

Mobile App Development

**South Eugene High School
2017-2018**

Faculty Name:	Mary Taylor
Contact:	taylor_m@4j.lane.edu
Room:	9 (Computer Center)
IA time:	Ms. Taylor is always available via email (taylor_m@4j.lane.edu) and by appointment.
Credits:	.5 credit, Applied Arts (elective)
College Credits:	Aligns with CIS 125M (Software Tools: Mobile Application Development ApplInventor) at LCC for 4 Computer Science credits
Course website:	eugene4j.edmodo.com
Grade updates:	staff.4j.lane.edu/~taylor_m login with last name (username) and student ID number (password)

Course Description

This course provides students with no programming background with an introduction to mobile application development. Students will use a visual, drag and drop tool to build applications for the Android and will be introduced to fundamental programming concepts and skills in the process. The intention of the course is to enable you to design, implement, test and debug simple mobile applications for the Android operating system.

Technologies

- Android OS
- AppInventor 2

Themes & Issues

- Mobile application development
- Communication
- Giving and receiving feedback

Concepts

- Event driven programming
- Event handling
- Debugging
- Variables and scope

- Operators and expressions
- Functions, parameters and return values
- Control structures
- Lists
- Software emulation

Skills

- Effectively use both the AppInventor 2 Component Designer, Blocks Editor and Emulator to implement, test and debug AppInventor applications.
- Effectively use: event handlers, variables, operators, functions, control structures and lists in AppInventor applications.
- Design, implement and test simple mobile applications.
- Describe concepts orally and in writing.
- Discuss themes and issues orally and in writing.
- Evaluate your own programs. Evaluate the programs of other students and provide constructive feedback orally and in writing.
- Respond appropriately to and assimilate feedback provided by other students and your instructor.

Prerequisite Knowledge and Skills

Students are not automatically admitted into this course; an informal admission process occurs, between prospective course members and Ms. Taylor, at the start of the term. Students need to be quite computer literate, self-motivated, mature, and detail-oriented to succeed in this course. No programming experience is required!

Textbook, Learning Materials, and Mobile Devices

There is no textbook for this course. The software used is an online development tool, AppInventor2. Students test their apps using an online emulator, Android phone (if they have one) or the Google Nexus 7 tablets available in Room 9. Students' apps are self-published to a portfolio site that they create with Google sites at the start of the course. Apps can also be shared via email, for installation and use by friends and family, on Android OS devices.

Teaching Methods Employed

Differentiated (Individualized) Instruction. In an attempt to maximize course offerings and learning at SEHS, Ms. Taylor offers all nine (9) computer courses every period she teaches. Seven of these are "College Now" courses (see below). The curriculum for each course is broken into weekly chunks and students are expected to keep their eye on each weekly Due Date. If they are unable to complete the week's work by that date, students are welcome to work during free periods, lunch, and/or to take learning materials home and work there. Late work is not penalized; the Due Dates exist to ensure that each student will have the greatest chance of successfully completing the course by the end of the term.

If students wish to move more quickly through the material, they are welcome to do so.

Work revision. Each assignment/product receives close attention by Ms. Taylor. Scoring is as described in "Grading Policies" below. If a top score was not reached, Ms. Taylor gives specific feedback as to what was missed, and students are invited to learn these additional skills/concepts and re-submit the assignment. By analyzing the questions missed, students can earn the privilege of re-taking quizzes, as well.

Peer support. The lab (Room 9) has 40 computers, and classes are generally full. At the start of each term, each student is invited to choose one of the eight course offerings, and they are assigned a computer, usually in proximity with other students taking the same course. Cross-fertilization of ideas and learning is encouraged, especially in this course!!

Online course management. The "Edmodo" online tool is used to deliver course content. There, students find each assignment – organized by due date – turn in their work, and make comments. Ms. Taylor receives, grades, and comments on each assignment via Edmodo, as well. Overall grades are posted on an almost-daily basis (see above for link).

Dual (College Now) Credit

Mobile App Development is one of a number of courses for which Ms. Taylor has an articulation agreement with Lane Community College, through the High School Connections/College Now program. When it has become clear that the student is going to succeed in completing the course and earning an A or B, Ms. Taylor guides them through admission as a College Now student at Lane, and, with their "L number" they enroll in the corresponding course and term. At the end of the term, Ms. Taylor inputs grades via LCC, so the student receives college credit on their Lane transcript. The credit is good at almost every college/university in the U.S.

Classroom/Behavioral Expectations

1. Students are expected to arrive on time. Attendance is reported within the first 10 minutes of class.
2. Students are expected to use their assigned computer and to report any difficulties to Ms. Taylor.
3. Students are expected to ask for help ANY time a direction is not clear or there is any other hindrance to their learning. It is not acceptable to skip over anything that is not understood.
4. Students are expected to work consistently for the duration of the class; when one lesson is finished, the next one should be started. (Likewise, if a course is finished, another is begun!)
5. Students are expected to save ALL work on in their school server (files1) account, instead of the particular computer (hard drive) where they sit and work. This is a much safer place for the files.
6. Students in this class are not allowed to use the Internet for anything other than logging into Edmodo and completing course activities.
7. Games of any kind are not allowed (except as they are being tested by Game Dev students).
8. Students may not have food (including candy) or drink at the computers, except for water in closed containers. They may keep other drinks, in closed containers, at the computer-less tables, and visit them there.
9. Students are expected to check in with Ms. Taylor if they need to leave the room for a short period of time (bathroom, drink, etc.).
10. Students are expected to take breaks when and if they are needed; staring at a monitor for 70 minutes straight is not encouraged. Simple exercises to relieve eyes, wrists, etc. are encouraged.
11. Students may not socialize (talk) during class, other than to help each other understand the computer concepts at hand.
12. Cell phones should not be seen or heard, with the exception of their use with headphones for providing music, if it helps the student work (and, of course, to test apps!).

Special Needs

Appropriate modifications and accommodations will be made for students with identified special needs. Identified IEP, 504, and TAG students generally feel at home in this classroom environment, since learning is pursued without comparisons of any sort being made, and distractions are minimized. Each student is encouraged to take the time they need for the activities of this course, which they have elected to take.

Grading Policies

Course activities fall into six categories, weighted as follows: Reading – 10%, Nuggets – 15%, Quizzes – 5%, Labs – 57%, Final Project – 10%, Start/End Term activities – 3%.

Level of Mastery	Indicated (for various activity types)	Score given
Complete	For initial builds of apps – run exactly as they should. For reading/watching – summaries are detailed and show full understanding. For quizzes – answers are all correct. For creative apps – run well, and show full understanding and inventiveness.	4
Approaching	On any of the above – quality of work is somewhat less than it could be; small problems or omissions.	3
More work needed	On any of the above – quality of work is a great deal less than it could be; small problems or omissions.	2
Much work needed	The activity is only partially completed, or the wrong activity submitted.	1

