CPS251 Android Syllabus

Instructor: **Scott Shaper**
Email: **sshaper@wccnet.edu**

Class Meeting Times:

Please see schedule for class meeting dates and times.

Course Structure:

This is a 4-credit mixed mode course. Whereas 2 of the credit hours are online while the other 2 are in the classroom. This course is designed using the “flip the classroom” module.

To be successful, it is important that you do the required online work. You are expected to read the projects before the start of the next class, so you have a general understanding what will be discussed. As you are doing your reading, I would recommend you write down questions for the next class. During class time I will hit the highlights and answer question then we will start that week’s project or reading if there is no project.

The goal of this structure is to make in face to face/virtual class time shorter, more focused and less lecture.

In addition to the online and face to face/virtual class time you may still have homework time which will be used to get project done. Please expect to spend at least 12 to 20 hours for homework projects. If you do not have the time to dedicate to the homework projects, they take this class when your schedule is better. Also, do not wait until the last minute to complete you project. Students who do that ultimately fail. Front load your work get the project done at the beginning of the week and do your readings and quiz towards the end.

Course Objectives

When you finish with this course you will be able to:

- Demonstrate how XML is used to create App forms
- Identify appropriate use of Android classes
- Develop database using SQL lite for Android applications
- Demonstrate sound software engineering techniques in developing Android applications.

Communication

Email Communication

- Please send emails from your WCC account to be in compliance with federal privacy regulations.
- Provide a clear subject line including the course and number CPS251.
- Always include your first and last name in the email message.
- Make sure you question in direct. If you need me to look at your code make sure your code is on your GitHub account and provide me a link to where it is located.

Expectations and Availability of Instructor

I will usually respond to email messages within 24 hours. You should make a habit of checking your WCC email on a regular basis. Also, when sending an email make sure you are allowing enough time for me to answer. Sending emails about a homework project the day or before it is due is not a good idea.

Asking Questions

When asking questions via Email please make sure you include in the subject line the class you are in. Also make sure your question is direct and, if it requires me to look at your code make sure your code is on your GitHub account, provide me a link to your code, and provide a comment in your code where your question is related to.

Course Overview

This course will introduce you to the basics of writing Android applications using Android Studio and Kotlin.

Assumed Knowledge

It is assumed that you have taken CPS161 with a minimum grade of A- or CPS261 with a minimum grade of B-. It is assumed that you understand Java, we will be writing Kotlin in this class which is like Java so a good understand of Java is important.

Supplies Needed

Book

You must have a copy of the book

Android Studio 4.2 Development Essentials (Kotlin Edition) by Neil Smyth.

You can get the printed copy or pdf copy or both, but you must have the book as we will be using it for our readings and examples. On the next page is a link where you can get the PDF version or printed book. You can also try Amazon, but they do not have the PDF version which I have found to be more helpful.

https://www.ebookfrenzy.com/ebookpages/kotlin_android_studio_42_ebook.html

Computer

You will need a fairly powerful computer to run the Android Studio SDK. I would recommend at least 8 gigs of RAM, SSD drive, and 7th gen or better CPU. Android studio takes a lot of processing especially when you use the emulator. A

slower computer may work but will take a long time to run processes and may be frustrating.

If you do have a slower machine, I would recommend you use an android physical device to test your applications on. The emulator is very computer resource intensive.

If you do not have access to a computer that can run android studio effectively (the library and lab computers will not), you will need to get one or take the class at another time. We should have 5 laptops you can check out on for the semester on a first come first serve basis.

System requirements (scroll down to bottom of page)

https://developer.android.com/studio

Academic Dishonesty

All forms of academic dishonesty including but not limited to collusion, fabrication, cheating, and plagiarism will result in immediate failure of this course.

- Collusion is defined as the unauthorized collaboration with any other person in preparing work offered for individual credit.
- Fabrication is defined as intentionally falsifying or inventing any information or citation on any academic exercise.
- Cheating is defined as intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.
- Plagiarism is defined as the appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit.
- Attempting to take quizzes and tests outside of class (unless permission has been given) is considered cheating.
- Changing homework projects after they are due is considered cheating.

- If a student is taking this class over and attempts to use a previous semester's work as their own current work is considered cheating.

Attendance

This course is a blended course meaning two hours of class time is spent online and two hours is spent in the classroom (instead of four hours in the classroom). You are required to show up for class. If you choose not to show up for class than the information you missed is on you. This is not intended to be an "online" class and it is not written that way.

If attendance becomes a problem from a class perspective, I reserve the right to create an attendance policy that will involve penalties for not attending.

Pre-reading and Doing the Examples

You will not learn by just reading or by just listening to me, you must do the examples provided in the book to get an understanding of how Android studio works. This class module is reflective of what is called the "flipping the classroom" model. In this model students will pre-read and do the examples for the next class, then in the next class we will go over the highlights and discuss what we learned, any time left will be to work on next week's project.

To ensure that students are doing the work they must (prior to the start of class) complete a short quiz in that week's learning module. You may also have a project to do as per the schedule.

Equipment Required

When coming to class you are expected to have your computer that is set and ready to create Android programs using the latest version of Android Studio. If you cannot do

that because the computer, you are using is a desktop then you must bring your book or have access to the PDF version of the book. Any time we have left in class will be used to work on your project (preferred and smartest) or start your readings for next week.

Grading of Projects

Full Credit

To get full credit, a student's project must work exactly as described in the instructions. Also, all the required submission screenshots and or videos must accompany the submission. Please see submission instruction located in each learning module where a project is due.

Partial Credit

It is expected that students fully complete their projects. I understand that some, at times, may not 100% complete their project.

If a student does not complete their project but has at least 85% of it done, they are to write (in the Blackboard Submission area) all the areas of their project they did not complete and what files they had issues with (with appropriate comments in those files). If a student submits a project that is not complete, they are expected to provide the above-mentioned documentation or expect to receive a zero for the project. If a student has less than 85% of the project done then it will be a zero.

Some students in the past have submitted very poorly done and mangled projects with the expectation that the instructor is to go through their code line by line and provide credit for what works or may seem to work. That will not happen in this class. Though I will look at your code overall, I will not hunt through every line looking for what works and what doesn't.

All students must put their projects in GitHub where I can access the code and they must give me the exact web address where that is to be found. Do not provide me with a link to the whole repository, I will not hunt for your project.

Late Projects

Late projects are not accepted no exceptions. Please see schedule for project due dates.

Homework Solutions

I will be going over my solutions to the homework projects during the class day in which they are due, if requested by the class.

Collaborate Learning

I will allow students to collaborate on homework projects in and outside of class. There is a clear difference between collaboration (helping each other) and copying (just copy what someone else did). If I see signs that collaboration is turning into copying, then I will terminate collaborative learning. Also, the offending student(s) may face zeros on the projects they copied.

Grading Feedback

If a project is graded at 100%, I normally do not provide feedback. If I see some major or minor issues, I will provide small feedback on that. Some of these projects are complex to really understand things. If you have questions about your project (post grading) that is beyond an email it is best to talk to me during office hours.

Grading Questions

All questions about grades must be addressed within 7 days or by the last day of class (whichever is less) of the return of the project. After that period, no grades will be reconsidered. Your grades are posted in Blackboard and it is your responsibility to check your grades regularly.

Possible Points

The following table lists all the point possible for this class. Subject to change with notice.

Project/Project	**Points**
First two projects Week 1	50 (25 apiece)
Quizzes(12)	120 (10 apiece)
All other projects (8)	800 (100 a piece)
Final Project	200
Final Exam (optional)	Up to 100 point grade booster

Audits and Withdraws

I don't not grant audits or withdraws. If a student wants to audit or withdraw, they can within the timelines permitted by the college. Other than that, I do not give audits or withdraws.

Grades

Letter Grade	**Percent Range**
A	100% – 93%

A-	92.9% - 90%
B+	89.9% - 87%
B	86.9% - 83%
B-	82.9% - 80%
C+	79.9% - 77%
C	76.9% - 73%
C-	72.9% - 70%
D+	69.9% - 67%
D	66.9% - 63%
D-	62.9% - 60%
F	59.9% or less