Objective	This course teaches how to develop applications for iOS mobile devices such as iPhones and iPads. We will go through the process of building a mobile application from start to finish using the iOS SDK (Software Development Kit). You will learn the basics of the Objective-C and Swift programming languages, how to use the libraries to build applications that have the proper look and feel, how to design and handle user input, and important software design patterns.
Prerequisites	ITP 365 or CSCI 104
Instructors	Trina Gregory (trinagre@usc.edu)
Office Hours	Listed on Blackboard under Contacts.
Lab Assistants	Listed on Blackboard under Contacts.
Course Hours	Monday and Wednesday, 12:00 pm – 1:50 pm.
Course Structure	The class meets for one hour and 50 minutes twice a week for a total of 3 hours and 40 minutes. These sessions include lectures and in-class assignments. Two exams are given during the semester and held during the class meetings. Homework assignments and a final project are completed outside of class time. Access to a computer is recommended, although ITP holds open lab hours with computers. All course material is available on Blackboard at http://blackboard.usc.edu.
Grading	The following percentage breakdown is used to determine the final grade.

Assignments (in-class and homework; weighted proportionally)	50%
Exam #1	15%
Exam #2	15%
Final Project Proposal (calculated in assignments)	
Final Project App	20%
TOTAL POSSIBLE	100%

Grading Scale	The following scale is used to determine the letter grade:

93% and above	A
90 - 92%	A-
87 - 89%	B+
83 - 86%	B
80 - 82%	B-
77 - 79%	C+
73 - 76%	C
70 - 72%	C-
69 - 65	D
64 and below	F

If you are taking the class with a grade of P/NP, you must earn a grade of 70% or higher in order to receive a P. Final grade percentages are calculated to two decimal places and rounded to hundredths. For example, 89.99 is a B+ while 89.995 is rounded to 90 and thus an A-.

Textbook	Recommended: https://itunes.apple.com/us/book/the-swift-programming-language/id1002622538?mt=11
Homework	The assignments will be posted on Blackboard under the "Assignments" section. Each assignment will include instructions, a due date, and a link for electronic submission. Assignments must be submitted using this link. All assignments will be digitally submitted through Blackboard except where specifically specified. Do not email them to the lecturer or lab assistant. It is your responsibility to submit assignments on or before the due date. Assignments turned in up to three days late will have 50% of the total points deducted from the graded score. After three days, submissions will not be accepted and you will receive a 0. It is the responsibility of the student to contact the grader when posting late projects. Each student will be allowed ONE three-day late assignment for "free". You must indicate that you are using your free late in the comments when you submit the assignment, and this may not be used on the final project. You are required to keep a copy of all of your assignments. You may save your assignments using a USB flash drive or a website such as http://www.dropbox.com. You will not be able to save your work on the ITP lab computers and the ITP laptops. ITP is not responsible for any work lost.
Policies	No make-up exams (except for documented medical or family emergencies) will be offered. If you will not be able to attend an exam due to an athletic game or other valid reason, then you must coordinate with the instructor before the exam is given. You may arrange to take the exam before you leave, with an approved university personnel during the time you are gone, or within the week the exam is given. If you do not take an exam, then you will receive a 0 for the exam. Attendance may be taken during lecture sessions electronically, verbally, or via a roster passed around the room. Do not sign in for another student; doing so is an academic integrity violation. If you would like to be considered for an excused absent, then create a private note on Piazza and select the absent folder. In the post, include your name, week (1-15), day, reason, and documentation. Attendance is not part of the grading breakdown, although attending lectures will help you learn the material and succeed in this class. If you are not able to attend lectures and be an active learner, then do not take this class. I expect you to pay attention during lectures and refrain from distracting your classmates. Chatting while the instructor is talking, texting on your mobile device, and participating on social media sites during class is disrespectful to the instructor and your classmates. Do not reproduce, distribute, or post any lecture material, assignments, or exams publicly without my written consent. You may take notes and make copies of course materials for your own use. You may not post my course materials on sites such as CourseHero. Doing so is a copyright violation and an academic integrity violation that will be dealt with accordingly.

ITP Computers	There will be Mac computers (laptops in KAP 160 and desktops in OHE 540) with Xcode that can be used during class.

ITP has 20 Mac laptops with Xcode that are available to borrow for a week at a time. Visit the ITP office in OHE 412 during the week (Monday - Friday, 8:30 am - 5 pm) to fill out a loan contract and then receive a laptop and power adapter. If all of them have been checked out, then you will be placed on the waiting list.

ITP offers open lab use for all students enrolled in ITP classes. These open labs are held beginning the second week of classes through the last week of classes. Hours are listed at http://itp.usc.edu/labs/. The open labs will not have a lab assistant for this specific class. These lab times are there in case you do not have a computer and need time to complete an assignment. KAP 160 and OHE 540/542 have Macs with Xcode.

You will not be able to save your work on the ITP lab computers and the ITP laptops. Once they are restarted, all work will be deleted. Use an external USB drive or a repository like GitHub to save your work. |
| **Late Add** | You are responsible for any lectures or work that you missed if you added the class after the first meeting.

If you missed due dates for assignments, then you will have one week from when you registered for the class to submit the assignments.

If you add the class during the third week of classes, then you must meet with the instructor to create a plan together on how to catch up to the rest of the class. |
| **Incomplete and Missing Grades** | University Grading Handbook contains details on incomplete and missing grades as well as other grading concerns.
http://arr.usc.edu/services/grades/gradinghandbook/gradingpolicies.html

A grade of Missing Grade (MG) should only be assigned in unique or unusual situations such as for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year, the grade is changed to UW (Unofficial Withdrawal) and will be calculated into the grade point average as zero grade points.

A grade of Incomplete (IN) is assigned when work is not completed because of documented illness or other 'emergency' occurring **after the twelfth week of the semester** (or 12th week equivalency for any course scheduled for less than 15 weeks).

Communicate with the instructor before the semester ends if you feel you have a situation that warrants receiving a missing or incomplete grade. |

Viterbi Honor Code	Engineering enables and empowers our ambitions and is integral to our identities. In the Viterbi community, accountability is reflected in all our endeavors. Engineering+ Integrity. Engineering+ Responsibility. Engineering+ Community. Think good. Do better. Be great. These are the pillars we stand upon as we address the challenges of society and enrich lives.
Academic Integrity	USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles.

SCampus is USC's Student Guide to Policies and Conduct Code and can be found at http://scampus.usc.edu. Section 11 contains the Behavior Violating University Standards and Appropriate Sanctions and can be found at http://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. Students will be referred to the Office of Student Judicial Affairs and Community Standards (SJACS) for further review, should there be any suspicion of academic dishonesty. The Review process can be found at http://www.usc.edu/student-affairs/SJACS/.

An academic integrity tutorial can be found at http://www.usc.edu/libraries/about/reference/tutorials/academic_integrity/index.php

Assignments and projects in computer programming course are different from those in some other types of courses. Students **may NOT collaborate**, work together, share code, or in any way exchange solutions for assignments and projects. All assignments are analyzed by software that looks for similarity. Any sharing of ideas or code will be considered a violation of academic integrity (cheating); an SJACS report will be filed with the recommended penalty of an F in the course. Do not share your code with anyone else in this or a future section of the course, as allowing someone else to copy your code carries the same penalty as you copying the code yourself.

If the instructor, a grader, or a lab assistant suspects you of academic dishonesty, it has to be reported to SJACS. Do not share lab assignments with another student. Do not submit another student's work as your own. Do not look at other students' papers during exams. Do not leave the room during an exam without permission. **Do not cheat!**

As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.

Support Systems	USC provides many services to support you and your fellow classmates at USC. **Student Counseling Services (SCS)** – (213) 740-7711 – 24/7 on call Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. https://engemannshc.usc.edu/counseling/ **National Suicide Prevention Lifeline** – 1-800-273-8255 Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. http://www.suicidepreventionlifeline.org **Relationship and Sexual Violence Prevention Services (RSVP)** (213) 740-4900 – 24/7 on call Free and confidential therapy services, workshops, and training for situations related to gender-based harm. https://engemannshc.usc.edu/rsvp/ **Sexual Assault Resource Center** For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: http://sarc.usc.edu/ **Office of Equity and Diversity (OED)/Title IX Compliance** – (213) 740-5086 Works with faculty, staff, visitors, applicants, and students around issues of protected class. https://equity.usc.edu/ **Bias Assessment Response and Support** Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. https://studentaffairs.usc.edu/bias-assessment-response-support/ **Student Support and Advocacy** – (213) 821-4710 Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. https://studentaffairs.usc.edu/ssa/ **Diversity at USC** Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. https://diversity.usc.edu/
Disability Services	**The Office of Disability Services and Programs** provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. **Please be sure the letter is delivered to your course instructor as early in the semester as possible.** If you need accommodations for an exam, the form needs to be given to the instructor at least two weeks before the exam, but preferably at the beginning the semester. http://dsp.usc.edu

Emergency	If an officially declared emergency makes travel to campus infeasible, **USC Emergency Information** will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology. http://emergency.usc.edu/
	Additional information about **Campus Safety and Emergency Preparedness** can be found at http://preparedness.usc.edu.
	USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC) Call for 24-hour emergency assistance or to report a crime. Provides overall safety to USC community. http://dps.usc.edu

Course Outline*

Week	Topics	Activities/Assignments
1	Course overview; Intro to Mobile, iOS, Xcode	HW1 – Me
	Interface Components, Icon Images	
2	Holiday – No Class	HW2 – Choose
	Auto Layout and Code	
3	Fundamentals and Swift	HW3 – Tip Calculator
	Data Types and Objects	
4	More Interface Components	HW3 – Tip Calculator
	Alerts	
5	Blocks and MVC	HW4 – Flashcards
	Model and Collections	
6	Singleton	HW4 – Flashcards
	Unit Testing	
7	Review	Review
	Exam #1	
8	Gestures, Animation, and Accelerometer	HW5 – Tables
	Audio and return Exam #1	
9	Delegation and Table Views	HW5 – Tables
	Navigation Bars and Tab Bars	
10	Scenes and Segues	HW6 – Tab Bars & Table View
	Data Persistence	
11	App Life Cycle and Memory Management	HW6 – Data Persistence
	Swift	
12	Collection View and Web View	App Proposal
	Pickers and Camera / Photo Library	
13	Map Kit and Core Location	HW7 – Tour Guide
	Exam #2	
14	APIs and REST	Final Project
	Analytics and return Exam #2	
15	Internationalization and Localizations	Final Project
	Deployment	
Finals	**Final Project due at the final exam time. **	

* This course outline is for planning purposes and is subject to change.

** For the date and time of the final exam time, consult the USC Schedule of Classes at
http://classes.usc.edu