

CSC 496: iOS App Development

Dr. Si Chen

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Class Discord: Please check class website

Class Website: [\[Link\]](#)

Office Hours: Monday 10: 00 AM - 12:00 PM Wednesday 10:00 AM - 1:00 PM

Course Description

This course will focus on iOS development tools, basic programming concepts, and industry best practices. Building on this foundation, you'll work through practical exercises, creating apps from scratch, and building the mindset of an app developer.

Credits: 3

Textbook

Required Textbook

No Textbook

Reference Books

- Ahmad Sahar, Swift Cookbook, ISBN 978-1839211195

Required Hardware

A computer with MacOS which can connect to the Internet. We will use the iMacs in Room 147.

Course Outline

- Swift Fundamentals
- SwiftUI

- SpriteKit
- Fetching from API
- Concurrency and Threading
- Other third-party packages
- MVC Pattern
- App Life Cycle

Programming Language & Tools

The programming language we chose for this course is Swift. You'll use Swift to build iOS apps. All the assignments (programming projects) will be submitted to D2L.

Grading Policy

A[90-100], B[80-89], C[70-79], D[60-69], F[0-59]

Attendance	20%	including in-class exercises
Lab	40%	4 labs, 10% each
Final Project	40%	1 team project (including presentation)

Note: No credit for unexcused late assignments.

Course Policies

ATTENDANCE POLICY

Please stay at home and do not go to class if you are not feeling well.

Being present includes your on-time, prepared presence. Being present also means handing in your assignments on time and demonstrating effort and engagement with the class and group work. Absence from class, having computer problems, running out of printer paper, etc., does not excuse a late assignment. Please assume technology, transportation, and your health may get in your way at every turn and plan accordingly.

Unexcused late arrivals / leaving early (15 minutes) are an **unexcused absence**. Notify your professors of **ANY** absence to see if they can be excused. Each unexcused absence > 1 reduces your course grade by 2 points; non-participation, including not completing non-credit homework, engaging in non-class activities, conversing during lectures, etc., reduces your course grade by 2 points each.

LATE ASSIGNMENTS POLICY

Late assignments will be accepted for **no penalty** if a valid excuse is **communicated to the instructor before the deadline**. No credit for unexcused late assignments.

ACCOMMODATIONS FOR DISABILITIES

If you have a disability that requires accommodations under the Americans with Disabilities Act (ADA), please bring me your letter of accommodations and meet with me as soon as possible, so I can support your success in an informed manner. Sufficient notice is needed in order to make the accommodations possible. If you would like to know more about West Chester University's services for students with disabilities, please contact the Office of Services for Students with Disabilities at 610-436-3217. You can find out more information at www.wcupa.edu/ussss/osssd.

ACADEMIC INTEGRITY AND HONESTY

The Computer Science Department has adopted the following policies in regard to academic dishonesty in Computer Science classes:

- A student found to be cheating in an assignment will receive zero for that assignment if it is his first offense in that class, but an F for the course if it is for his second offense in that class.
- A student found to be cheating in a test will receive the grade of F in that class.
- For the purposes of this document on cheating, every form or method of evaluation in a class will be considered as being of one of two types: an assignment or a test. Assignments include homework assignments, and short quizzes. Tests include final exams and major exams. An instructor has, subject to these guidelines, the discretion to determine the type of any other form of evaluation, such as a project, in his class.
- The term cheating is used throughout in the sense provided by the rules and regulations of West Chester University. (The following is taken from The Ram's Eye View of 1988-89.)

Cheating includes but not limited to:

- Plagiarism that is copying another's work or portions thereof and/or using ideas and concepts of another and presenting them as one's own without giving proper credit to the source.
- Submitting work that has been prepared by another person.
- Using books or other material without authorization while taking examinations.
- Taking an examination for another person, or allowing another person to take an examination in one's place.
- Copying from another's paper during an examination or allowing another person to copy from one's own.
- Unauthorized access to an examination prior to administration.

A student who has received the grade of F in a course because of cheating and who wants or is required to repeat that course may re-take that course only as a regularly scheduled course that is open to the student community in general. In exceptional circumstances, this condition may be revoked, but only by an explicit action to that effect by the full Computer Science Committee, and only then on a case by case basis.

ABOUT AI LLM MODELS

As of 2023, we are pleased to inform you that the use of AI LLM (Large Language Models), such as ChatGPT, is permitted and encouraged in this course to augment your project code, lab reports, and presentation slides. These models can be particularly helpful in generating high-quality content and clarifying complex programming concepts.

In the context of iOS development, these AI models can assist you in writing Swift code snippets, conceptualizing app architecture, and even providing suggestions for UI/UX design.

Code Generation: While AI LLM models are not a substitute for in-depth understanding and manual coding, they can provide code examples and templates that you may find useful during the development process. These can serve as an excellent starting point or reference for your own projects.

Enhanced Learning: By leveraging these AI technologies, you can gain alternative perspectives on problem-solving and algorithmic thinking, enriching your learning experience in iOS development.

By incorporating these AI LLM models responsibly, you can enhance both the efficiency and quality of your work, taking your understanding and skills in iOS development to the next level.

EXCUSED ABSENCES POLICY FOR UNIVERSITY-SANCTIONED EVENTS

I. Students participating in University-sanctioned events such as, but not limited to, the Marching Band and NCAA athletic events, will be granted an excused absence(s) by the respective faculty members for class periods missed. Students will be granted the privilege of taking, at an alternative time to be determined by the professor, scheduled examinations or quizzes that will be missed. The professor will designate such times prior to the event and the make-up should be as soon as possible following the missed class. Professors can provide a fair alternative to taking the examination or quiz that will be missed. Students must recognize that some activities cannot be directly made up (e.g., a laboratory, group presentation, off-campus experience), and faculty will arrange a fair alternative to the missed work. Students must submit original documentation on University letterhead signed by the activity director, coach, or adviser detailing the specifics of the event in advance. Specific requirements include the following:

- Responsibility for meeting academic requirements rests with the student.
- Students are expected to notify their professors as soon as they know they will be missing class due to a University-sanctioned event.
- Students are expected to complete the work requirement for each class and turn in assignments due on days of the event prior to their due dates unless other arrangements are made with the professor.
- If a scheduled event is postponed or canceled, the student is expected to go to class.
- Students are not excused from classes for practice on nonevent days.

The following are specifics for the student athlete:

- The student athlete is expected, where possible, to schedule classes on days and at hours that do not conflict with athletic schedules.
- Athletes are not excused from classes for practice or training-room treatment on non-game days.

II. West Chester University recognizes required (non-voluntary) service in the United States military including the Pennsylvania National Guard as a legitimate reason to miss up to the equivalent of 2 weeks during a 15-week semester. Service members must submit a copy of their orders to the Registrar's Office. The Registrar's Office will communicate with respective faculty members and the student will be granted an excused absence(s) for the class periods missed. All points covered in part I of this policy including make-up work and specific requirements 1-4 also apply. Service members required to miss more than the equivalent of 2 weeks during a 15-week semester can withdraw from the term in a non-punitive manner in accordance with Pennsylvania state law. Students are expected to work closely with faculty and the Registrar's Office to ensure their academic success. Students in programs with external accrediting bodies must also be aware that there may be attendance requirements that cannot be made up. III. In the event of a student's unplanned medical emergency, including serious health conditions as outlined in the Family and Medical Leave Act, or the death of a student's immediate family member, faculty members are expected to provide, within reason, an opportunity for students to make up work. Students are responsible for providing proper documentation and will work with respective faculty members to make up course work as described in part I of this policy. Students are encouraged to contact the Assistant Dean of Students and refer to the website on Student Assistance for additional information. IV. Consistent with guidelines set forth by the Family and Medical Leave Act, students who become parents of new children or have children with serious health conditions that require the student-parent to miss up to the equivalent of 2 weeks during a 15-week semester shall be given an excused absence for the courses that are missed. Students will work with respective faculty members to make up course work as described in part I of this policy. Students required to miss more than the equivalent of 2 weeks during a 15-week semester can withdraw from the term up until the term-withdraw deadline. Students required to miss more than one semester should also refer to Admissions policy on consecutive non-enrollment. Students are encouraged to contact the Assistant Dean of Students and refer to the website on Student Assistance for additional information. V. West Chester University recognizes excused absences in accordance with federal and state legal statutes including but not limited to compliance with jury duty, subpoenas, and notices of deposition. Such excused absences will be dealt with as described in part I of this policy.

REPORTING INCIDENTS OF SEXUAL VIOLENCE

West Chester University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University's Title IX Coordinator, Ms. Lynn Klingensmith. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report sexual violence

or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred to the person designated in the University protection of minors policy. Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at the webpage for the Office of Social Equity.

EMERGENCY PREPAREDNESS

All students are encouraged to sign up for the University's free WCU ALERT service, which delivers official WCU emergency text messages directly to your cell phone. For more information, visit <http://www.wcupa.edu/wcualert/>. To report an emergency, call the Department of Public Safety at 610-436-3311.

ELECTRONIC MAIL POLICY

It is expected that faculty, staff, and students activate and maintain regular access to University provided e-mail accounts. Official university communications, including those from your instructor, will be sent through your university e-mail account. You are responsible for accessing that mail to be sure to obtain official University communications. Failure to access will not exempt individuals from the responsibilities associated with this course.

APSCUF

I am a member of APSCUF, the Association of Pennsylvania State College and University Faculties. We uphold the highest standards of teaching, scholarly inquiry, and service. We are an organization that is committed to promoting excellence in all that we do to ensure that our students receive the highest quality education. For more on our organization, see www.apscuf.org.