

Mobile Application Development

Computer Science 344

Instructor:	Erik Krohn
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Text Message Only:	608-492-1106
Class/Lab Times:	Monday: 1:50pm - 4:50pm
Class/Lab Room:	Halsey 101C
Office Location:	Halsey 216
Office Hours:	Monday: 12:20pm - 1:50pm Tuesday: 11:10am - 12:40pm Thursday: 12:30pm - 1:30pm
Prerequisites:	Computer Science 262 with a grade of C or better.
Course Website:	http://www.uwosh.edu/d2l
Number of Credits:	3

Course Information

An introduction to the tools for developing mobile applications. Topics covered include: history of mobile development, using an appropriate IDE, emulating a mobile device, building a flexible user interface, understanding the application lifecycle, creating and managing multiple threads, creating and using web services and encrypting a completed project. A large mobile applications will be created throughout the course.

Course Website

You should check d2l on a regular basis - it will contain lecture notes, handouts, assignments, announcements, and grades. Ill do my best to let you know when something new and important comes up, but it is your responsibility to check the web site frequently for information that you might not get otherwise.

Labs

All labs will consist of short programming projects. **All labs must be written using Android Studio.** One of your goals (during this class and beyond, in Java or any programming language) should be to write understandable, readable code. You should be making every effort to comment anything that might be confusing to a reader unfamiliar with your program, to name variables intelligently, to use indentation that reflects the codes organization, and so on. All of this will be taken into account during grading: poorly organized or written code may have a negative impact on your grade, even if the resulting program works fine.

Keep this in mind when writing programs: write your code in small pieces, making sure each piece works before moving on to the next one. It is much better to turn in a project that is not finished but has many working pieces than to turn in one that doesnt work at all, even though most of the code is written.

All labs must be submitted electronically via d2l. It is your responsibility to ensure that your submission was submitted correctly. You must double check to ensure your program was uploaded correctly. **There are no late submissions.**

Grading

Course grades will be based on labs and a large programming project. Your final grade will be computed with the following percentages:

- 50% - labs
- 50% - large mobile application project

Grading will be on a plus/minus system. Grading may be done on a curve depending on the overall performance of the class. If no curve is used, your grade will be computed based on the following:

Percentage	Grade	Percentage	Grade
≥ 92	A	72 - 78	C
90 - 92	A-	70 - 72	C-
88 - 90	B+	68 - 70	D+
82 - 88	B	62 - 68	D
80 - 82	B-	60 - 62	D-
78 - 80	C+	< 60	F

Academic Dishonesty

Academic dishonesty of any kind will not be tolerated. All assignments, labs, mini assignments and exams are to be completed individually. While discussion of ideas and problems with fellow students is encouraged, all projects and labs must be done individually. In certain circumstances, code fragments from the instructor may be provided to eliminate tedious coding or to provide a common framework for all students. **All other code must be original.** Online resources may be used to help you understand the material, but you may not copy online code nor can you “borrow” code from other students, past or present.

Any suspected academic dishonesty will be dealt with on a case-by-case basis. Any clarification of what does or does not constitute academic dishonesty must take place **before** you turn in questionable work. For clarification on what constitutes academic dishonesty, contact me or consult the printed policy in the UWO Student Discipline Code, Chapter UWS 14 which can be found at <https://www.uwosh.edu/stuaff/images/Chapter%20UWS%2014.pdf>.

Course Outcomes

1. Understand the mobile platform and development environment and how it differs from traditional application development.
2. Understand the basic components on which mobile applications are created.
3. Be able to create a manifest file to present essential information to the system about an application.
4. Use permissions correctly to restrict access to a part of code or to data on a device.
5. Be able to define and create applications with sophisticated user interfaces including using layouts, menus, action bars, dialogs, notifications, drag and drop and toasts.
6. Provide the user with notifications when the application is running in the background.
7. Be able to handle concurrency using threads and handlers.
8. Create an application where the application can access data over a network from a mobile device.
9. Create an application using GPS locational services.
10. Be able to animate an application and create applications that respond to custom gestures.