1 Hour	Discovery Learning, Modified Lecture	Knowledge		HCI101-05	
Screening of the video	Asynchronous, 1hr	Discovery Learning	Knowledge, Comprehension		HCI101-04	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assignment: name passport	4hrs		Application		HCI101-05 HCI101-04 HCI101-06	
Discussion: the importance of	1hr		Knowledge,		HCI101-03	

HCI in the design process			Analysis		HCI101-07	
Reading: textbook	1hr		Knowledge, Comprehension		HCI101-03	

Week 4

- Weekly Overview: HCI is Design; designing for people*

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of the passport assignment	In Class, 1 Hour	Discovery Learning Analysis	Application, Analysis		HCI101-05	
PPT Lecture: HCI is Design	In Class, 1 Hour	Modified Lecture, Discovery Learning	Knowledge, Comprehension Analysis		HCI101-02 HCI101-03	
Screening: siftables: the smart blocks demo	Asynchronous 1Hour	Teach Back	Analysis and Synthesis		HCI101-01 HCI101-02	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussion: design	1 hr		Synthesis		HCI101-02 HCI101-04	
Assignment: inspirational design (design exercise)	4 hrs		Knowledge, Analysis		HCI101-02 HCI101-04	
Readings: textbook	1 hr		Knowledge, Comprehension		HCI101-03	

Week 5

- Weekly Overview: Mobile technologies and HCI*

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of the	In Class	Discovery Learning	Evaluation,		HCI101-05	

inspirational design assignment	1 hr	Analysis	Analysis	HCI101-07
PPT Lecture: Mobile Technologies and HCI	In Class, 2 Hours	Discovery Learning, Modified Lecture	Knowledge, Comprehension	HCI101-01 HCI101-03

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assignment: mobile phones	4hrs		Comprehension, Knowledge,		HCI101-03 HCI101-05 HCI101-06	
Reading for week 6: textbook	1hr		Comprehension, Knowledge		HCI101-02 HCI101-03	
Discussion: mobile technologies	1hr		Evaluation		HCI101-01 HCI101-07	

Week 6

- **Weekly Overview: Design of Mobile Technologies**

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of the mobile phone assignment	In Class, 1hr	Discovery Learning	Knowledge, Analysis		HCI101-03 HCI101-05	
Screening: video: design of mobile technologies	In Class, 1hr	Discovery Learning	Knowledge, Analysis		HCI101-01	
Screening of the video: mobile phones	Asynchronous, 1hr	Discovery Learning	Knowledge, Analysis		HCI101-01	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussion: the future of mobile technologies	2 hrs		Analysis		HCI101-03	
Readings: textbook, Online assigned articles about	4hrs		Comprehension, Knowledge		HCI101-01	

input devices

Week 7

Weekly Overview: input

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
PPT Lecture: Input	In Class, 1 Hour	Discovery Learning, Modified Lecture,	Comprehension, Knowledge		HCI101-01	
Discussions of readings from Bill Mogridge's Book (mouse)	In Class 1Hour	Discovery Learning,	Analysis		HCI101-01 HCI101-07 HCI101-02	
Screening of the Zerkin Glove video	Asynchronous, 1hr	Discovery Learning	Analysis		HCI101-01 HCI101-02	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Research other input devices	2hrs		Knowledge, Analysis		HCI101-01	
Discussion: input devices	2hrs		Evaluation		HCI101-02 HCI101-07	
Assigned online readings	2hrs		Comprehension, Knowledge		HCI101-02	

Week 8

Weekly Overview: Prototyping and heuristic analysis

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussion of assigned online readings	In Class, 1 Hour	Discovery Learning	Evaluation		HCI101-02	
PPT Lecture: Prototyping	In-Class 1hr	Discovery Learning Modified Lecture	Knowledge, Comprehension		HCI101-03	

Discussion of 10 heuristic principles by Nielsen	In Class, 1hr	Discovery Learning Analysis	Knowledge, Comprehension	HCI101-02
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Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assignment: prototyping	4hrs		Application		HCI101-06	
Assigned online readings	2hrs		Comprehension, Knowledge		HCI101-03	
Discussion: the value of prototyping	1hrs		Evaluation		HCI101-03	

Week 9

Weekly Overview: Visual design

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of prototyping assignment	In Class, 1 Hour	Discovery Learning, Teach Back	Evaluation		HCI101-06	
PPT Lecture: visual design	In Class, 2hours	Discovery Learning, Modified Lecture	Comprehension, Knowledge		HCI101-02	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Reading: online- multiscale design	3hrs		Comprehension, Knowledge		HCI101-02	
Research well designed websites	2hrs		Knowledge, Analysis		HCI101-02	
Discussion: the importance of visual design in HCI	1hr		Analysis		HCI101-02 HCI101-07	

Week 10

Weekly Overview: Designing for diverse contexts; software tools

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussions of the online reading	In Class, 1 Hour	Discovery Learning	Knowledge, Analysis		HCI101-06	
PPT Lecture: Designing for diverse contexts	In Class, 2 Hours	Discovery Learning	Comprehension, Knowledge		HCI101-02	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Research how to conduct a user study	4hrs		Comprehension, Knowledge Application		HCI101-02	
Discussion: feedback on the design and diverse contexts	2hrs		Analysis, Evaluation		HCI101-02	

Week 11

Weekly Overview: Web and social software

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of the results of the research on how to conduct a user study	In Class, 1 Hour	Discovery Learning	Analysis, Knowledge,		HCI101-02	
PPT Lecture: collaboration on the web	In Class, 1 Hour	Discovery Learning, Modified Lecture	Comprehension, Knowledge,		HCI101-02	
Web-Scale experiments: screening	Asynchronous, 1 Hour	Discovery Learning	Knowledge, Analysis		HCI101-02	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussion: web-scale experiments	2hrs		Analysis, Knowledge		HCI101-02	

Reading: textbook on the future of HCI	2hr		Knowledge, Comprehension		HCI101-03	
Screening: find one example of the future directions of HCI	1hrs		Knowledge,		HCI101-01	

Week 12

Weekly Overview: Future directions of HCI

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of students' example	In Class, 1 Hours	Discovery Learning, Teach Back	Knowledge, Synthesis		HCI101-01	
Discussion of the assigned readings	In Class, 1 Hour	Discovery Learning	Knowledge, Comprehension		HCI101-07	
Screening	Asynchronous, 1/2 hr	Discovery Learning	Knowledge, Comprehension		HCI101-01 HCI101-07	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Research project ideas evolving around the concepts of change, time, glance – choose one	3hrs		Knowledge, Analysis,		HCI101-07	
Assignment: final project storyboarding	3hrs		Evaluation		HCI101-06	

Week 13

Weekly Overview: work on the final project: concept development and storyboarding

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
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Discussions of the storyboarding for the final project	In Class, 2 Hours	Discovery Learning Teach Back	Knowledge Synthesis		HCI101-06	
Screening of various of examples of storyboarding and prototyping	In Class, 1hr	Discovery Learning,	Knowledge,		HCI101-06	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Work on the final project	6hrs		Knowledge, Evaluation, Synthesis		HCI101-06	

Week 14

Weekly Overview: work on the final project: testing and results

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Final Thoughts about the class	1hr	Teach Back	Synthesis			
Presentations of testing stage	In Class, 2 Hours	Discovery Learning, Teach Back	Knowledge		HCI101-06	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Work on the final project	6hrs		Analysis, Application		HCI101-06	

Week 15

Weekly Overview: Final project Presentations

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of the Final	In Class, 2 Hours	Discovery Learning	Evaluation		HCI101-06	
Critiques	In Class, 1Hour	Teach Back	Analysis and Evaluation		HCI101-06	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Feedback on the course	3hrs		Evaluation			
Post-Critique	3hrs		Evaluation		HCI101-06	

XI. Date of Last Review of Syllabus:

12/26/12

The nature of course delivery necessitates some flex in the outline of the course due to holidays, project work, etc. Courses can potentially vary from the stated outline but will cover all of the material listed in the outline of the course.