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Course assignments are not weighted.

CSC XXXX Fall 2022

Flutter (Mobile App Development)

Thursdays 5:30 PM- 8:30 PM / Room: Virtual

Professor: Jeremy Andrews

Office Hours: After lecture or by appointment

Email: marketing@alphabetcreatives.com

App development is an expansive discipline with many components including desktop, mobile, and web. The core foundational aspects of app development include front end compilation (Views/HTML, CSS, JS) and backend development (Middleware, Backend, Database) -sometimes referred to as server side development. The understanding of both components is critical in order to understand how to build success apps.

Applications can be simple, or require more complexity through a series of API/REST integrations and database management. With backend development, you're most likely storing sensitive user data, authenticating users, and ensuring your data security is considered when building an application. A server side, or backend engineer, may also be responsible to create or design specs, technical documentation and control concepts when needed. An app frontend engineer will most likely be responsible for the full user flow, screens and the customer journey through the app. As a career, app development is very much in demand as users data becomes continually important and valuable.

This is a very hands-on programming course building, web, mobile, and desktop apps. You will learn:

- Basic concepts and fundamental approaches of mobile app development with Flutter and Dart
- Learn foundations of Dart (The core language) and Flutter SDK, two components of building cross-functional apps
- How Desktop, Web, and Mobile compilation differs with Flutter in a single code base
- Understand the differences between native Android/iOS Development and Flutter
- Build something that you can actually showcase to potential employers

Software Requirements:**Required:**

1. [Cloud Server](#) - Cloud Development/Production Server (we'll only be using GCP, Firebase in this course - but any VPS will do)
2. [Gitlab](#) - Pipeline Tools (Included with Course Package)
3. Computer (Mac/Linux/Windows) Should be able to support Android Studio or XCode and Visual Studio Code.
 - There are cloud options with amazon ec2 and macinthecloud.com however there may be some latency

Electronic Resources:

- Required Online Resources
 - [Dart](#)
 - [Flutter](#)
 - [Kotlin](#)
 - [Swift](#)

Optional But Highly Recommended

[Activate Your Aerie Career: How responding to change will inspire your life's work](#)

<https://hackr.io/blog/best-programming-books> (Anyone of these could work)

Online Resources

- There's a lot of outdated information on the Web that leads new mobile developers astray, propagating bad practices and insecure code. We will be using authoritative sources only in the course.

Grading Rubric:

- Homework Assignments: (10%)
 - There are 2 homework assignments
 - Home Assignments are graded with an "A"/100 or "B"/85 if submitted on time. No late assignments will be accepted and will receive a score of "0".
 - A = submitted on time and working correctly
 - B = submitted on time but not working.
- Quizzes (15%)
 - 4 Quizzes - multiple choice/short answer
- Mid Term (20%)
- Option #1
 - Build an Web App With Flutter (Web) given certain parameters
 - Working = A/100
 - Partially Working = B/85
 - Not Working = C/75
- Option #2
 - Given a current webapp, debug 5 items
 - 1/5 65%
 - 2/5 75%
 - 3/5 85%
 - 4/5 = 90%
 - 5/5 = 100%

Both options must be committed to the Gitlab repo

- Final (20%)
 - Part 1 will consist of 25 multiple choice questions. (60% of Final)
 - Part 2 Complete a scenario based on learning so far or Build Something (40% of Final)
- Group Project #1: (20%) Web App
- Group Project #2: (20%) Mobile App
 - You'll build an app and do a presentation on the app.

Final Exam Date: TBD

Course Topics:

	DART	FLUTTER	FIREBASE	DATABASE	API'S	PIPELINES	REPO	DevSecOps	Deployments
Heavy	X	X	X	X	X	X	X		
Light								X	X

Cheat Sheets

1. [Linux Commands](#)
2. [Git Commands](#)

Course Summary:

Date	Details	Due
Thu Sep 1, 2022	Environment/Naming Conventions Setup Assignment #1	due by 12pm
Thu Sep 8, 2022	Firebase And GCP Setup Assignment #2	due by 1pm
	Final Exam	
	Important Notes	