

ACAD415: Dev III: Designing Applications for Emerging Platforms

Units: 4.0

Spring 2024—MW—12:00-1:50 PT

Location: IYH 210

Instructor: John Bruneau, Yihyun Lim

Office: Online

Office Hours: By appointment

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IT Help: <https://uscedu.sharepoint.com/sites/IYASStudent/SitePages/IT-Resources.aspx>

Hours of Service: 8:30am - 6:30pm

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Description and Assessment of Assignments

The following is a breakdown of the assignment expectations. Unless otherwise noted, all submissions will be due prior to the class session via Blackboard.

Students are expected to produce professional level content that demonstrates a mastery of raw technique as well as an attention to aesthetic quality and user experience design. In the case of interactive media, a professional level result is aesthetically pleasing while functionally sound. To assess technique, the source material will be evaluated to ensure that methodologies taught in class are utilized for the result for each assignment. Each project should be designed with clear intention to deliver experience value to the user.

Assignment 1 - UX Foundations (15% of grade: Design 6%, App 9%)

Design a single page app.

Requirements:

- Case study document and design proposal
- Figma design mockup, UI wireframes and UX flow map
- One modal, with a confirm, button and a cancel button
- One animated slide-in menu
- At least 3 action buttons that change the main scene in some way.
- A Responsive Layout that resizes appropriately to different phone aspect ratios, resolutions, and orientations.
- Build target: Mac and PC or WebGL

Assignment 2 - Mobile Gestures (15% of grade: Design 6%, App 9%)

Design a layout that uses at least 2 mobile gestures. Examples include, swipe, pinch, twirl, long press, multitouch. The gestures need to make sense in the context of the design.

Requirements:

- Case study document and design proposal
- Figma design mockup, UI wireframes and UX flow map
- A Responsive Layout that resizes appropriately to different phone aspect ratios, resolutions, and orientations.
- Build target: Android APK or Xcode Project

Assignment 3 - Experimental Interface (15% of grade: Design 6%, App 9%)

Design an interface that uses one or more non-touch inputs as its core feature. Examples include, accelerometers, device orientation, geolocation, microphone.

Requirements:

- Case study document and design proposal
- Figma design mockup, UI wireframes and UX flow map
- A Responsive Layout that resizes appropriately to different phone aspect ratios, resolutions, and orientations.
- Build target: Android APK or Xcode Project

Assignment 4 - Augmented Reality (15% of grade: Design 6%, App 9%)

Design an augmented reality application that allows the user to place a 3D model in real world space.

Requirements:

- Case study document and design proposal
- Figma design mockup, UI wireframes and UX flow map
- A UI for placing and deleting models.
- An interface allowing the user to drag, rotate and scale the model.
- A Responsive Layout that resizes appropriately to different phone aspect ratios, resolutions, and orientations.
- Build target: Android APK or Xcode Project

Final Project - Published App (30% of grade)

Working in groups to design and develop a full featured app that is published to the Apple or Android App store.

Requirements:

- Case study document and design proposal includes value proposition, user persona, key product features
- Figma design mockup, UI wireframes and UX flow map
- A Responsive Layout that resizes appropriately to different phone aspect ratios, resolutions, and orientations.
- Deliverable: Android or iOS app on the Android or Apple App Store.

Final Project Milestones:

- Project Proposal (3% of grade)
- Design Mockup and Working prototype (7%)

- Beta (10%)
- Final MVP and design presentation (10%)

Grading

Assignment	Points	% of Grade
Project 1 - Button interaction (Design 60 points, App 90 points)	150	15%
Project 2 – Gesture (Design 60 points, App 90 points)	150	15%
Project 3 – Accelerometer (Design 60 points, App 90 points)	150	15%
Project 4 – AR (Design 60 points, App 90 points)	150	15%
Final Group Project	300	30%
Attendance & Participation	100	10%
Total	1,000	100%

Course Schedule: A Weekly Breakdown

*Please cross-reference with the Assignments section of the syllabus for greater details on deliverables.

Red text = Assignment due

	Session 1 (Mon)	Session 2 (Wed)
1	Jan 8 - (JB and YL) Intro to class (overview) Module 0 - Design and Development: Foundations, Introduction to Unity and C#	Jan 10 (JB) Module 0 continued. Lab time
2	Jan 15 - MLK day no class	Jan 17 (YL) UXD Lecture: What is User Experience Design? Design Principles and UX Design Methods Activity: Project 1 - research, ideation, and proposal
3	Jan 22 (JB) Module 1 - Standard UI: Buttons and mouse/tap interaction	Jan 24 (JB) Module 1 continued. Dev Lab time
4	Jan 29 (YL) Module 1 continued. UX Design Lab time Lecture: UXD methods and process Activity: 1:1 review of project progress	Jan 31 (YL) Project 1 Design Due - In-class presentation of concept, process, UI design, and working demo of interaction on mobile phone
5	Feb 5 (JB) Project 1 APP Due - Working demo of interaction on mobile phone Module 2 - Gesture: Swipe, Pinch, Rotation	Feb 7 (YL) UXD Module 2 Introduction – Gesture-based mobile experience. Case studies and idea sketch. Activity: Project 2 - research, ideation, and proposal
6	Feb 12 (JB) Module 2 continued. Dev Lab time	Feb 14 (YL) UXD Session: in-class studio work, 1:1 feedback Project 2 Design Due – Sunday Feb 18th EOD, submit to Blackboard
7	Feb 19 - Presidents Day no class	Feb 21 (JB) Module 2 continued. Dev Lab time
8	Feb 26 (JB & YL) Project 2 APP Due - In-class presentation of design, process and working of interaction on mobile phone	Feb 28 (YL) UXD Module 3 Introduction – Designing with movement (Accelerometer - Device Rotation, Orientation, and Movement) Case studies and idea sketch.

9	Mar 4 (JB) Dev Module 3 – Accelerometer: Device Rotation, Orientation, and Movement. Dev Lab time	Mar 6 (YL) UXD Session: in-class studio work, 1:1 feedback Project 3 Design Due – Sunday March 10th EOD, submit to Blackboard
10	Mar 11-15 Spring Break	
11	Mar 18 (JB) Dev Module 3 continued. Dev Lab time	Mar 20 (JB & YL) Project 3 APP Due - In-class presentation of design, process and working of interaction on mobile phone
12	Mar 25 (JB) Module 4 – AR introduction AR Surfaces and Object Placement	Mar 27 (YL) UXD Module 4 – Designing with AR Case studies and idea sketch.
13	Apr 1 (YL) UXD Session: in-class studio work, 1:1 feedback Project 4 Design Due – April 2nd Tuesday EOD, submit to Blackboard	Apr 3 (JB) Dev Module 4 continued. Dev Lab time
14	Apr 8 (JB & YL) Project 4 APP Due - In-class presentation of concept, process, UI design, and working demo of interaction on mobile phone	Apr 10 (YL) Intro to final project. Students form teams and work on project proposals. FP Milestone 1 - Project proposal due, Sunday April 14th EOD to Blackboard
15	Apr 15 (JB) Work-in-class Dev Lab time	Apr 17 (JB) Work-in-class Dev Lab time FP Milestone 2 - Design mockup and Working prototype due, Sunday April 21st EOD to Blackboard
16	Apr 22 (YL) Work-in-class UXD Lab time	Apr 24 (JB) Work-in-class Dev Lab time FP Milestone 3 - Beta due, Sunday April 28th EOD to Blackboard
Study Days		
	Final Exam Friday May 3, 11-1pm (JB & YL) https://classes.usc.edu/term-20241/finals/ Final Presentation: Presentation of concept, process, features, intentions, UX storytelling, and demo of MVP app (more details to follow).	