



NORTHWEST
MISSOURI STATE UNIVERSITY
MARYVILLE | KANSAS CITY

School of Computer Science Information Systems
44643-01/44443-01
Mobile Computing – iOS
3 credit hours
Fall 2022

Instructor: Dr. Ajay Bandi
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Prerequisites: CSIS 44242 with a grade of C or better, or CSIS 44542 with a grade of B or better.

Textbook and supplementary materials: All the materials will be posted on NorthwestOnline

Course description: Students will learn the intricacies of mobile computing development with an emphasis on the iOS platform.

Student learning outcomes:

- Learn swift programming basics.
- Create a project in the XCode.
- Design and implement apps in UIKit framework adhering to the coding standards.
- Understanding the key components of the Foundation and UIKit frameworks.
- Effectively debug and resolve the errors in an application.
- Design responsive UI using stacks and constraints.
- Learn importing of third-party packages and implementing protocols and delegates.
- Create animations, use media components, and complex controllers (collection view controller, table view controller, etc.)
- Retrieving and using data from third party API's.

Assessment methods:

Assignments, final project, research paper, and class participation

Instructional methods: Instructional methods may include lectures, practical demonstrations, classroom practice, class projects, individual projects, and interactive question and answer sessions.

Graded course requirements:

Category	Points	Percentage
Assignments	150	30%
Final Project	100	20%
Research paper	50	10%
Exams	150	30%
Class Participation (Miscellaneous)	50	10%
Total	500	100%

Grading scale:

Undergraduate Credit (44443)	
Percent Range	Grade
88-100%	A
>= 78% and < 88%	B
>= 68% and < 78%	C
>= 58% and < 68%	D
below 58%	F

Graduate Credit (44643)	
Percent Range	Grade
90-100%	A
>= 80% and < 90%	B
>= 70% and < 80%	C
>= 60% and < 70%	D
below 60%	F

Course outline/major topics studied:

Week	Topic	App	Assignment
1	Course Discussion and installation guide	No App	No Assignment
2	Introduction to swift (Swift playgrounds), Basics (Variables, constants, datatypes, operators, optional) Control Flow (if-else, switch)	No App	Assignment1

Week	Topic	App	Assignment
	Control Flow (For-in, while, repeat) Strings and its methods		
3	Collection types (arrays, set, dictionary) Functions Introduction to XCode (creating project, application architecture, lifecycle etc.)	Hello World App	Assignment 2 (simple app)
4	Demonstrating arithmetic operators using a demo app	Arithmetic operation app	Assignment 3 (Calculator)
5	Demonstrating images. Can be included something here	Image Slider	Assignment 4 (Image Slider)
6	Demonstrating first responder, different events on buttons	Word Predictor	Assignment 5 (Jumbled word Predictor) Bonus: Animations
7	Demonstration of Animations and sound	Show Emotions App	
8	Protocols Communication or passing data between controllers (Segues)	Demo App	Assignment 6
9	Table View Collection View	Product Display App Movie Display App	
10	JSON parsing, API Call	Demo App (Yet to decide)	Assignment 6
11	Core Data services, installing and	Demo App (Yet to decide)	Assignment 7

Week	Topic	App	Assignment
	working with cocoa pods.		
12	iOS widgets (Alerts, date picker) or connecting firebase.	Demo App	
13	Thanksgiving Break		

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

MacBook: Due to unplanned high enrollments, university is not providing an individual MacBook to every student. However, students may use machines in CH 1400, CH 1120, and in library to work on assignments. Also, students can explore of purchasing any cheaper cloud service to work with XCode.

Attendance: Students are expected to attend all classes as specified in the course syllabi for each course. Class participation points may be awarded to students. It is the responsibility of the student to promptly notify his or her instructor when unable to attend class. Please refer to the university policy on attendance at <https://www.nwmissouri.edu/policies/academics/Attendance.pdf>

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.

Administrative drop: An instructor may request the Office of the Registrar delete a student from a course roster if the student has not met the prerequisite for the course as stated in the catalog, or as a result of non-attendance in the course.

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>

Late Submission Policy for assignments: Each assigned, graded activity will have a due date posted and are expected to be completed by due date. All the submissions must be submitted through Northwest Online. Any submission up to 24 hours after the due date will be considered as a late submission. The score for late submissions will have 10% of the maximum score deducted from the actual points

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 <https://www.nwmissouri.edu/TitleIXEquity/titleix/>

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.

Disclaimer: Course schedule is subject to change and you will be responsible for abiding by any such changes. Your instructor will notify you of any changes.