



iOS Development II

IT-MOB 382 / Section OL1-LEC (3646)/ 5 Credits / 2023 Fall

Course information

Day, time, place of class meetings: Mondays and Wednesdays, 3:30pm-5:35pm, on Zoom

Course website: Course is listed in Canvas

Instructor name: Mike Panitz

Cascadia email: MPanitz@cascadia.edu

Office phone number: 425-352-8211

Office location/office hours:

In Person Office Hours: Tuesdays and Thursdays (from 1pm-2:20pm)

Office hours will start in the CC1-231 classroom until questions have been answered;

then I move to my office (CC1-319) to finish any in-person questions,

then I stay in my office (CC1-319) and get on Zoom, and answer any in-person or online questions as people show up

(as time allows - I may not get to the later locations if the earlier ones take up all the time)

Course description

Students in this Information Technology (IT) course will continue creating iOS apps within development teams, learning advanced topics including custom user interface (UI) development, Objective-C integration, iOS Extensions, specialized developer kits and open-source libraries, cloud services, and multi-threading. The course will emphasize writing, review, profiling, and testing code, as well as app packaging and distribution via the App Store

Prerequisites

Admission to the BAS-IT program, AND completion of BIT 381 with a grade of 2.0 or higher, OR instructor permission.

Course learning outcomes

- I. Learn Actively - *Learning is a personal, interactive process that results in greater expertise and a more comprehensive understanding of the world.*
 - Review and assess feature set and code-base for an iOS app
 - Refine a UI design to perform on multiple iOS platforms: phone, tablet, watch, and TV
 - Configure an app for distribution to a commercial marketplace
 - Use an agile development process to build and release a mobile application
- II. Think Critically, Creatively and Reflectively - *Reason and imagination are fundamental to problem solving and critical examination of ideas.*
 - Estimate team's workload capacity to negotiate feature adoption and release schedules
 - Evaluate development tools and code libraries for use with specific apps or feature sets
 - Select appropriate programming patterns for particular requirements

- Make implementation decisions based on mobile OS and device features and capabilities
- Gain experience identifying and developing multi-threaded app processes

III. Communicate with Clarity and Originality - *The ability to exchange ideas and information is essential to personal growth, productive work, and societal vitality.*

- Coordinate as a development team to create, integrate and test code
- Use version control processes and tools to distribute code and communicate progress
- Provide clear feedback during peer code review cycles
- Receive and incorporate peer and stakeholder feedback into code revisions
- Fully document development progress to hand-off to future developers

IV. Interact in Diverse and Complex Environments - *Successful negotiation through our increasingly complex, interdependent and global society requires knowledge and awareness of self and others, as well as enhanced interaction skills.*

- Interact with team and stakeholders throughout the app development process
- Utilize collaborative tools such as Slack, Discord, etc to coordinate team activity
- Work within a team development setting using effective agreements and processes
- Respect individual ways of arriving at answers, expressing opinions and making decisions

Course Content, Topics, and Themes:

- Asynchronous team best practices using communication tools and version control processes
- Version control advanced concepts and troubleshooting
- Advanced iOS coding concepts such as profiling, iOS extensions, notifications, power management, and cloud-based service integration.
- Test frameworks and unit tests within the development cycle
- Profiling applications for memory, CPU and view hierarchy issues
- Multi-threading architecture, processes, and tools including Grand Central Dispatch
- Custom UI development with Layers and Core Graphic
- Monetization and in-app advertisement
- Publishing through the App Store including alpha and beta testing

Required text, supplies, and supplemental materials

Lab/Supply Fee: Intensive Computer Technology \$40

Textbooks:

Textbook Title: Pro iPhone Development with SwiftUI: Design and Manage Top Quality Apps

Textbook Author: Wang, Wally

Publication Date 2022

Edition 3rd ed.

ISBN: 1484278267

ISBN: 9781484278260

[This book is available as a free eBook that you can read through the UW Bothell library.](#)

We will also finish using the book from BIT 381, which was:

Textbook Title: Beginning iPhone Development with SwiftUI: Exploring the IOS SDK

Textbook Author: Wang, Wally

ISBN: 1484278178

ISBN: 9781484278178

[This book is also available as a free eBook that you can read through the UW Bothell library.](#)

You will need a working UW NetID to access the online eBooks.

If you need help with this please contact me and also [the UW Bothell Library](#).

Grading criteria/standards scale

Your course grade is built on five types of assessment: a team project, class participation/discussion forums, exercises, quizzes and solo assignments. The assessment pieces fit together into your course grades as follows:

Class Activity	Percentage
Team Project (Research and Presentation)	30%
Agile Development Individual Assessments	20%
Class Forums and Participation	20%
Programming Exercises	30%
TOTAL:	100%

- **Team Project** will bring together the design and development of a mobile app. Team and client communication and design documentation is assessed as well.
- **Agile Development Individual Assessment** focus on your individual participation in the agile team process and development as a developer.
- **Class Forums and Participation** will include posting to discussion forums before class period to prepare or follow-up.
- **Programming Exercises** on a particular mobile app development topic related to the weekly readings/activities, both inside of and outside of class time.

Note that the class will use an absolute grading scheme: If you get 100% of the points possible, you'll get a 4.0. If everyone gets 100% of the points possible, everyone will get a 4.0. Table 1 (see below) shows you how to convert the points you've earned in this class into your final GPA for this class.

Missed Work / Late Policy:

Any work that is not submitted to the instructor for grading will be assigned a grade of "0".

The general policy for work that is submitted electronically is this: work is not late until the instructor goes to grade the work and finds it to be missing. In practical terms this means that if the instructor hasn't graded something yet you can (typically) still upload the work and have it be graded as if the work had been handed in on-time (i.e., penalty-free). The instructor will wait until the work is due to grade it (of course), but makes no guarantees about waiting any longer than that.

In other words: for work that the instructor has not yet graded you can take your chances that the instructor will be late enough for you to get the work done and submitted but if the

instructor grades it before you can finish (or submit) the work then you will get the zero for not having it in on time.

This policy applies to the In Class Exercises, posting to forums, and Homework Assignments but NOT to quizzes (if any), exams, or anything else.

A Warning about unreliable technology

Today's technology is inherently unstable: AOL might give you a busy signal, your ISP might be down, the public library might not be open, you might be unable to get Microsoft Word to do exactly what you want. While you might have this happen to you, it's not an excuse for handing in an assignment late. Knowing this, you should include time in your schedule to compensate for possible technological snafus. This will allow you to hand in work on time, even in the fact of unexpected techno-faults. For assignments that have a hard deadline, no leeway will be given to students who fail to hand in an assignment because of technological problems.

Attendance

You are responsible for what goes on in class whether present or not. You are responsible for making up any work, assignments, quizzes, etc., for missed classes.

Attendance is very important, since the course is structured to require active involvement and participation on the part of the student. Missing a class means missing material that is difficult to make up. Daily attendance records will be kept.

If you must miss a class, you will have to arrange to get the class notes and any other information from another person. I suggest that once you get to know some people in the class, you exchange phone numbers with one or two, so if you do miss a class you can obtain assignments, quiz information, etc., for the following class.

Other Notes

I reserve the right to modify any and all aspects of the course, at any time, including this syllabus.

Grading scale

Note that this table uses the [interval notation](#) to indicate whether the end of a range is included or excluded from a particular grade (so 95 is excluded from the 3.9 grade and included in the 4.0 grade, meaning that if you've got 95% of the points exactly you'll receive a 4.0, not a 3.9)

Percent earned	Grade	Letter grade
[95-100]	4.0	A

Percent earned	Grade	Letter grade
[94-95)	3.9	A

Percent earned	Grade	Letter grade
[93-94)	3.8	A-

Percent earned	Grade	Letter grade
[92-93)	3.7	A-
[91-92)	3.6	A-
[90-91)	3.5	A-
[89-90)	3.4	B+
[88-89)	3.3	B+
[87-88)	3.2	B+
[86-87)	3.1	B
[85-86)	3.0	B
[84-85)	2.9	B
[83-84)	2.8	B-

Percent earned	Grade	Letter grade
[82-83)	2.7	B-
[81-82)	2.6	B-
[80-81)	2.5	B-
[79-80)	2.4	C+
[78-79)	2.3	C+
[77-78)	2.2	C+
[76-77)	2.1	C
[75-76)	2.0	C
[74-75)	1.9	C
[73-74)	1.8	C-

Percent earned	Grade	Letter grade
[72-73)	1.7	C-
[71-72)	1.6	C-
[70-71)	1.5	C-
[69-70)	1.4	D+
[68-69)	1.3	D+
[67-68)	1.2	D+
[66-67)	1.1	D
[65-66)	1.0	D
<65	0.0	Failing

Inclement Weather/Outage Course Information

If the college closes during our class time, detailed instructions on how you will make up the work will be provided online.

Cascadia College Syllabus Learning Agreement

Updated for Summer 2023 on July 3, 2023

Please see your course syllabi for faculty-specific course policies and procedures.

Health & Safety

Emergency Procedures

Emergency procedures are posted in each classroom. To reach campus security personnel, dial 425-352-5359. City of Bothell fire and police may be reached by dialing either 9-9-1-1 or 9-1-1 from any campus phone. Campus emergency phones are located on campus walkways and parking lots.

Campus Closures and Inclement Weather

Find information about and sign up for alerts and notifications at [Emergency Notifications Cascadia FlashAlert](#). The site includes instructions for subscribing to alerts.

In the event of inclement weather affecting morning classes, there will be notification on the local media by 5:30 a.m. You may also call the main campus number: 425-352-8000 to hear a message that will be updated with the latest Cascadia closure information. Should the weather deteriorate during the day, you may check online, listen to the main campus message, check email or the media to hear news about closures or class schedule changes.

Learning & Learning Resources

Accessibility Statement

Cascadia provides equal access to educational programs and opportunities for all students, including those with disabilities. The goal of Cascadia's faculty is to create a learning experience

that is inclusive in its design. If at any point in the quarter, you find yourself unable to access the content, space, or full experience of this course, please let your instructor know immediately. If you are a student with a disability or think you may have a disability, you can also contact Student Accessibility Services (SAS). Even if you are unsure if accommodations are appropriate, SAS can provide you with more information about possible temporary assistance and connections to resources. SAS can be reached by phone at 425-352-8128 or by emailing accessibility@cascadia.edu. If you have been already been approved for accommodations, please request your accommodations by visiting the SAS website: <https://www.cascadia.edu/advising/accessibility.aspx>. SAS advises completing this process before or at the start of the quarter. You can also discuss your accommodations with your course instructor(s) in a private setting.

Course Websites

Nearly every course at Cascadia has one or more dedicated websites. The most common course website is the college Learning Management System, [CANVAS](#); nearly all mathematics courses use [WAMAP](#). Access to course websites is through Internet browsers, and students will use personal user IDs and passwords to log in.

- Students may not share their user IDs and passwords with anyone else or allow anyone else to participate in course sites on their behalf.
- Students need reliable access to the Internet. Some devices, such as smartphones, cannot access all aspects of CANVAS and most other course websites. Cascadia does not recommend that students attempt to complete a course using only a smartphone. A limited number of laptops are available for student checkout and can be requested through the campus helpdesk: <https://support.cascadia.edu/>.

Students who enroll in courses that make use of a course website are expected to check that site frequently. For help accessing learning management systems, email ELHelp@cascadia.edu.

Synchronous and Asynchronous Classes

Remote classes at Cascadia are either synchronous or asynchronous.

- *Asynchronous*: Learning happens independently online, on student's own time, with professor-designed content and lessons; no real-time whole-class interactions. Note: In the class schedule, **asynchronous classes appear with OL listed for the days and Online Asynchronous as the room information.**
- *Synchronous*: Learning happens in real time with the class, using a live conferencing tool such as Zoom. **Students are required to log in on specific days/times as listed in the class schedule. Synchronous online classes appear with Online Synchronous as the room information.** Additional study time is expected to happen on the student's own time.

Please visit the [Learning Technologies and Design website](#) for more information, and contact your instructor for more details about your specific course.

Other Technology

You may be asked to use various forms of technology (including software, apps, browser extensions, plug-ins, or websites). to complete assignments in your courses. Not all technology is compatible with all devices. Review the specific technology needed for each course, and visit the Information Services Helpdesk (<https://support.cascadia.edu/>) for tech support or to check out a laptop.

John and Margaret Bock Learning Center Services

To support student success, Cascadia offers a variety of support services through its John and Margaret Bock Learning Center (The Bock Center). The Bock Center provides tutoring in a range of subjects, space for students to work individually or in small groups, computer and printing resources, technology support, and graphing calculators available for checkout. [Click here for hours and contact information for the Bock Center.](#)

Online Tutoring and Writing Assistance

Cascadia provides additional online access to live tutors in a variety of subjects through the Western e-Tutoring Consortium. This service includes live, interactive sessions and asynchronous feedback through an Essay Center. Many subjects have convenient tutoring hours late into the evening and seven days a week, depending on tutor availability; schedules are available online. To learn more or get started, visit the Bock Learning Center's [etutoring webpage](#).

Additional Support & Resources

Counseling Services

If you have a personal problem or stress that is affecting you and would like to talk with mental health, please contact [UWB's Mental Health Counseling Center](#). Counseling at Cascadia (provided through UWB) is confidential, professional and free. Call 425-352-3183 for an appointment. To access real-time, confidential mental health support, 24/7 and in multiple languages, please contact [MySSP](#) by calling 1-866-743-7732. MySSP counselors are licensed mental health therapists who are familiar with campus resources.

CARE Team and Bias Incident Response

Students who are concerned about their own or another student's well-being (including concerns about mental health, financial trouble, food & housing insecurity, victim of violence) should [file a report](#) with the CARE Team. [The CARE Team](#) is a collection of staff and faculty who work with students facing difficult situations to connect them with appropriate resources. After filing a report with the CARE Team, a member will reach out to gather information in a confidential manner to discuss with appropriate resources. The CARE Team is for non-emergency situations. If you or someone you know is in immediate danger, please call 911.

Benefits Hub Emergency Grant

If you have recently lost a job, had your hours cut, faced emergency medical expenses, or run into other financial hardship, you can access the Benefits Hub Emergency Grant. The grant is designed to keep students enrolled in their classes by supporting them with emergency financial costs. Students may be eligible for \$1,000.00 a quarter. Please complete a [CARE Team report](#) if you want to access this grant (only available to currently enrolled students).

Advising

Students should schedule an appointment to meet with an advisor to consult about classes and degrees, and to create a tentative education plan. Visit the [Academic Advising webpage](#) for information on scheduling an appointment with an academic advisor or email advising@cascadia.edu with questions. At the time of the appointment, students are encouraged to indicate which degree they are pursuing. See the Cascadia website for information about Drop-In Advising hours.

Student Rights & Responsibilities

Cascadia is a student-centered college, operated to provide knowledge and skills for the achievement of learners' academic, professional and personal goals. Inherent in the college's mission are certain rights and freedoms needed for learning and personal development. Admission to Cascadia provides these rights to students, and also assumes that students accept the responsibility to conduct themselves in ways that do not interfere with the purposes of the college in providing education for all of its learners. [For the complete policy, see the Student Code of Conduct in the Student Handbook.](#)

Non-discrimination Statement

Cascadia is committed to creating a supportive environment for a diverse student, faculty, and staff population. Individual differences are celebrated in a pluralistic community of learners. Cascadia does not discriminate on the basis of race, color, religion, gender and/or sex, sexual orientation, national origin, citizenship or immigration status, age, marital or veteran status, or the

presence of any sensory, mental or physical disability, or genetic information, and is prohibited from discrimination in such a manner by college policy and state and federal law.

The following office has been designated to handle inquiries regarding non-discrimination policies and can direct inquiries to the appropriate office for ADA-related requests:

Vice President of Administrative Services

Cascadia College

18345 Campus Way NE

Bothell, WA 98011

nondiscrimination@cascadia.edu

Title IX

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs or activities that receive Federal financial assistance. In compliance with Title IX, Cascadia is committed to providing an educational environment free from sexual harassment, including acts of sexual violence or sexual assault. The College is equally committed to ensuring that those who raise complaints or participate in the investigation and resolution of complaints are free from retaliation. To raise a complaint or voice a concern with Cascadia's compliance with Title IX, contact Human Resources Non-Discrimination, nondiscrimination@cascadia.edu, 425-352-8880.

Academic Honesty

The College regards acts of academic dishonesty, including such activities as plagiarism, cheating and/or violations of integrity in information technology, as very serious offenses. These offenses are prohibited by the [Washington Administrative Code regarding student conduct](#). In the event that cheating, plagiarism, or other forms of academic dishonesty are discovered, each incident will be handled as deemed appropriate. Care will be taken that students' rights are not violated and that disciplinary procedures are instituted only in cases where documentation or other evidence of the offense(s) exists. A description of all such incidents may be forwarded to the Student Conduct Officer, where a file of such occurrences is maintained. The Student Conduct Officer may institute action against a student according to the college's disciplinary policies and procedures.

For details, view the [Cascadia Student Handbook](#), then select Student Code of Conduct, then view the Cascadia section of the [Washington Administrative Code](#).

Reasonable Accommodations for Religion/Conscience:

Students who will be absent from course activities due to reasons of faith or conscience may seek reasonable accommodations so that grades are not impacted. Such requests must be made within the first two weeks of the quarter, in writing, to the faculty member and must include specific dates for which the student requests accommodations. Please see the [Student Handbook](#) on the Cascadia website for more information.

Acceptable Use Policy on Information Technology

In general, the same ethical conduct that applies to the use of all college resources and facilities applies to the use of Cascadia's systems and technology. These systems may only be used for authorized purposes, using only legal versions of copyrighted software, and with consideration and respect for the conservations of resources and the rights of other users. For additional information, see the [online version of the Student Handbook](#) or go to the Bock Learning Center for assistance with any questions.

Family Education Rights and Privacy Act (FERPA)

Cascadia College complies with the Family Education Rights and Privacy Act (FERPA) of 1974 concerning the information that becomes a part of a student's permanent educational record and governing the condition of its disclosure. Under FERPA, students are protected against improper disclosure of their records. [See the student handbook for details.](#)

Even if a release of information form is on file, only registered students, SAS-approved individuals, and faculty-invited guests can attend class. Release of information forms do not authorize anyone

else to act as a proxy for a student by attending classes, joining office hours, or submitting information on behalf of a student, whether online or in-person.

Class Recordings

Students may not record classroom lectures without instructor consent. If instructor permission is given, recordings may be used for the student's individual educational purposes only and must be deleted upon completion of the course. Class recordings cannot be posted online, shared with others, or distributed without explicit permission from the instructor. Students who violate this policy may be subject to discipline.

Students who need to record lectures to gain equal access to the classroom can request this from Cascadia's [Cascadia's Student Accessibility Services](#) office.

Class Concerns

Students who have a concern about a course should first try to resolve any issue directly with the faculty member. If they are unable to resolve a concern directly, they have the right to bring their concern to the Office of Student Learning (StudentLearning@cascadia.edu), and have the option of meeting with the dean to discuss their concern.