



## INFO 6350 Smartphones-Based Web Development

### Course Information

Course Title: Smartphones-Based Web Development

Course Number: INFO 6350

Term and Year: Spring 2024

Credit Hour: 4

Course Format: On-Ground

### Instructor Information

Full Name: Rabah Ahmed

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### Course Prerequisites

Graduate level INFO 5100 Minimum Grade of C- or Graduate level CSYE 6200 Minimum Grade of C-

### Course Description

Covers application development for mobile devices using advanced development platforms. Focuses on how to write mobile applications using cross-platform development tools and processes. Topics include user interfaces, the software life cycle, persistent storage, networking using HTTP and other REST interfaces, and mobile/handheld data applications. Requires a final project.

### Standard Learning Outcomes

*Learning outcomes common to all College of Engineering Graduate programs:*

- 1. An ability to identify, formulate, and solve complex engineering problems.*
- 2. An ability to explain and apply engineering design principles, as appropriate to the program's educational objectives.*
- 3. An ability to produce solutions that meet specified end-user needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.*

*The Information Systems Program accepts students of different engineering backgrounds with minimum programming skills and produces first class Information Systems engineers that operate at the intersection of real-world complexity, software development, and IT management. Graduating students will be able to construct end-to-end advanced software applications that meet business needs.*

*Specific Learning Outcomes for the Information Systems program:*

- 1. Create a strong technical foundation through diverse, high-level courses*
- 2. Built crucial interpersonal skills needed to succeed in any industry*
- 3. Foster a deep level of applied learning through project based case studies*

### **Course Outcomes and Assessment Standards**

The goal of this course is to create an environment where the students are exposed to the practice of developing iOS applications using Swift and the Cocoa Touch framework within the Xcode/iOs paradigm. Coverage of the underlying theory coupled with hands-on exercises through the development of innovative solutions to practical problems will enable them to develop expertise in this expanding domain and prepare them to confidently face the increasing needs and challenges of the mobile application industry.

### **Course structure:**

This course will be conducted using a combination of formal class lectures and hands-on assignments. Lectures will cover theoretical concepts and backgrounds related to Mobile application development. Extensive examples will be used to illustrate the taught principles.

The coursework assignments will include a final project, where the student will select a problem and develop a complete solution for it. This will help them develop a strong understanding of the software development process by participating in all aspects of Software Development Life Cycle.

### **Course Outline:**

- Mobile Application Design and Development
- Programming Strategies for Mobile devices
- Swift bootcamp
- Application Development for the iOS platform

### **Evaluation:**

- Homework and programming assignments	25%
- Mid-term Exam	20%
- Final Exam	20%
- Final Project	30%
- Attendance	5%

## Class Policies:

- Punctuality, attendance, and class participation are essential for success. If a student must miss a class for a valid reason, he/she should make arrangements ahead of time to complete the assignment and turn it in on time.
- All tests are closed book, closed computer composed by questions requiring the student to have a good understanding of the software and concepts taught in class.
- Make-ups will only be given under extenuating and unavoidable circumstances. The student is responsible for informing the instructor prior to missing an exam.
- Students should feel free to exchange ideas with each other, however all assignments are expected to be the student's own work. All work that the student submits must truly represent his individual effort.
- Representing the words, ideas, or data of another as one's own in any academic exercise without providing proper citation is considered

## Reference Textbooks:

- - iOS 15 Programming Fundamentals with Swift by Matt Neuburg Ed Swift, Xcode, and Cocoa Basics ISBN-10: 1492074535
- - The Swift Developer's Cookbook by Erica Sadun ISBN10: 0134395263

## End-of-Course Evaluation Surveys

Your feedback regarding your educational experience in this class is particularly important to the College of Professional Studies. Your comments will make a difference in the future planning and presentation of our curriculum.

At the end of this course, please take the time to complete the evaluation survey at <https://neu.evaluationkit.com>. Your survey responses are **completely anonymous and confidential**. For courses 6 weeks in length or shorter, surveys will be open one week prior to the end of the courses; for courses greater than 6 weeks in length, surveys will be open for two weeks. An email will be sent to your Husky Mail account notifying you when surveys are available.

## **Academic Integrity**

A commitment to the principles of academic integrity is essential to the mission of Northeastern University. The promotion of independent and original scholarship ensures that students derive the most from their educational experience and their pursuit of knowledge. Academic dishonesty violates the most fundamental values of an intellectual community and undermines the achievements of the entire University.

As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, examinations of whatever kind, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Students are responsible for learning the conventions of documentation and acknowledgment of sources in their fields. Northeastern University expects students to complete all examinations, tests, papers, creative projects, and assignments of any kind according to the highest ethical standards, as set forth either explicitly or implicitly in this Code or by the direction of instructors.

Go to <http://www.northeastern.edu/osccr/academic-integrity-policy/> to access the full academic integrity policy.

## **University Health and Counseling Services**

As a student enrolled in this course, you are fully responsible for assignments, work, and course materials as outlined in this syllabus and in the classroom. Over the course of the semester if you experience any health issues, please contact UHCS.

For more information, visit <https://www.northeastern.edu/uahcs>.

## **Student Accommodations**

Northeastern University and the Disability Resource Center (DRC) are committed to providing disability services that enable students who qualify under Section 504 of the Rehabilitation Act and the Americans with Disabilities Act Amendments Act (ADAAA) to participate fully in the activities of the university. To receive accommodations through the DRC, students must provide appropriate documentation that demonstrates a current substantially limiting disability.

For more information, visit <https://drc.sites.northeastern.edu>.

## **Library Services**

The Northeastern University Library is at the hub of campus intellectual life. Resources include over 900,000 print volumes, 206,500 e-books, and 70,225 electronic journals.

For more information and for education specific resources, visit <https://library.northeastern.edu>.

## **24/7 Canvas Technical Help**

For immediate technical support for Canvas, call 617-373-4357 or email [help@northeastern.edu](mailto:help@northeastern.edu)

Canvas Faculty Resources: <https://canvas.northeastern.edu/faculty-resources/>

Canvas Student Resources: <https://canvas.northeastern.edu/student-resources/>

For assistance with my Northeastern e-mail, and basic technical support:

Visit ITS at <https://its.northeastern.edu>

Email: [help@northeastern.edu](mailto:help@northeastern.edu)

ITS Customer Service Desk: 617-373-4357

## **Diversity and Inclusion**

Northeastern University is committed to equal opportunity, affirmative action, diversity, and social justice while building a climate of inclusion on and beyond campus. In the classroom, members of the University community work to cultivate an inclusive environment that denounces discrimination through innovation, collaboration, and an awareness of global perspectives on social justice.

Please visit <http://www.northeastern.edu/oidi/> for complete information on Diversity and Inclusion

## **Title IX**

*Title IX of the Education Amendments of 1972 protects individuals from sex or gender-based discrimination, including discrimination based on gender-identity, in educational programs and activities that receive federal financial assistance.*

Northeastern's Title IX Policy prohibits Prohibited Offenses, which are defined as sexual harassment, sexual assault, relationship or domestic violence, and stalking. The Title IX Policy applies to the entire community, including male, female, transgender students, faculty, and staff.

In case of an emergency, please call 911.

*Please visit <https://www.northeastern.edu/ouec> for a complete list of reporting options and resources both on- and off-campus.*