

San José State University
College of Science/Department of Computer Science
CS235, User Interface Design

Course and Contact Information

Instructor:	Nada Attar
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Office Hours:	Tu 8:00-9:00am W 8:00-9:00am Zoom link: https://sjsu.zoom.us/j/89597060530 Appointment slots: https://calendar.google.com/calendar/u/0/selfsched?sstoken=UUIPZVdhWkdtZF14fGRlZmF1bHR8ZmJhMGUzOTQ3YTM5MjIyYjJmE1M2QyNGE
Class Days/Time:	Recorded lectures will be posted on Canvas Instruction Mode 01 (Online only – Asynchronous): Class is offered completely online with no designated day/time meeting pattern
Classroom:	Online

Prerequisite

CS 130 or CS 116A, and Graduate standing. Allowed Declared Major: Computer Science, Bioinformatics, Data Science. Or instructor consent.

Catalogue Description

Human-computer interaction principles, direct manipulation, focus plus context, interaction history; interfaces for websites and website collections; usability testing; role of metaphors; case studies; advanced topics include information visualization, interfaces for collaboration, intelligent interfaces, and software agents.

Course Description

In this course, you will learn the critical elements in the design and implementation of user interfaces for a wide variety of applications. The course will cover combine the modern theory and practice of human-computer interface design with lecture material, case studies, research topics presented in papers and practical experience with a term project. The field is rapidly evolving and there will be special emphasis placed on the design of interfaces and case studies will be presented in the fields of design, engineering, entertainment and virtual/augmented reality.

Course Objectives

1. Understand the process of user interface design and how to use it to design high performance applications.
2. Gain an understanding current research in the field through selected readings and presentations.
3. Employ some of the current state-of-the art UI design tools and technologies.
4. Ability to complete a larger scale project leveraging the design process learned.

5. Understand the important elements of design and research using eye-tracking technology.

Required Texts/Readings

Textbook

- “User Interface Design for Programmers”, by Avram Joel Spolsky.
- “Research Methods in Human-Computer Interaction”, by Jonathan Lazar, Jinjuan Heidi Feng, Harry Hochheiser (2nd Edition, 2017). ISBN-10: 9780128053904, ISBN-13: 978-0128053904
- Notes, and research papers giving by the instructor

Final Examination:

- One written final cumulative exam.
- The exams will contain multiple choice questions, short answer questions and questions that require computations. Students must obtain >50% in the following components of the course (homework assignments, final project, and final exam) in order to be eligible for a passing grade.

Grading Information

Your grade for the course will be based on the following components:

- Homework Assignments and Presentations - 35 %
- Final Project - 40 %
- Final Exam - 25 %

Exams are closed book; final exam is comprehensive. No extra point options. No make-ups exams except in case of verifiable emergency circumstances

Determination of Grades

The following shows the grading scale to be used to determine the letter grade:

Percentage	Grade	Percentage	Grade
94 and above	A	90 - 93	A-
87 - 89	B+	83 - 86	B
80 - 82	B-	77 - 79	C+
73 - 76	C	70 - 72	C-
67 - 69	D+	63-66	D
60-62	D-	59 and below	F

Faculty Web Page and MYSJSU Messaging

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on my faculty web page at <http://www.sjsu.edu/people/firstname.lastname> and/or on [Canvas Learning Management System course login website](#) at <http://sjsu.instructure.com>. You are responsible for regularly checking with the

messaging system through MySJSU at <http://my.sjsu.edu> (or other communication system as indicated by the instructor) to learn of any updates.

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

Homework assignments will be individual, regularly assigned, will include written problem assignments, and perhaps some online exercises. Solutions will be not posted. The homework is a tool for you to learn the material and prepare you for the exams.

Classroom Protocol

Attendance is highly recommended. Please avoid disturbing the class: turn-off cell phones (or put them on vibrate mode), no text messaging in the class or the exams, no taking pictures and video, avoid coming late. You may not publicly share or upload material for this course such as exam questions, lecture notes, or solutions without my consent.

University Policies (Required)

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>” Make sure to review these policies and resources.

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	W 1/27	Introduction; Term Project Requirements; Reading Assignments
	M 2/01	Human factors – Perception, Cognition and Ergonomics
2	W 2/03	HCI Design - User Experience, Requirements. Strategy, Usability, Design Rules
	M 2/08	Topics from research papers: User characteristics <i>Last Day to Drop Courses Without an Entry on Student's Permanent Record</i>
3	W 2/10	Controlling the environment
	M 2/15	Topics from research papers: Eye-Tracking I <i>Last Day to Add Courses & Register Late</i>
4	W 2/17	Understanding users, Design for extremes, Project phase 1 due
	M 2/22	Usability Testing, Designing principles
5	W 2/24	Topics from research papers: Empirical studies
	M 3/01	Prototyping
6	W 3/03	User Interfaces for Web and Mobile
	M 3/08	Topics from research papers: User characteristics
7	W 3/10	Eye tracking in User Interface Design, Project phase 2 due
	M 3/15	Questionnaires, in-depth interviews and focus groups
8	W 3/17	Topics from research papers: Accessibility
	M 3/22	Semi-Final Project Presentation
9	W 3/24	Semi-Final Project Presentation
	M 3/29	<i>No Class - Spring Break</i>
10	W 3/31	<i>No Class - Cesar Chavez Day (Observed) - Campus Closed (CC)</i>
	M 4/05	Topics from research papers: Cognition
11	W 4/07	Preprocessing data
	M 4/12	Experiment analysis
12	W 4/14	Topics from research papers: Usability
	M 4/19	Experiment analysis, Project phase 3 due
13	W 4/21	Applying old research method to new problems
	M 4/26	Topics from research papers: Ubiquitous and mobile devices
14	W 4/28	Theoretical analysis and methodological development
	M 5/03	Final Project Presentation
15	W 5/05	Final Project Presentation
	M 5/10	Final Project Presentation
16	W 5/12	Final Project Presentation
	M 5/17	Review <i>Last Day of Instruction – Last Day of Classes</i>
17	F 5/21	Final Exam 19:45-22:00

