



NORTHWEST
MISSOURI STATE UNIVERSITY
MARYVILLE | KANSAS CITY

School of Computer Science and Information Systems
44-644 Mobile Computing - Android (3 hours)
44-444 Mobile Computing - Android (3 hours)
Spring 2022

Instructor: Dr. Charles Hoot

Phone: 660-562-1801

Office Hrs:

MWF 1-3

TTh 2-3

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Office: Colden Hall 2163

Section 1 TR 9:30-10:50 CH 1350

Section 2 TR 8:00-9:20 CH 1350

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Prerequisites: CSIS 44242 with a grade of C or better, or [CSIS 44542](#) with a grade of B or better. Knowledge of object-oriented programming and an interest in exploring new technologies.

Textbook : *No textbooks are required; all materials will be provided through the course website.* Some supplemental material can be found here:

- Google - Training for Android Developers (<https://developer.android.com/training/index.html>)
- Google - User Interface Guidelines (https://developer.android.com/guide/practices/ui_guidelines/index.html);
- The Android Developer's Cookbook (available in university library);

Software and resources: Students must have access to the following:

- . Their campus-assigned laptop at every class session
- . Android Studio (Free)
- . Genymotion Android Simulator (Free)
- . Various tools and libraries as directed by the instructors.
- . Lockdown browser (for quizzes)
- . A repository for the project (GitHub)

Course description: This course provides an introduction to mobile computing and mobile application development, with an emphasis on the Android platform.

Student learning outcomes:

Upon completion of this course, each student should be able to:

1. Describe the frameworks that support an Android application
2. Use Android studio to create and debug an app
3. Create a layout for an android app
4. Use GPS location services
5. Use JASON to get information from an online service
6. Use a mobile backend data service to support an app.
7. Represent information using modern data serialization formats
8. Utilize technologies *not* taught in this course with greater confidence and efficiency ("learn how to learn")
9. Explain, from experience, how to work well with others on a team
10. Make a compelling, professional presentation

Assessment methods: Desired Student outcomes will be assessed via programming assignments quizzes, midterms, and a final exam.

Instructional methods: Instructional methods include lectures, individual work, and quizzes.

Graded course requirements:

| Category | Weight |
|-------------------|-------------|
| Attendance | 5% |
| Quizzes | 5% |
| Assignments | 20% |
| Midterm Exams (2) | 35% |
| Final Project | 20% |
| Final Exam | 15% |
| Total | 100% |

Grading scale:

| Undergraduate Credit | | Graduate Credit | |
|----------------------|-------|------------------|-------|
| Percent Range | Grade | Percent Range | Grade |
| 88-100% | A | 90-100% | A |
| >= 78% and < 88% | B | >= 80% and < 90% | B |
| >= 68% and < 78% | C | >= 70% and < 80% | C |
| >= 58% and < 68% | D | >= 60% and < 70% | D |
| below 58% | F | below 60% | F |

Course outline/major topics studied:

This is a tentative schedule and is subject to change. For exact information, including important dates, check the course website.

Tentative Spring 2020 Schedule

| | |
|--------------------------------|---|
| Week 1 – Jan 10 | Introduction, Android studio |
| Week 2 – Jan 17 | Whats app Layouts |
| Week 3 – Jan 24 | Layouts |
| Week 4 – Jan 31 | Life cycle of an app, intents |
| Week 5 – Feb 7 | Recycler views Project Proposal, Friday Feb 11 |
| Week 6 – Feb 14 | Recycler views Midterm 1, Thur Feb 17 |
| Week 7 – Feb 21 | Fragments Dialogs Project Milestone 1, Friday Feb 25 |
| Week 8 – Feb 28 | JSON Data Persistence |
| Week 9 – Mar 7 | Spring Break – No class |
| Week 10 – Mar 14 | Data Persistence Parse, MBaaS |
| Week 11 – Mar 21 | Parse, MBaaS Project Milestone 2, Friday Mar 25 |
| Week 12 – Mar 28 | Action Bar, Tabbed applications |
| Week 13 – Apr 4 | Action Bar, Tabbed applications Midterm 2, Thursday Apr 7 |
| Week 14 – Apr 11 | Custom Views Project Milestone 3, Friday Apr 15 |
| Week 15 – Apr 18 | Animation, Events |
| Week 16 – Apr 25 | Project presentations Tuesday Apr 26 Final, Thursday Apr 28 Presentation Submission, Friday April 29 Project Submission, Saturday April 30 |
| Week 17 – May 2 Finals Week | Project presentations Section 1: Thursday, May 5 at 7:30 am - 9:30 am Section 2: Thursday, May 5 at 2:00 pm - 4:00 pm |

Note: Course schedule is subject to change with instructor notification and students will be responsible for abiding by these changes.

Academic Calendar: <http://www.nwmissouri.edu/academics/calendar.htm>

Final Exam Schedule: <http://www.nwmissouri.edu/registrar/finals.htm>

Programming Assignments

All assigned work is to be submitted electronically on canvas to the appropriate assignment by 11:59pm of the due date. Work can be submitted late up to 24 hours, but will be assessed a penalty of 10% of the maximum possible score on the assignment. Any work submitted after the late period will receive **NO** credit. The number of points for an assignment may vary depending on the difficulty of the assignment.

Quizzes/Exams

Quizzes will be unannounced and will use the lockdown browser from the Canvas Website. Make sure you have it installed on your computer.

The midterms and final will be held on the dates specified. If you must miss an exam, it is your responsibility to notify the instructor in person prior to the exam and to provide the instructor with written verification of the reason for your absence. Failure to follow these instructions may result in a grade of zero on the exam.

All quizzes/exams are closed book and no resources are allowed.

No calculators, cell phones, or other electronic devices can be used during exams or quizzes unless explicitly allowed by the instructor.

Group Project

- All students must complete a final project
- The final project will be done in groups of 3 or 4
- Students will be required to provide a **final project proposal and three milestones and a final submission**. Each team will give a presentation in class as well.

Grade verification:

Your score on each component will be posted on Canvas as soon as that component has been graded. You are responsible for checking Canvas at least once a week to ensure that your grades are properly posted. ***If there is an error in grading, you must bring that to the attention of the class assistant or instructor within one week of the time the grade is posted. Grades cannot be changed after the one-week period.***

Attendance

You are expected to attend class each day AND BE ON TIME. Attendance will be a factor in your grade. If you must miss class due to a university sponsored event (documented with an excuse signed by the university sponsor prior to the event) or by circumstances considered extenuating by the course instructor, it is your responsibility to inform the instructor class time via email. If the instructor was not notified before class time, the absence will be unexcused. Please refer to the general university policy on attendance at <https://www.nwmissouri.edu/policies/academics/Attendance.pdf>

Class Participation

As well as attending all classes, you are expected to be an active participant in classroom activities and discussions.

Classroom Decorum

Students are required to come to class prepared for the day's activities. That means be in your seat before the class starts (or logged into our zoom session), with the textbook, notepaper or notebook and writing instrument. We will start class promptly at the designated time.

Cell phones and pagers must be turned off during class time and are not allowed during exams. Laptop computers and handhelds may be used during class time if they are being used for a class activity, such as taking notes. Students are not to read or send e-mails, text messages, or surf the web during class time. Anyone using an electronic device to give or receive assistance during exams will be in violation of the "Academic Integrity" section of the catalog.

Northwest Online Tools

Course materials are distributed through the course website at Northwest Online. To access the site, go to <http://www.nwmissouri.edu/online/>. Click the link for Technical Support to see the basic technical requirements your computer system must satisfy. Use the links to configure and test your devices.

Accessing Course Materials

To access course materials go to the Northwest Online site and log in. Your login ID is your Northwest Student Number (S-----). Your password is your social security number, or your 919 number, without dashes. If you are a returning online student, your password will be the same as last trimester. During the first week of classes, *all* students are required to visit the site, check that their computer system meets the technical requirements, and complete the Student Orientation Course, which shows how Northwest Online operates.


Announcements and email

Announcements are communicated via the **Announcements** page on the course website and your Northwest Missouri State University email account. It is your responsibility to check each of these sources daily. Note that you must use your Northwest e-mail account on the Northwest Online site. For security reasons, emails without an appropriate subject may not be opened. Emails *must* include a useful signature; unsigned emails may not receive a reply.

Northwest Online Helpdesk. for Canvas and eConferencing Software

Hours: 24/7/365

helpdesk@northwestonline.org

 877.740.2213

NWMSU Helpdesk. for General Questions on Campus Computer, Software, and Networking

Hours: Monday-Thursday 8-9; Friday 8-5 helpdesk@nwmissouri.edu

 660.562.1634

Final exams: If an emergency occurs that prevents the administration of a course scheduled final examination, the final course grades will be calculated based on the work in the course completed to that point in time and the faculty member's considered judgment. Final exams will not be rescheduled, and a grade of "I" will not be given as a result of an institutional cancellation of a final examination. This final exam policy does not apply to online courses.

Academic Administrative withdrawal: When it is in the best interest of Northwest Missouri State University for a student to withdraw, a student will be given a W, put on administrative hold, and given notice that they

are about to be withdrawn. This action will result in removal of all credits associated with courses that have yet to be completed in the semester in question and the student will be administratively withdrawn from the University. An Administrative Withdrawal does not affect the student's grade point average. Please refer to Northwest Missouri State University's Academic Administrative Withdrawal Policy at: <https://www.nwmissouri.edu/policies/academics/Adding-Dropping-Withdrawals.pdf>

University communications: Students are expected to use their Northwest student email account for any electronic correspondence within the university. Students are also strongly advised to check their email and CatPAWS accounts on a regular basis.

Academic integrity policy: The students, faculty, and staff at Northwest endeavor to sustain an environment that values honesty in academic work, that acknowledges the authorized aid provided by and intellectual contributions of others, and that enables equitable student evaluation. Please refer to Northwest Missouri State University's Academic Integrity Policy at <http://www.nwmissouri.edu/policies/academics/Academic-Integrity.pdf>

Learning or Living Accommodations Request Process: Northwest Missouri State University complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 [ADA] and the ADA Amendments Act of 2008 [ADAAA]. If a student has a documented disability that qualifies under the ADA/ADAAA and requests accommodations, they should review the Accessibility and Accommodations webpage at <https://www.nwmissouri.edu/titleixequity/accessibility/index.htm> for guidance, including the accommodations application and supporting documentation requirements. Contact ada@nwmissouri.edu or 660.562.1873 for further assistance. For the university policy on disability accommodation refer to <http://www.nwmissouri.edu/policies/student/Disability-Accommodation.pdf>

Non-discrimination and anti-harassment policy: Northwest Missouri State University is committed to maintaining an environment for all faculty, staff, students, and third parties that is free of illegal discrimination and harassment. Please refer to the Non-Discrimination and Anti-Harassment Policy at <http://www.nwmissouri.edu/diversity/titlevi.htm>

Family Educational Rights and Privacy Act (FERPA) policy: Family Educational Rights and Privacy Act of 1974, as amended (commonly known as the Buckley Amendment), is a federal law which provides that colleges and universities will maintain the confidentiality of student education records. Please refer to the Family Educational Rights and Privacy Act (FERPA) Policy at <http://www.nwmissouri.edu/policies/academics/Family-Educational-Rights-and-Privacy-Act.pdf>

COVID-19 Classroom Mitigation: Northwest is committed to the health and safety of the University community. Face coverings are required in all instructional spaces (classrooms/labs/studios) for all students and faculty until campus vaccination and infection data allow the university to direct otherwise. Should a non-vaccinated faculty member or student make close contact with a symptomatic, COVID-19 positive student, they will be asked to quarantine and not enter University facilities (unless otherwise instructed by University Wellness) or attend class until that quarantine period is over. Faculty will provide means for students missing class because of COVID-19 quarantine or isolation to keep up with course work, but students must communicate with faculty and adhere to the quarantine/isolation start and end dates. All other illnesses or absences for personal reasons will be handled as they were before the pandemic. Northwest further asks all students and faculty to practice good hygiene and not enter University facilities or attend face-to-face classes when they feel sick. Students who do not comply with these requirements will be subject to standard disciplinary procedures according to the Northwest Student Code of Conduct (i.e. verbal and written warnings

followed by a hearing, if necessary). We thank you for doing your part to maintain our learning environment and to protect the health of fellow Bearcats.

Change in Course Delivery:

It is our goal as a University to continue all courses as planned on campus. However, due to unforeseeable impacts of COVID-19 and its variants, faculty and students must be prepared to adjust course formats or mitigation strategies anytime during the semester, either permanently or for a short term. The University and faculty will communicate with students in the event such action is deemed necessary to preserve the health and safety of students and employees.

Quarantine checklist:

YOUR to do List:

- Call 911 if you experience difficulty breathing or a change in your level of consciousness.
- Contact Wellness Services at 660.215.8573 with questions. You may text or call between 7 a.m. and 7 p.m. If you have an emergency outside of these hours, contact UPD at 660.562.1254.
- Notify all of your instructors of your absence and predicted date of return. They will assist you in your coursework by providing information on their strategies for distance learning. Please ensure that you have your laptop, notes, textbooks, and other necessary course materials when you enter into quarantine. Lack of engagement in your coursework during quarantine will likely result in lower grades or failure. When communicating with your instructors, you may provide them with the reason you cannot be in the classroom, but you are not required to do so.
- Stay away from all people.
- You must talk with a Wellness Services staff member every few days, either by phone, text, Zoom or Skype. If you develop COVID-19 symptoms, you MUST notify Wellness Services immediately. It is important for your wellbeing that Northwest maintains contact with you. We want to know you are doing okay, answer any questions you have, check for symptoms and assist with your needs.

Behavior and Wellness: Northwest focuses on student success—every student, every day.

The Wellness Center, 660.562.1348, offers free counseling for students coping with depression, anxiety, alcohol or drug misuse, relationships, and other emotional, social, and academic stressors. In addition, faculty, staff, and students who are concerned with student wellbeing can report their concerns, including anonymously, to the Behavioral Intervention Team, so that the student can be offered relevant support, at this link: [Concerning Behavior Reporting Form](#). If you are concerned about the immediate safety of a student, please call the University Police, who have specialized training in intervention, at 660.562.1254.

During this time of Covid and enhanced Online course content delivery, it is easy to feel isolated and not take the best care of yourself. But there are resources out there that can help you.

Wellness Center Website: <https://www.nwmissouri.edu/wellness/index.htm>

Wellness Center Well-Being Resources (lots of

links): <https://www.nwmissouri.edu/wellness/wellness%20resources.htm>

TAO (Therapy Assist Online) (self guided): <https://www.nwmissouri.edu/wellness/counseling/tao/index.htm>

Body U (self guided) : <http://bodyu.org/>

RESPOND training (training for helping others, students are welcome): <https://www.nwmissouri.edu/wellness/respond.htm>

Wellness Center Workshops(lots of topics, students welcome): <https://www.nwmissouri.edu/wellness/Hope4All/workshops.htm>

