

HCDD 340, Section 001: HCD FOR MOBILE COMPUTING (22411--UP---P-HCDD----340-----001-)

*****Please note that the specifics of this Course Syllabus are subject to change. I will notify students of any changes, and students will be responsible for abiding by them. Even if you print this syllabus, please check the online version often.**

Description

HCDD 340: Human-Centered Design for Mobile Computing (3 credits)

Semester: Spring 2024

The course will provide students with an appreciation for the importance of mobile computing in modern life. It will also provide an introduction to the technical aspects of mobile computing including input modalities, sensors and sensing, wearable and smart home devices, and virtual/augmented reality. It will provide an introduction to established design concepts as well as explore emerging ideas and new concepts in the domains of mobile computing, and explore some of the most important domains where mobile computing is having a significant impact including health and wellness and computing in the developing world. The latter part of the course will include an analysis, design, and development project for students to work on individually or in groups.

Class Section, Time, and Location

Course: HCDD 340.001 RI

Time & Location: Tuesday/ Thursday 03:05 pm - 04:20 pm @Westgate Bldg E202

Instructor

Dr. Sarah Stager, sjs230@psu.edu (<mailto:sjs230@psu.edu>)

- (<mailto:sjs230@psu.edu>) Office Hours: TBD

Teaching Assistants

- Riley Howard {rmh6042@psu.edu}
 - Office Hours: TBA
- Manasa Pisipati

All course-related emails, including messages to your instructor(s) and fellow students, should be sent within Canvas, using the Inbox. Every attempt will be made for the instructor (or a substitute) to respond

to email questions within 24 hours. EMAIL ENTIRE TEACHING TEAM when conversing with the professor or LA.

If you need to contact the teaching team please send a message on Canvas to ALL learning assistants and professors.

Additional instructor information can be found by selecting People and then the Teacher name.

Prerequisites

(HCDD 264 or IST 311) and (IST 256 or IST 311)

Objectives

Upon completion of this course, students will be able to:

1. Explain the importance of human-centered design for mobile computing in modern societies.
2. Explain the most important technologies enabling and challenging mobile computing.
3. Explain the different modes of interaction with mobile devices.
4. Explain the enablers and challenges of wearable and smart home computing.
5. Explain how mobile computing is increasingly important in different domains such as health and wellness.
6. Design and develop a mobile application providing to provide users with some usable and useful capability.
7. Apply evaluation methods to their designs with an appreciation for the special challenges facing users of mobile technology.

Assignments and Grading

Grading Category	Percentage of Final Grade
Assignments	25%
Discussions	20%
Quizzes	10%
Final Project	25%
Group Work	20%

Course Grading Scale

The following are minimum cutoffs for each grade:

- 93.00% = A
- 90.00% = A-

- 87.00% = B+
- 83.00% = B
- 80.00% = B-
- 77.00% = C+
- 70.00% = C
- 60.00% = D
- less than 60.00% = F

Course Policies and Expectations

- Changes - Please note that additions or changes to the syllabus as well as topics and the assigned readings/videos may occur as we move through the course, so always reference the Canvas Calendar and Module tabs for the most recent assignments, due dates, prep work, and events. When the professor makes a change to the calendar, they will notify students (via announcement and in class) and make the appropriate changes in Canvas.
- Logging into Canvas - Students are expected to login to Canvas **daily**, to check for course updates, announcements, emails, etc.
- Emailing through Canvas - Students are expected to use Canvas for all course email communication with the professor and instructional assistants[select all]. Students are expected to check their email and notifications at least daily. ***ALL EMAILS TO PROFESSOR MUST INCLUDE THE ENTIRE TEACHING TEAM.**
- **This class requires attendance.** We will be doing much of our work in class with the ability to collaborate with our classmates. Missing class has the potential to affect your grade. However, life happens. So grades will not be affected until more than 5 classes are missed:
 - Each student is allowed **5 unexcused absences**. After that, students will lose points based on how many additional classes they miss based on the following table:
 - 6-8 absences: -2% of final grade
 - 9-10 absences: -5% of final grade
 - 11-13 absences: -10% final grade
 - More than 13 absences: Automatic failure without discussion with instructor before last week of the semester.
 - **I always value and reward communication. If you are struggling with attendance, please speak to me as soon as possible. I always believe we can work something out.**
- In addition, students who have perfect attendance will receive a 2% boost to their grade.
 - Students that miss only one class will receive a 1% boost to their grade.
- Participation - Students are expected to participate in all course activities during class time. Students are expected to refrain from using their phones, computers, or other technologies on **non-course-related** items during class time.
- Attending virtual and group meetings - Students are expected to meet with their group as needed, outside of class time. Students may use specified virtual meeting tools (e.g. Zoom) for collaboration,

meetings, presentations, etc., as needed and as specified by the professor.

- Point Questions or Disputes - If a student has questions about why they did not receive full points for any graded assignment or quiz questions, the student has one week from the date that the assignment grade/comments were given to the student to email any issues to the professor. Point changes will not be made at the end of the semester.
- Late Submissions - Life happens, but time management skills are important. Missing assignments may result in a zero, depending on the assignment. Make sure to submit your assignments **earlier** than the deadline time, otherwise, it will be marked late. Carefully check the due date time for assignments. Most assignments are 10% off per day late.
- Academic Integrity - Students are **not** permitted to post or download any graded assessment (quiz questions, in-class activities, assignments, project reports, etc.) or course materials to an online website that facilitates copying/cheating among students, such as Course Hero or Chegg. Any evidence of posting or downloading graded assessments or using posted content to facilitate copying/cheating on graded assessments will constitute an Academic Integrity violation for all students involved.

Technical Requirements

Standard computer technical specifications are assumed for this course. [Please test your computer \(https://courses.worldcampus.psu.edu/public/diagnostics/canvas.shtml\)](https://courses.worldcampus.psu.edu/public/diagnostics/canvas.shtml) for requirements. In addition, a headset or earbuds or speakers and a microphone are REQUIRED for the course. These may be used for virtual meetings, virtual office hours, interactions with classmates and your instructor, and group presentations - which may be conducted with virtual meeting tools.

Resources

Find extensive information and links to many Penn State and IST resources (including the **Penn State libraries, video conferencing tools, technology and software, writing and research**, and much more) on the [Resources](https://docs.google.com/document/d/1Zsu5Lgaic3kLLiM3co5mxWU5B7IOfu15sppAQvsym6E/pub)

(<https://docs.google.com/document/d/1Zsu5Lgaic3kLLiM3co5mxWU5B7IOfu15sppAQvsym6E/pub>)

University Policies

Review current information regarding Penn State policies (including **academic integrity, copyrights, counseling and psychological services, disability accommodations, discrimination and harassment, emergencies, military accommodations, trade names**, etc.) on the [University Policies](https://docs.google.com/document/d/1FIQdII2qw3SJOIgQWTWRByCxSbsnY6DcZA0JHzL4yBk/pub) (<https://docs.google.com/document/d/1FIQdII2qw3SJOIgQWTWRByCxSbsnY6DcZA0JHzL4yBk/pub>)



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