

# CSC 191 – Advanced Android Programming

**Course Description:** (2h) Study of the design and development of software for mobile devices, with a particular focus on developing for the Android system. Topics to be covered include application lifecycles, user interfaces and interaction, device communication, threading, advanced Java, and software development processes. Cannot be counted towards the Bachelor of Science in Computer Science.

**Prerequisites:** Computer Science 111

**Professor:** Dr. William Turkett - Manchester 240, 758-4427, email: turketwh@wfu.edu

**Office Hours:** 12:00-1:30pm TR, drop-in (if door open [afternoons are usually good]), and by appointment

**Meeting Time For Class:** 12:00-12:50pm WF, Manchester 017

**Webpage:** <http://turkett191.tumblr.com>

Please check the website frequently for updates concerning the class.

**Textbook:** Professional Android 2 Application Development, by Reto Meier – Wrox (Wiley) Publishing – ISBN-13: 9780470565520 (the book is important for this class, for examples and as a reference)

## Grading:

- Tests – 40% (15% midterm, 25% final)
- Homeworks – 40%
- Project – 20%

## Expected Grading Scale

	A 93-100	A- 90-92
B+ 87-89	B 83-86	B- 80-82
C+ 77-79	C 73-76	C- 70-72
D+ 67-69	D 63-66	D- 60-62
F 0-59		

## Attendance:

Regular attendance in and preparation for the class is expected.

## Tests:

There will be two tests (including the final exam) to judge the student's progress in the course. These tests may include material from the appropriate sections of the textbook, lectures, homeworks, and programming assignments and may include some cumulative aspects. Tests and exams will be closed book. Make up tests will be allowed only if the absence is excused by the University.

**Homeworks:**

Individual homeworks will be assigned at regular intervals to reinforce the content presented in the course. Homeworks will primarily be small programming projects to gain experience in and demonstrate understanding of Android programming skills.

**Project:**

A semester-long project is planned for the class. Students will be split into teams of size three to four. Deliverables on the project may include, but are not limited to, homework assignments (as discussed above), software development process documentation, and in-class presentations.

**Note on Programming Assignments:**

All programming assignments will be graded on both code quality (correct, complete, efficient, etc.) and programming style (appropriate identifiers, commenting, etc.). The split will typically be 85%,15%. A student's level in completion of courses will be taken into account when reviewing the assignments in this manner.

**Academic Integrity:**

All work should be done independently by each student. Copying of partial or complete work will be referred to the University Judicial System. You should keep evidence when possible to demonstrate your own work. Should a question of authorship arise you will be expected to produce documents that trace the development of your work. Algorithmic and electronic means of detecting copying may be used by the instructor on submitted assignments.

**Learning Assistance:**

If you have a disability that may require an accommodation for taking this course, please contact the Learning Assistance Center (758-5929) within the first two weeks of the semester.

**Planned Topics To Be Covered:**

- Use of Eclipse and the Android hardware emulator
- Application lifecycle
- User interfaces
- Listeners
- Inter-application communication
- Network-based communication
- Location and map functionality
- Services and threading
- Java (as needed)
- Software development processes (as needed)

**Additional Topics If Time Allows:**

- Multimedia functionality
- Sensor functionality
- Data management
- Phones vs. Tablets

**Course Calendar:**

Wednesday, August 31<sup>st</sup> – First day of class

Wednesday, October 5<sup>th</sup> – Last day to drop

Friday, October 14<sup>th</sup> – Midterm exam

Friday, October 21<sup>st</sup> – Fall Break – no class

Wednesday, October 26<sup>th</sup> – Midterm grades due

Wednesday, November 23<sup>rd</sup> & Friday, November 25<sup>th</sup> – Thanksgiving – no class

Wednesday, December 7<sup>th</sup> – Project presentations

Friday, December 9<sup>th</sup> – Project presentations, Last day of class

Monday, December 12<sup>th</sup> – Final Exam at 2:00pm

**Course Outcomes:**

By the end of this course, students will be able to:

- Create a complete mobile application for the Android platform
- Choose between and employ suitable programming language features relevant to the development of event-driven software
- Demonstrate competence with available tools for Android platform development
- Demonstrate competence with the Java programming language beyond the CSC 111 level
- Describe the purpose of and employ simple software process artifacts

**University Closure:**

In the event that the University closes due to a health pandemic or other emergency, you will be provided with my home address, phone number, and a *CSC 191 Lecture Plan* document. You are requested to read the textbook material denoted within that document. Lecture materials, in the form of Powerpoint slides and/or videos; programming exercises; homeworks; and examination materials, will be distributed electronically via email or via postal mail during the closure period. If the Internet is available, you should submit electronic versions of your solutions through the Sakai site, and if that fails, send the electronic solutions of the homeworks and programming exercises to either my WFU email address or [turketwh@gmail.com](mailto:turketwh@gmail.com). Tests should be taken closed book, without access to papers, persons, or other resources, and submitted via postal mail. A return date for the examinations will be specified in the mailing.

The Department of Computer Science would appreciate your help preparing for emergency situations in which students might be away from campus for an extended period of time during the course of a semester. For example, extreme weather or widespread health concerns might lead to an extended, but temporary, closing of campus facilities. Under such circumstances we would like for you to be able to continue your academic studies through electronic or postal communication channels. Please assist your instructor by providing the following information. This information will remain with your instructor and will not be disseminated in any way. Collected information will be shredded at the end of the semester.

Name: \_\_\_\_\_

WFU e-mail address: \_\_\_\_\_

(Optional) Other, non-WFU, e-mail address: \_\_\_\_\_

Telephone number where you can be reached if campus is closed:

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Mailing address where you can be contacted if campus is closed:

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