Mobile Computing
CSCI 4500

Instructor Info —

- Kelvin Gao
- Office Hrs: Mon & Wed 4:00p-5:00p
- GH 310S
- www.kell.vin
- zgao1@aum.edu

Course Info ———

- Prereq: CSCI-3400 and CSCI-3700
- Mon & Wed
- 5:00p-6:15p
- Room 205 B GH

Lab Info ————

- In class
- 5:00p-6:15p (after lecture), more labs time TBA
- Room 205 B GH

TA Info ————

- TBD
- Office Hrs: TBD
- TBD

Overview

This course introduces smartphone or tablet device programming on platforms using Apple iOS (mainly) or Android, including a brief introduction to Swift (iOS), Java (Android), HTML5, PHP, Javascript, etc. Advanced topics such as UI design, communication, memory, and storage management, animation, etc. are also covered. This course is a hands-on example oriented course. Thus, knowledge of object-oriented programming and data structure is highly suggested.

Material

Required Texts

Craig Clayton, *iOS 12 Programming for Beginners: An introductory guide to iOS app development with Swift 4.2 and Xcode 10*. Third Edition. ISBN-13: 978-1789348668

Grading Scheme

20%	Attendance and Lab Practice
40%	Programming Assignment
40%	Group Project

Grades will follow the standard scale: A = 89.5-100; B = 79.5-89.4; C = 69.5-79.4; D = 60-69.4; F <60. Curving is at the discretion of the professor.

Late Submission Policy

Except in the cases outlined above for excused absences, programming assignments must be submitted before the specified deadline in order to receive full credit.

- 0 to 24 hours late: 10% of points will be deducted from the original score.
- 24 to 48 hours late: 20% of points will be deducted from the original score.
- Others: No acceptance.

Note: No late submissions will be accepted after the final exam.

E-mail Policy

Subject line format:

For undergraduate: [CSCI 4500][FirstName LastName]You subject

For undergraduate: [CSCI 6970][FirstName LastName]You subject

The professor's e-mail uses filter rules, make sure that you use the correct format; otherwise, your e-mail will be forwarded to somewhere else.

Learning Objectives

- Understand the fundamental concept of mobile computing
- Learn the critical features of mobile computing, e.g. UI, communication, animation etc.
- Learn popular mobile app programming languages, e.g. Swift and Java.
- Learn the new features of mobile computing

FAQs

What skills are required for this class?

Object-oriented programming and data structure are high recommended.

Any programming work in this course?

Yes, we do have several class project that require programming works.

What about Android?

Android and Java will not taught in the lecture, but the professor would give advises and guides after class.

Which version if iOS are we going to use

Mainly iOS 12. Some new feature of iOS 13.

Make-up Policy

Make-up exams or assignments will only be allowed for students who have a substantiated excuse approved by the instructor *before the due date*. Leaving a phone message or sending an e-mail without confirmation is not acceptable.

Diversity and Inclusivity Statement

I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability - and other visible and non-visible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

Accommodations for Students with Disabilities

Students who need accommodations are asked to arrange a meeting during office hours to discuss your accommodations. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not registered for accommodation services through the Center for Disability Services (CDS), but need accommodations, make an appointment with CDS, 147 Taylor Center, or call 334-244-3631 or e-mail CDS at cds@aum.edu.

Free Academic Support

All students have the opportunity to receive free academic support at AUM. Visit the Learning Center (LC) in the WASC on second floor Library or the Instructional Support Lab (ISL) in 203 Goodwyn Hall. The LC.ISL offers writing consulting as well as tutoring in almost every class through graduate school. The LC may be reached at 244-3470 (call or walk-in for a session), and the ISL may be reached at 244-3265. ISL tutoring is first-come-first served. Current operating hours can be found at www.aum.edu/learningcenter

Blackboard support: Students may seek technology assistance from the ITS Help Desk located in the computer lab on the first floor of the Taylor Center. You may also call 334-244-3500 or email helpdesk@aum.edu.

Academic Integrity

The University Code of Academic Integrity is central to the ideals of this course. Students are expected to be independently familiar with the Code and to recognize that their work in the course is to be their own original work that truthfully represents the time and effort applied. Violations of the Code are most serious and will be handled in a manner that fully represents the extent of the Code and that befits the seriousness of its violation.

Class Schedule

MODULE 1: Introduction

| Week 1 | Introduction | Jan 13&15: introduction.pptx, syllabus, ch1-xcode.pptx, Task 1 |

MODULE 2: Swift (and Java)

Week 2	Intro. to Swift	Jan 22: ch2-intro-swift.pptx, Task 2
Week 3	Adv. Swift	Jan 27&29: ch3-adv-swift.pptx, Task 3
		Due: Task 1 and 2

MODULE 3: User Interface (UI)

Week 4	Storyboard	Feb 3&5: ch4-storyboard.pptx, Task 4
Week 5	Model, View, Controller	Feb 10&12: ch5-mvc.pptx, Task 5
		Due: Task 3 and 4
Week 6	Grid and Table view	Feb 17&19: ch6-grid-table.pptx, Task 6
Week 7	Class Project Description and Lab Practice 1	Feb 24&26: Class Project
		Due: Task 5 and 6

MODULE 4: Adv. Mobile Programming

Week 8	Application Programming Interfaces	Mar 2&4: ch7-api.pptx, Task 7
Week 9	Data Management	Mar 9&11: ch8-data.pptx, Task 8
Week 10	Holiday	Mar 17&19: Sprint Break
Week 11	Notification	Mar 23&25: ch8-notification.pptx
		Due: Task 7 and 8
Week 12	Interact with Web Service	Mar 30& Apr 1: ch9-web, Task 9
Week 13	Basic Animation and 3D Rendering	Apr 8&10: ch10-animation.pptx
Week 14	Sensors	Apr 15&17: ch11-sensor.pptx
		Due: Task 9
Week 15	Class Project Demo	Apr 22&24: Class Project Demo
Week 16	Exam Week	Due: Project report