COSC 4390.001 TOPICS IN COMPUTER SCIENCE & COSC 5384.001 MOBILE APPLICATIONS, Fall 2021

M/W/F 11:15AM - 12:10PM @ COB 207

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Office Hours: M/W/F 10:00AM-11:00AM @COB 315.12

General Course Information

Required Device	**Computer.** *Windows or iOS computer*
Suggested Device	**Mobile Device.** *An Android device, and a USB cable.*
Materials	**No required Textbook.** *Resources will be posted on Canvas.* *Android Developer* *Google Developer*
Pre-requisites	COSC 1336 (or COSC 1315) and COSC 1337
Course Description	This is a programming course. But friendly for beginners. Experience with C, or C++ or Java is helpful. This course covers the basics of mobile application development, with a focus on Android programming. By studying sample apps, students will learn the fundamentals of web programming for mobile devices, the frameworks of Google's Android Studio, Architecture, design and engineering issues, techniques, methodologies, and third-party platforms for mobile application development.
Learning Outcomes	1. Identify the differences between mobile web and native mobile application 2. Master the basics of programming constructs such as for loop, if-else, arrays, xml/json data format 3. Be able to create attractive user interface for mobile apps 4. Attain skills for designing and implementing basic mobile apps. 5. Develop cloud-based mobile apps that interacts with the data 6. Distribute the developed app to the Android Google Play store, Apple Store, or Windows store. 7. Practice in applying the learned development skills to create specific apps.

Grading Policy

Weighting Scheme	Programming Assignments - 50% Final Project - 20% Quizzes - 15% Attendance and Participation - 15%	90.0 - 100% A 80.0 - 89.99% B 70.0 - 79.99% C 60.0 - 69.99% D Below 60% F

Assignments

- All code and files required for the assignments must be submitted in electronic form via Canvas.
- There are four **individual** programming assignments throughout the semester. Due dates will be specified and are firm. Individual programming assignments **must** represent individual student work.
- **No late submissions will be accepted.**
- Your goal should be to make it easy for us to see how great you did. If we make a couple of good faith attempts but fail to get your program running, we will try once to contact you to help us. If we still cannot get your work to compile, it will receive a zero grade.

Projects

- All code and files required for the projects must be submitted in electronic form via Canvas.
- There will be one semester long project, to be completed in teams.
- Each team has to submit a one-page written proposal for the project.
- In addition to the programming project, each team will give a brief in-class presentation demonstrating their final project.
- **No late submissions will be accepted.**

Quizzes

- Each course module includes at least one formative short multiple choice quiz. At the end of each module, students take a summative multiple choice quiz that assesses their knowledge of the concepts covered in the module.
- Pop quizzes may be given for extra credit, to be determined.

Computing

- This class will involve extensive use of Android Studio and Android devices (both virtual and physical). You may set up your own personal computer for this build environment so you can work at your convenience outside of the lab (this is recommended). Tutorials will be provided to aid in your setup.
- If you have an Android device (phone, phablet, tablet) then you may use that for development (highly recommended!!). Note: a physical device is not mandatory for the course.

Course Policies

- Assignments should be turned in no later than the deadline. Turn in what is completed by the deadline for partial credit. **No late submissions will be accepted**.
- You are expected to do your own work. You may assist each other with general concepts, but direct assistance with a particular assignment or any attempts to gain an unfair academic advantage will not be tolerated. **Any indication of cheating and/or plagiarism on an exam/assignment/project will be an automatic 0 (zero) for the exam/assignment/project for all students involved. Solutions copied from the internet, instructor's manual, etc. will also be given zero credit.** If you have questions about the

line between assistance and cheating, discuss it with the instructor. For examples of Scholastic Dishonesty, please visit Section 8-802 of the Manual of Policy and Procedures.

Attendance and Participation

- Attendance and participation will be considered in a portion of the student's grade.
- Each student is expected to participate by making regular forum posts on the discussion board under Canvas, either asking a question or responding to an existing topic.
- Regular course attendance is mandatory. If attendance is low, the instructor reserves the right to administer pop quizzes for credit, to be determined.

Information for Classrooms and Laboratories

- Students are expected to wear face masks covering their nose and mouth in public settings (including classrooms and laboratories). The UT Tyler community of Patriots views adoption of these practices consistent with its Honor Code and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.
- Students who are feeling ill or experiencing symptoms such as sneezing, coughing, digestive issues (e.g. nausea, diarrhea), or a higher than normal temperature should stay at home and are encouraged to use the UT Tyler COVID-19 Information and Procedures website to review protocols, check symptoms, and report possible exposure. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email saroffice@uttyler.edu.

***This syllabus is subject to change at any time at the discretion of the instructor.**

Tentative Course Schedule

Week	Date	Lecture Topics	Assignments
01	8/23-27	Syllabus Introduction to Software Development My First App: Hello Android Studio!	Pre-course Survey due
02	8/30-9/3	Introduction to Android Android Basics (syntax, types)	
03	9/8-10	No class on 9/6 Android Basics (manifests, java, res)	
04	9/13-17	Android (property, object, method)	9/17: Assignment 1 due
05	9/20-24	Android (Activities, Resources, and Gradle)	
06	9/27-10/1	Android (Intent, Navigation Drawer)	Group Project Proposal due
07	10/4-8	Android (with Firebase)	10/8: Assignment 2 due
08	10/11-15	Android (with Data)	
09	10/18-22	Test	
10	10/25-29	Android Architectures	10/29: Assignment 3 due
11	11/1-5	Google Flutter for Beautiful UIs	
12	11/8-12	Material Design & Standards	
13	11/15-19	Polishing & Publishing	11/19: Assignment 4 due
14	11/22-26	Thanksgiving Break	
15	11/29-12/3	Final Project Presentation	Final Project due

***Note that the schedule is subject to change as the course progresses.**