

CPSC 575 – Android Mobile Computing

Instructor: Keith Perkins

Office Hours: Luter Hall 207
M,W,F 11-12 AM
T,Th 10:50-12:20

E-mail: keith.perkins@cnu.edu

Phone: 594-8425

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 7 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.**

Significant differences between graduate and undergraduate versions of this course

All graduate student projects must be professional and significantly more polished than undergraduate student projects. They must be well researched and designed. They must be rigorously tested against edge condition input as well as typical input.

Additionally, students taking the graduate version of this course will be expected to do one or more of the following;

- Research one complex Android concept and present one 75 minute talk and paper. Topics include; cloud based application preferences, cloud messaging, cloud infrastructure, simple game loop implementation, Bluetooth or wifi-direct communication, webview based mobile application development or other topics approved by instructor.**

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.

Projects40%
Presentation10%
Midterm25%
Final Exam.....25%

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

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

10 pts - Research presentation and paper– See highlighted section above

Numerical Grading Scale

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|----|--------|
| A | 91-100 |
| A- | 86-90 |
| B+ | 81-85 |
| B | 76-80 |
| B- | 73-75 |
| C+ | 68-72 |
| C | 63-67 |
| C- | 60-62 |
| 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, 3rd 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.