
Course Title: Aesthetic Principles of Interface Design

Course Number: MTM310

Course Prerequisites: CIS100; MTM215

Credit Hours: 3

General Studies Credits: 0

I. Course Description:

What is it that makes an engaging interface? What elements must be considered to hold user interest? This course explores the aesthetic and functional components associated with creating effective interfaces that encourage the user to be an active participant. Topics include product design, color and compositional ergonomics, and the design process as it relates to interaction with the content. Students will be involved in creating unique interface design solutions, as well as critiquing existing interfaces from a variety of media sources.

II. Course Goal

The course analyzes, develops and prototypes ideas for alternative interfaces from a variety of media sources, and explores the symbiotic relationship between the visual design and the cognitive dimensions in interface design.

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. Digital Media

Objective 3: Design, develop and build graphical user interfaces for a variety of technology products utilizing the latest in interactivity design with an eye toward the user experience and the function of the device.

Objective 4: Integrate product design concepts into the development of contemporary interfaces.

3. HCI

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.

Objective 2: Create and implement interfaces and interaction focusing on sound design principles and aesthetics utilizing industry-standard tools, software, and production processes.

4. 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. Explore the aesthetic and functional components associated with creating effective interfaces;
2. Understand the role of graphic design in GUI architecture, including hierarchy, organization of text and image (lay out), color, fonts and bitmaps
3. Become familiar with theories and motivations of visual interaction design

4. Learn how to structure applications and interfaces for specific audiences
5. Understand the diversity of users with respect to physical, cognitive and perceptual abilities, differing personalities, identity and cultural differences
6. Create a proposal for an user-centered, functional and innovative interface
7. Explore future developments in interface design

V. Standardized Assessments:

1. Week 12: Mobile Technologies Assignment
2. Week 4: Typography Assignment; Week 5: Layout Assignment; Week 6: Color Assignment
3. Week 2: Discussion on the importance of design; Week 3: screening of David Carson and discussion
4. Week 10: Web design aesthetics; Week 11: heuristic analysis assignment
5. Week 11: Discussion of Jakob Nielsen's usability principles
6. Week 8: midterm project; Week 15: final project
7. Week 13: Alternative interfaces research and discussion

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. Projects: 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:

- "Living with Complexity", Don Norman
- "Design of Everyday Things", Don Norman
- "Designing with the Mind in Mind, Jeff Johnson

Other online required texts

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:

AESTHETIC PRINCIPLES OF INTERFACE DESIGN

Week 1

- *Weekly Overview: introduction to the course; introduction to interface design*

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			
Lecture: What is Design?	In Class, 2 Hours	Modified Lecture Discovery Learning	Knowledge, Comprehension		MTM31-03	
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 one two examples of good interface design	4 hours	NA	Knowledge, Comprehension		MTM310-01	
Discussion of the findings	2hrs	NA	Analysis		MTM310-01	

Week 2

- *Weekly Overview: Introduction to Aesthetics and visceral, behavioral and reflective design*

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
PPT Lecture: Aesthetics and visceral, behavioral and reflective design	In Class, 1 Hour	Modified Lecture, Discovery Learning	Knowledge, Comprehension		MTM310-03 MTM310-04 MTM310-05	
Presentations of a beautiful example of interface design	In Class, 1 Hours	Teach Back, Discovery Learning	Analysis		MTM310-04 MTM310-01	
Screening of the video: Don	In Class,	Discovery	Knowledge,		MTM310-05	

Norman – Design and emotion	1hr	Learning	Comprehension
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Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assignment: describe the aesthetic qualities of your object based on 3 levels of processing: visceral...	3 hours	NA	Application		MTM310-03 MTM310-05	
Discussion: Characteristics of design	1 hours	NA	Analysis, Evaluation		MTM310-03	
Reading for Week 3: online articles	2hrs	NA	Knowledge, Comprehension		MTM310-05	

Week 3

- ***Weekly Overview: Beyond Desktop***

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discuss assigned readings (2 per student)	In Class, 1 Hour	Discovery Learning	Knowledge, Comprehension		MTM310-05	
Presentations of the first assignment	In Class, 1 Hour	Discovery Learning	Knowledge Analysis		MTM310-05	
PPT Lecture: Beyond Desktop	In Class, 1hr	Modified Lecture, Discovery Learning	Knowledge, Comprehension		MTM310-03	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assignment: typography	4hrs		Application		MTM310-02 MTM310-01	
Screening of the video: David Carson on Design	2hrs		Comprehension, Knowledge		MTM310-02	

Week 4

Weekly Overview: Typography and interface design

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of typography assignment	In Class, 1 Hour	Discovery Learning Analysis	Application, Analysis		MTM310-02	
PPT Lecture: Type I	In Class, 1 Hour	Modified Lecture, Discovery Learning	Knowledge, Comprehension Analysis		MTM310-02 MTM310-03	
Discussion typographic sins link	Asynchronous 1Hour	Teach Back	Analysis and Synthesis		MTM310-02	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussion: type	1 hr		Synthesis		MTM310-02	
Assignment: layout assignment	4 hrs		Knowledge, Analysis		MTM310-02 MTM310-01	
Readings: as assigned	1 hr		Knowledge, Comprehension		MTM310-02	

Week 5

Weekly Overview: Type design continued

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Screening of the video: physical and computer integration	In Class 1 hr	Discovery Learning Analysis	Knowledge, Comprehension Analysis		MTM310-01	
PPT Lecture: Type Design	In Class, 2 Hours	Discovery Learning,	Knowledge, Comprehension		MTM310-02 MTM310-03	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assignment: watch the three videos posted under the main heading of week 5	3hrs		Comprehension, Knowledge,		MTM310-01	
Reading for week 6: chapter 1 from Design of Everyday Things	3hrs		Comprehension, Knowledge		MTM310-02 MTM310-04	

Week 6

- **Weekly Overview: Layout Design**

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of layout assignment	In Class, 1hr	Discovery Learning	Knowledge and Analysis		MTM310-02	
Discussions of assigned readings	In Class, 1hr	Discovery Learning	Knowledge, Analysis		MTM310-02	
PPT Lecture: layout design	In Class, 1hr	Modified Lecture, Discovery Learning			MTM310-02 MTM310-03	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Work on the midterm project	2hrs		Knowledge Evaluation		MTM310-06	
Assignment: color	2 hrs		Application		MTM310-02 MTM310-01	
Readings: chapter 3 from Design of Everyday Things	2hrs		Comprehension, Knowledge		MTM310-04	

Week 7

- **Weekly Overview: The Importance of Color in interface design**

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Screenings of videos	In Class, 1 /2Hour	Discovery Learning, Teach Back	Application, Evaluation		MTM310-02	
Discussions of the reading	In Class 1/2Hour	Teach Back	Analysis		MTM310-02	
Presentations of the color assignment	In Class, 1hr	Discovery Learning,	Analysis		MTM310-02	
PPT Lecture: color	In Class, 1hr	Modified Lecture, Discovery Learning	Analysis		MTM310-02 MTM310-03 MTM310-04	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Work on the midterm project	6hrs		Synthesis		MTM310-06 MTM310-01	

Week 8

Weekly Overview: Presentations of the midterm project

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations and critique of the midterm project	In Class, 2 Hours	Discovery Learning	Evaluation		MTM310-06	
PPT Lecture: introduction to semiotics	In-Class 1hr	Discovery Learning Modified Lecture	Knowledge, Comprehension		MTM310-03	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Post-Critique of the midterm	1hr		Evaluation		MTM310-06	
Assigned online readings	3hrs		Comprehension, Knowledge		MTM310-04	
Screening: John Maeda video on the signs	2hrs		Comprehension, Knowledge		MTM310-04 MTM310-05	

Week 9

Weekly Overview: Logos and Signs design

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Screening of the videos	In Class, 1 Hour	Discovery Learning, Teach Back	Application, Evaluation		MTM310-03	
PPT Lecture: logos and signs	In Class, 2hours	Discovery Learning, Modified Lecture	Comprehension, Knowledge		MTM310-03	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Assigned online readings	3hrs		Comprehension, Knowledge		MTM310-03	
Research well designed websites	2hrs		Knowledge, Analysis		MTM310-04 MTM310-01	
Discussion: semiotics	1hr		Analysis		MTM310-03	

Week 10

Weekly Overview: print and web interface design

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussions of the assigned readings	In Class, 1 Hour	Discovery Learning	Knowledge, Evaluation		MTM310-04	
PPT Lecture: Print+Web	In Class, 2 Hours	Discovery Learning	Comprehension, Knowledge		MTM310-03	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course	Program
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			Objective	Objective
Assignment: web design aesthetics	4hrs		Comprehension, Knowledge, Application	MTM310-04 MTM310-01
Discussion: print vs. web design	2hrs		Analysis, Evaluation	MTM310-01

Week 11

Weekly Overview: Heuristics and Usability Principles

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Presentations of the web aesthetics assignment	In Class, 1 Hour	Discovery Learning	Analysis, Knowledge,		MTM310-01	
PPT Lecture: Heuristic Analysis	In Class, 1 Hour	Discovery Learning, Modified Lecture	Comprehension, Knowledge,		MTM310-04	
Screenings of web projects	Asynchronous, 1 Hour	Discovery Learning	Knowledge, Analysis		MTM310-05 MTM310-01	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Online readings of Jakob Nielsen's usability principles	2hrs		Comprehension, Knowledge		MTM310-05	
Discussion: the importance of heuristic analysis	1hr		Analysis		MTM310-04	
Assignment: heuristic analysis	3hrs		Knowledge, Synthesis		MTM310-04	

Week 12

Weekly Overview: Mobile technologies

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course	Program
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				Objective	Objective
Presentations of the heuristic analysis assignment	In Class, 1 Hours	Discovery Learning, Teach Back	Knowledge, Synthesis	MTM310-04 MTM310-05	
Screenings of videos	In Class, 1 Hour	Discovery Learning	Knowledge, Comprehension	MTM310-05	
Discussions about mobile technologies today	In-Class, 1 hr	Discovery Learning	Knowledge, Comprehension	MTM310-04	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Readings: online reading – neuroscience and HCI	2hrs		Knowledge, Analysis, Application		MTM310-05	
Assignment: pros and cons of your mobile phone interface	3hrs		Analysis		MTM310-05	
Discussion: the future of mobile technologies	1hr		Evaluation		MTM310-01	

Week 13

Weekly Overview: Alternative Interfaces

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussions of the reading	In Class, 1 Hour	Discovery Learning	Knowledge Comprehension		MTM310-05	
PPT Lecture: alternative interfaces	In Class, 1hr	Discovery Learning, Modified Lecture	Knowledge, Comprehension		MTM310-04 MTM310-05 MTM310-07	
Research one example of an alternative interface	Asynchronous 1hr	Discovery Learning,	Knowledge, Analysis		MTM310-05 MTM310-01 MTM310-07	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Discussion	1 hr		Evaluation		MTM310-07	
Work on the final project	5hrs		Knowledge, Evaluation, Synthesis		MTM310-06	

Week 14

Weekly Overview: Synthesis

Course Class Hours

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Final Thoughts about the class	1hr					
PPT Lecture: Synthesis	In Class, 2 Hours	Discovery Learning, Teach Back	Knowledge		MTM310-01	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Work on the final project	6hrs		Analysis, Application		MTM310-06	

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		MTM310-06	
Critiques	In Class, 1Hour	Teach Back	Analysis and Evaluation		MTM310-06	

Course Homework

Activity	Time	YRBL	Bloom's	Thinking Styles	Course Objective	Program Objective
Feedback on the course	3hrs		Evaluation			
Post-Critique	3hrs		Evaluation		MTM310-01	

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.