



NORTHWEST
MISSOURI STATE UNIVERSITY
MARYVILLE

School of Computer Science and Information Systems
44-443-01/44-643-01 Mobile Computing – iOS
(3 hours)
Fall 2025

Instructor: Dr. Ratan Lal

Email: rlal@nwmissouri.edu

Office hrs:

MW: 12:00 p.m. to 02:00 p.m.

TR: 11:00 a.m. to 12:30 p.m.

Office: CH2205

Phone: 660.562.1588

Prerequisites: [CSIS 44242](#) with a grade of C or better, or [CSIS 44542](#) with a grade of B or better.

Textbook and supplementary materials: No textbook is required. All the material will be posted in Canvas.

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 XCode.
- Design and implement apps in the UIKit framework while adhering to 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 how to import third-party packages and implement protocols and delegates.
- Create animations, use media components, and complex controllers (collection view controller, table view controller, etc.)

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 for both undergraduate and graduate students:

Category	Points	Percentage
Assignments	150	30%
Final Project	120	24%
Exams	170	34%
Class Participation (Miscellaneous)	60	12%
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	Student Agreement
2	Introduction to Swift (Swift playgrounds), Basics (Variables, constants, datatypes, operators, optional)	Hello App Vowel Tester App	Assignment-01
3	Control Flow (if-else, switch)	Calculator App	Assignment-02
4	Strings		Assignment-03
5	Functions	Discount App	
6	Dictionaries	Help session in class.	
7	Arrays	Exam - 01	
8	Project Group Discussions Arrays	Help Session	Assignment-04
9	Help Session	WordGuessApp	Assignment-05
10	Coordinates Animations Project group discussion	Demo App	Project Milestone - 01
11	Multiple View Controller	BMI App	
12	Table View	Product App	Assignment-06
13	Collections View	Exam - 02 Movie App Demo	Project Milestone – 02 Assignment 07
14	Thanksgiving Week		
15	Help Session	Exam - 03	
16	Finals Week		Project Milestone 03 Project Milestone 04

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

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

Refer to Syllabus Addendum for additional information

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

Attendance: Students are expected to attend all classes as specified in the course syllabi for each course. 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>

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 CaNVAS accounts on a regular basis.

Artificial Intelligence Engines: Generative AI engines are fast becoming important tools to help improve various personal, professional, and educational tasks. Specifically for this course, the submission of academic work created by a generative AI engine is not allowed. All submitted course work must be your own work. The goal is for you to learn and understand the course content. AI engines are a tool which can help facilitate the learning process. The understanding of course content is assessed by completing the required course work. Your understanding cannot be gauged if AI generated material is used.