

Fall 2020

ITLS 4260

## Mobile Design and Development for Learning

**Instructor:** Ralph Trumble

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Class Time: Monday - Friday

Location: Online

### Course Overview

This course is designed for those who are interested in developing mobile apps for learning. Throughout the semester you will build 16 mobile apps using *App Inventor 2 (AI2)*. AI2 is a block-based programming environment, through which you can learn many valuable computer science concepts and begin developing mobile applications with little to no previous programming experience. These apps that you build will provide you with skills that you'll need to complete your final project, which is a unique, professionally developed Mobile App for Learning. In the first half of the semester, you will build simple apps to provide instruction, to assess, and to support learning in various environments. Then towards the middle of semester you will begin developing game-based applications. In the last part of the semester you will learn to work with cloud-based databases, and how to develop a login system for you application. To support the development of your final project you will also engage in short weekly readings about learning and instructional design principles. Finally, in addition to learning to develop mobile apps, you will also learn to evaluate mobile apps in terms of their usability, design quality, and learning value.

### Course Objectives

The course is designed to not only foster skills for mobile design and development but to also review and promote a deeper understanding of design and learning principles. Upon completion of this course students will be able to:

- *Evaluate, design and build multiple mobile apps for educational purposes.*
- *Utilize fundamental programming concepts like variables, control structures, procedures, and cloud-based database storage systems.*
- *Apply design and learning principles to create educational apps.*
- *Creatively use programming skills and design/learning principles to personalize and adapt mobile apps to contexts outside of the course.*

### IDEA Learning Objectives:

- *Learn fundamental principles, generalizations, or theories about mobile design and learning.*
- *Developing specific skills, competencies and points of view needed by professionals in the field most closely related to this course*
- *Developing creative capacities (writing, inventing, designing, performing in art, music drama, etc.)*

## Course Format

Delivery of this course is online, through the Canvas learning management system. Each week you will have assignments that are due on **Thursdays**, and then also on **Monday** (those assignments involve leaving feedback on others' work and/or peer reviews). I will unlock assignments four weeks before they are due. Each week you will be expected to complete readings (**due on Thursday**), build one to two Apps (**also due on Thursday**), and then provide feedback to your classmates Apps (**due on Monday**). Occasionally, you'll have additional assignments (e.g. evaluate a commercial apps, final project proposal) these will also be **due on Thursdays**.

To build the mobile apps I will provide a combination of videos (to introduce the app, and provide instruction on key concepts) and text-based instructions via Canvas modules. While I encourage creativity (you will need to extend and personalize the apps), your final apps will need to include the minimal standards (outlined by rubrics) to get full points. When evaluating your classmates' apps, you'll be given a rubric to complete. Finally, in terms of the readings, they will be relatively short (~10 pages / week) and you'll need to complete a short, low-stakes quiz to demonstrate you completed the reading. There are 12 total readings, but your two lowest scores will be dropped.

You can expect the following from the instructor:

- Quick responses to requests to meet with the instructor by phone, in person, or in a virtual conference room (within 48 hours, but more quickly on weekdays). Should there be multiple student requests (at least 1/3 of the class), a formal conference day and time will be scheduled and an announcement encouraging others to participate will be made on the course site.

### Asking Questions about the Material

Questions are best asked on the [Help Discussion Boards](#). Many students will benefit from hearing your questions and others' responses. If you have a question, it is very likely that others do too. And if you have an answer you could receive a few extra credit points. Questions regarding personal concerns may also be sent to the instructor via email, but most questions should be posted online.

## Required Course Readings

Course readings are available through links or pdfs online through Canvas. Our readings will come from the two sources below:

Readings:

1. McQuiggan, S., McQuiggan, J., Sabourin, J., & Kosturko, L. (2015). *Mobile learning: A handbook for developers, educators, and learners*. John Wiley & Sons.
2. Lubniewski, K. L., Arthur, C. L., & Harriott, W. (2018). Evaluating instructional apps using the app checklist for educators (ACE). *International Electronic Journal of Elementary Education*, 10(3), 323-329.

## Course Requirements

You are expected to check in the syllabus and with the course website regularly and meet all posted deadlines. You are also expected to follow the order of the assignments listed in each learning module, unless otherwise posted. There are a total of 1000 possible points for this course, below is a breakdown of how those points are distributed.

### Assignments

<i>Grade Component</i>	<i>Assignment Description</i>	<i>IDEA Objective</i>	<i># of Assignments</i>	<i>Points</i>	<i>Total Points</i>
<i>Build Apps</i>	You will follow in-Canvas instruction to build apps which increase in difficulty and introduce new programming concepts.	Developing specific skills.	16	15	240
<i>App Extensions</i>	After building the Apps via Canvas instructions, you are expected to expand/adapt the apps. Extensions can be cosmetic, functional, or content-based.	Developing specific skills/ Creatively use programming skills and design/learning principles	16	10	160
<i>Reading quizzes</i>	Each week readings introducing learning and/or design principles will be given. After readings you are expected to complete a short quiz about your understanding of the text.	Learn fundamental principles or theories about mobile design and learning	10	5	50
<i>Evaluate Classmates Apps</i>	In addition to building the apps, you will evaluate	Learn fundamental	32	5	160

	two of your classmates' apps to check that they completed the App and added their own extensions.	principles or theories about mobile design and learning			
<i>Evaluate Commercial Apps</i>	Using the design/learning principles studied via the readings, you will evaluate three educational apps during the course.	Learn fundamental principles or theories about mobile design and learning	3	30	90
<b><i>Final Project</i></b>					
<i>Project Proposal</i>	Write a half-page proposal of the final app that you plan to build.		1	20	20
<i>Prototype</i>	Submit a prototype of the app using a design tool (e.g. InDesign)	Creatively use programming skills and design/learning principles	1	30	30
<i>First Draft</i>	Submit a first draft of the project. The first draft should include at least 25% of the project completed.	Creatively use programming skills and design/learning principles	1	30	30
<i>Peer Feedback</i>	You will provide feedback to one other student, including suggestions for improving their app design.	Learn fundamental principles or theories about mobile design and learning	1	20	20
<i>Final Draft with Write up</i>	Turn in final app with a 2-page write up describing the design and learning principles used to develop the app.	Developing specific skills	1	200	200
<b><i>Total</i></b>					<b>1000</b>

## Class Schedule

Note: the course schedule is subject to change, that is, it is a plan rather than a contract. You will be notified in Canvas about any changes to the schedule or existing content. Each week you will work on one to two Apps. The Apps are divided into five subtypes. The table below provides an overview of those types.

<i>App Type</i>	<i>Brief Description</i>
<b>Instructional</b>	These apps deliver instruction on a certain app. They have some crossover with assessment apps.
<b>Supplementary</b>	These apps provide the instructor with a tool through which to deliver the lesson.
<b>Assessment</b>	The assessments contain elements of instructional apps but are focused on assessing learner abilities.
<b>Game-based</b>	These apps add gaming principles to instructional apps.
<b>Utility</b>	These are sections of apps that can build upon first four app types.

<i>Wk</i>	<i>Date</i>	<i>Topic</i>	<i>Reading/s</i>	<i>Apps to Build</i>	<i>Assignment Due</i>
1	Aug 26 - Sep 1	Mobile Learning Intro	Mobile Learning – Chapter 1, Part1	1. Info App	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App
2	Sep 3-8	Benefits and Challenges to Mobile Learning	Mobile Learning – Chapter 1, Part2	1. Convo Starter	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App
3	Sep 9-15	Evaluate Apps	Checklist for Educational Apps	1. Vocab App 2. Media Lit App	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App <b>5. Evaluate Commercial App</b>
4	Sep 16-22	Learning Principles	Mobile Learning-Chapter2, Part1	1. MC App 2. Math App	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App
5	Sep 23-29	Applying Learning Principles	Mobile Learning-Chapter2, Part2	1. Note-Taker App	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App <b>5. Evaluate Commercial App</b>
6	Sep 30-Oct 6	Design Process	Mobile Learning-Chapter8, Part1	1. Draw App 2. Step Tracker	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App
7	Oct 7-13	Design Process	Mobile Learning-Chapter8, Part2	1. Book club	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz

<b>8</b>	Oct 14-20	Design Experience	Mobile Learning-Chapter9, Part1	1. Space Invaders	4. Evaluate Classmate App <b>5. Evaluate Commercial App</b>
					1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App
<b>9</b>	Oct 21-27	Design Experience	Mobile Learning-Chapter9, Part2	1. Memory Game	<b>5. Final Project Proposal Due</b>
					1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App
<b>10</b>	Oct 28-Nov 3	Learning in other Environments	Choose 1: Mobile Learning-Chapter 12 Chapter 13 Chapter 14	1. Chat Forum	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App <b>5. Final Project Prototype Due</b>
<b>11</b>	Nov 4-10	Data and Evaluation	Mobile Learning-Chapter10, Part1	1. Login System	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App <b>5. First Draft of Final Project Due</b>
<b>12</b>	Nov 11-17	Data and Evaluation	Mobile Learning-Chapter10, Part2	1. Location-Based	1. Turn in App(s) 2. Add Extensions (s) 3. Reading Quiz 4. Evaluate Classmate App
<b>13</b>	Nov 18-24	Data and Evaluation	No Reading	1. Database App	<b>5. Peer Feedback Final Project</b> 1. Turn in App(s) 2. Add Extensions (s) 3. Evaluate Classmate App
<b>14</b>	Nov 25-Dec 1	THANKSGIVING	No Reading	No App	No Assignments
<b>15</b>	Dec 02-08	Final Week	No Reading		<b>Final Project Due Dec. 10</b>

### Grading scale

There is no curve for the class. Grades will be assigned based on the scale below, with your final grade rounded to the nearest tenth of a percentage point.

Grading scale	
A	93 – 100%
A-	90 – 92.9%
B+	87 – 89.9%
B	83 – 86.9%
B-	80 – 82.9%
C+	77 – 79.9%
C	73 – 76.9%
C-	70 – 72.9%
D+	67 – 69.9%
D	63 – 66.9%

D-	60 – 62.9%
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## Late Assignments

Assignments will be accepted late. However, there will be a 10% score reduction for each day late. After a week late assignments will not be accepted.

## USU Criteria for Make-Up of Missed Assignments or Projects

Students will be allowed to make up assignments or projects at full credit only if they meet one of the following criteria:

- Incapacitating illness prevents a student from attending classes for a minimum period of two weeks,
- A death in the family,
- Financial responsibilities requiring a student to alter a schedule to secure needed employment,
- Change in work schedule as required by employer (with verification) or,
- Other emergencies deemed appropriate by the instructor.

If there are extenuating circumstances, a student may petition the instructor for time beyond the deadline. Documentation of the circumstances cited to justify the make-up is required.

## Plagiarism

As stated in the USU Student Code, plagiarism is “the act of representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.” Plagiarism is harmful both for the author of the original work and for the plagiarizer. Any individuals involved in plagiarizing work will receive an automatic fail for the assignment or project and will be immediately reported to the university administration.

## Persons with Disabilities

Students with documented disabilities who are in need of academic accommodations should immediately notify the instructor and/or contact the Disability Resource Center at (435) 797-2444 and fill out an application for services. Accommodations are individualized and in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1992.

## Incompletes

In accordance with University policy, incompletes are not to be given for poor performance. There will be no incompletes given except for conditions beyond the student's control, including:

- Incapacitating illnesses that prevent a student from attending classes for a period of at least two weeks
- A death in the immediate family
- Financial responsibilities requiring a student to alter course schedule to secure employment

- Change in work schedule as required by an employer

Other, *unexpected* emergencies may be considered on a case-by-case basis. Regardless of the cause for the incomplete, appropriate documentation of the circumstances is required for an extension to be considered.

## Written Assignments

Unless otherwise advised in advance, all written assignments are to be completed in the following format:

1. MS Word file with **your name** and assignment type in the file name.
2. 8.5 x 11, single-spaced.
3. Times or Times New Roman, 12 pt. font, **your name** on first page.
4. Submitted by electronic copy through email.

### **ALL ASSIGNMENTS MUST BE ORIGINAL WORK**

Plagiarism will result in a failing grade. The preferred style for bibliographic referencing is APA (*American Psychological Association*). You can find details about APA documentation on the following helpful website: <http://www.wisc.edu/writing/Handbook/DocAPA.html>. For educational research, the most popular database is ERIC (*Education Resources Information Center*). This can be found online at: <http://www.eric.ed.gov/>.

### **10 Pointers for Good Academic Essay Writing**

1. A good general rule to follow in the structure of your papers is “tell them what you’re going to say, tell them, then tell them what you said”. In the introduction, provide a roadmap of what you are going to say in the paper. It will help your own organization and organizes the paper for the reader to follow your arguments along.
2. Be explicit about your questions, thesis, perspective and put it up front in your introduction. It’s best not to leave your reader(s) guessing what the paper is about.
3. Provide signposts or points to your roadmap, e.g., “in this section, the following point...” or “to summarize” or “having covered the...we will now turn to...”
4. Section titles are also good as signposts but be sure that the content of the section reflects the title of the section.
5. Use transition sentences that build from previous information and connects to the next.
6. Explain terms. Don’t put them in quotes and assume the reader will know what you mean. Try very hard not to make assumptions about what the reader knows even though you know who the reader is and he/she might be an expert in your topic. The point is for you to demonstrate that you know the material.
7. Be consistent with your bibliographic referencing style.
8. Be careful not to over-generalize, e.g., “many theorists...” when you are only referencing one study.
9. Don’t assume everyone sees or agrees with your perspective, you need to convince the reader of your perspective.
10. Summarize in the conclusion, what you wrote about in the body of the paper. Tie your conclusions back to your original question...how have you proven, answered, shown, presented information that addresses it. Don’t introduce new information in the conclusion. It detracts from the cohesiveness.

\* Syllabus adopted from  
original created by  
Fredrick Poole- course  
creator