

## CPSC 475 – Android Mobile Computing

**Instructor:** Keith Perkins

**Office Hours:** Luter Hall 207  
M,W 11:50-1 PM  
F 1-2 PM  
Tues,Thurs 10:45-12  
Fri 10-12

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**Purpose:** This course covers core concepts of the Android programming platform and its key components using the Android SDK and the Java programming language. Topics include application lifecycle, user interface design, activities and intents, data persistence, networking, messaging, location-based applications, and android services.

**Objective:** As computer systems migrate from desktop to mobile devices it is necessary for PCSE majors to be versed in programming for these new environments. This course addresses that need by providing a lecture based, project intensive introduction to android programming. Upon course completion students will be able to develop a variety of complex Android applications.

**Web:** Notes and assignments announced on CNU Scholar.

**Required Hardware:** **None.** It is however, highly recommended that you obtain at least an Android 4.4 device for this course.

**Required Text:** None, course material will come from lecture notes, and the web.

### Exams

There will be **1 exam** during the semester and 1 **final exam** at the end of the semester. The final exam is comprehensive.

### Projects

Projects will be assigned throughout the semester. See the 'Weekly Content and Assignment Calendar' section below for assignment and due dates. Due dates will be clearly noted and rigorously observed. All projects count equally. **Projects turned in up to 1 week late will be penalized 50%. Projects later than 1 week will not be accepted.**

### Make Ups

I will not give make-up exams or accept any late projects except in cases of documented illness or valid justification.

### Grading Policy:

Final grades will be based on the following weighting distribution.

Projects .....50%  
Midterm .....25%  
Final Exam.....25%

### Weekly Content and Assignment Calendar

Week	Topics	Test	Project Assign	Project Due
1	Introduction		Project1	
2	Android Studio and Android programming basics			
3	User Interface layouts, event handlers		Project2	Project1
4	Intents, Preferences and Serialization			
5	Threading and Concurrency Intents			
6	Networking and Libraries		Project3	Project2
7	MVC, ListView, Gridview			
8	Test and in class lab	Test1		
9	Location and Google Maps		Project4	Project3
10	Sensing and Sensors, Alarms			
11	Notifications , Services, Broadcast Receivers			
12	Topics		Project5	Project4
13	Topics			
14	Topics			Project5
15		Final		

**Project List (Complete project description and requirements will be available on scholar)**

**15 pts - Project 1:** Develop Local, User Interface Intensive, Mobile application

**20 pts - Project 2:** Develop a Camera and Messaging Based application

**20 pts - Project 3:** Develop a Networked, Multithreaded application

**20 pts - Project 4:** Develop a Networked, multithreaded data display application

**25 pts - Project 5:** Develop a Graphical widget tracking application using Android services, broadcast receivers and intents.

### Numerical Grading Scale

A	94-100
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	77-79
C	74-76
C-	70-73
D+	67-69
D	64-66
D-	60-63
F	< 60

**Honor Code**

The Honor Code will be strictly observed. All work must be done individually (except for assignments that explicitly allow teamwork). Cheating on any work will result in either a score of zero or an F for the course, and/or the filing of a case in the CNU honor court. Violation of the honor code may result in dismissal from the University.

**Class Conduct:**

Treat others in the class with respect. Please feel free to ask questions. Please arrive to class on time. Please turn off cell phones and beepers.

**Disabilities:**

In order for a student to receive an accommodation for a disability, that disability must be on record in the Dean of Students' Office, 3<sup>rd</sup> Floor, David Student Union (DSU). If you believe that you have a disability, please contact Dr. Kevin Hughes, Dean of Students (594-7160) to discuss your needs. Dean Hughes will provide you with the necessary documentation to give to your professors.

Students with documented disabilities are required to notify the instructor no later than the first day on which they require an accommodation (the first day of class is recommended), in private, if accommodation is needed. The instructor will provide students with disabilities with all reasonable accommodations, but students are not exempted from fulfilling the normal requirements of the course. Work completed before the student notifies the instructor of his/her disability may be counted toward the final grade at the sole discretion of the instructor.

**Success:**

I want you to succeed in this course and at CNU. I encourage you to come see me during office hours or to schedule an appointment to discuss course content or to answer questions you have. If I become concerned about your course performance, attendance, engagement, or well-being, I will speak with you first. I also may submit a referral through our Captains Care Program. The referral will be received by the Center for Academic Success as well as other departments when appropriate (Counseling Services, Office of Student Engagement). If you are an athlete, the Athletic Academic Support Coordinator will be notified. Someone will contact you to help determine what will help you succeed. Please remember that this is a means for me to support you and help foster your success at CNU.

**Academic Support:**

The Center for Academic Success offers free tutoring assistance for CNU students in several academic areas. Staff in the center offer individual assistance and/or workshops on various study strategies to help you perform your best in your courses. The center also houses the Alice F. Randall Writing Center. Writing consultants can help you at any stage of the writing process, from invention, to development of ideas, to polishing a final draft. The Center is not a proofreading service, but consultants can help you to recognize and find grammar and punctuation errors in your work as well as provide assistance with global tasks. Go as early in the writing process as you can, and go often!

You may drop by the Center for Academic Success to request a tutor, meet with a writing consultant, pick up a schedule of workshops, or make an appointment to talk one-on-one with a University Fellow for Student Success. The Center is located in Newport Hall, first floor, room 123.