

Human Computer Interaction

PSYC438 – Fall 2019

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Software: [LiveCode](#) (8.1.2 Stable – Community Edition)

Class materials: Canvas & Menti

Grading:

- Quizzes = 60%
- Project = 20%
- Apps (4) = 10%
- Attendance = 10%
 - See me on an individual basis for university related excuses
 - Based on 13 classes

Date	Lecture Topics	Project
8/29	<u>Lesson 1 - Introduction</u> <ul style="list-style-type: none">• HCI Defined• The Impact of HCI on People and Society <u>Lesson 2 - Process</u> <ul style="list-style-type: none">• Requirements Process• Goals of a UI Designer• Cognitive and Perceptual Abilities• Individual Differences• UI Design Research	<u>LiveCode:</u> <ul style="list-style-type: none">• Object Oriented• Event Driven• Edit/Run Modes• Cards/Stacks and Files
9/5	<u>Lesson 3 – Guidelines & Principles</u> <ul style="list-style-type: none">• Guidelines• Principles• Theories <u>Lesson 4 - Methods</u> <ul style="list-style-type: none">• Managing the Design Process• Patterns & CRAP• Three Pillars of Design• Development Methodologies• Ethnographic Observation• Organization• Scenarios• Legal Issues	<u>LiveCode:</u> <ul style="list-style-type: none">• Development Environment• File/Edit/Tools Menus• Object/View/Help Menus• Project Browser

9/12	<p><u>Lesson 5 – Evaluating Designs</u></p> <ul style="list-style-type: none"> • Evaluating UI • Expert Reviews • Usability Testing • Surveys <p><u>Lesson 6 - Tools</u></p> <ul style="list-style-type: none"> • Software Tools • Transition Diagrams • Workflow diagrams • Design Tools 	<p><u>LiveCode:</u></p> <ul style="list-style-type: none"> • Properties Inspector • Code Editor • Message Box • Tool Bar • Tools Palette • Alignment/Layers • In class development of App Quiz & Sound <p>App 1 Due – Switch between cards and URL</p> <p>Project concept due – Paragraph Description</p>
9/19	<p><u>Lesson 7 – UI Patterns</u></p> <ul style="list-style-type: none"> • Menu Selection • Form Fill-in • Dialog Boxes • Menu organization • Single menus • Combination menus • Data Entry with menus • Audio menus <p><u>Lesson 8 – Direct Manipulation</u></p> <ul style="list-style-type: none"> • Command Line • Direct Manipulation • Virtual Environments • 3D Interfaces • Teleoperation • Augmented reality • Video Games • WYSIWYG 	<p><u>LiveCode:</u></p> <ul style="list-style-type: none"> • Properties Inspector • Script • Handlers/Events <p>App 2 Due – Quiz & Sound</p>
9/26	<p><u>Lesson 9 – Process Control</u></p> <ul style="list-style-type: none"> • Process Control • Supervisory Control • SHELL Model • Automation • Rasmussen • Human Error Taxonomy • Nuclear Plants 	<p><u>LiveCode:</u></p> <ul style="list-style-type: none"> • Operators • Making Decisions • Chunk Expressions • In class development of App Drag & Drop <p>Detailed project description due</p> <p>Describe how project will include:</p> <ul style="list-style-type: none"> • Use of a minimum of one URL • Quiz • Drag and drop • Arithmetic function • Sound file

10/3	<u>Lesson 10 – Natural Language and Robot Interaction</u> <ul style="list-style-type: none"> • Command Language • Natural Languages • Search tasks • NLI • Humans & Robots • Assistive Robots • Educational Robots 	<u>LiveCode:</u> <ul style="list-style-type: none"> • Scripting • Menus • Arithmetic Functions <p>App 3 Due – Drag & Drop</p>
10/10	<u>Lesson 11 – Help Systems</u> <ul style="list-style-type: none"> • Quality of Service • Models of response time • Expectations and attitudes • Productivity 	<ul style="list-style-type: none"> • In class development of App Menu & Math
10/17	<u>Lesson 12 – Form and Function</u> <ul style="list-style-type: none"> • Error messages • Non-anthropomorphic design • Display design • Complexity Metrics • Window Management • Browsing • Color 	<p>App 4 Due – Menu & Math</p>
10/24	<u>Lesson 13 – Interaction Devices</u> <ul style="list-style-type: none"> • Interaction Devices • Keyboards & keypads • Pointing devices • Speech/auditory interfaces • Small & large displays • Context awareness • Fitts's Law • Siri • IVR • Heads-up Displays 	<p>Project draft due</p>
10/31	<u>Lesson 14 – Collaboration & Social Networking</u> <ul style="list-style-type: none"> • Collaboration Goals • Asynchronous distributed interfaces • Synchronous distributed interfaces • Blogs, Wikis, Twitter, Hangouts • Conferencing • Face-to-Face interfaces • Social Networking • Texting • Legal Issues 	

11/7	<u>Lesson 15 – Information Search and Visualization</u> <ul style="list-style-type: none"> • Information search & filtering • Information visualization, 1D, 2D, 3D • Multidimensional Data • Temporal Data • Tree Maps • Facebook Data Visualization • Star Plots • Searching in text documents • Database queries • Multimedia document searches Advanced filtering/search interfaces 	Project second draft due
11/14	<u>Lesson 16- What it Means to be Human</u> <ul style="list-style-type: none"> • Living Systems • Critical Subsystems • Conceptual, Concrete and Abstract • Structure & Processes <u>Lesson 17 – Societal Impacts</u> <ul style="list-style-type: none"> • Impact of Technology on Society • Internet Visionary • The Future <u>Lesson 18 – To work or not to work</u> <ul style="list-style-type: none"> • To Work or Not to Work? 	
11/21	PROJECT WORK SESSION	Project Due
11/28	THANKSGIVING BREAK	
12/5	PROJECT PRESENTATION	