

CMPS 312 – Mobile Application Development

Syllabus and Course Admin



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Outline

- Course introduction
- Grading
- Policies

About the Instructor

- **Dr. Abdelkarim Erradi**
 - **Office:** H07 - C309, College of Engineering
 - **Phone:** 4403 4254

Office hours:

- Female: **Sun 12:15pm to 1:15pm** at H07-A399
- Male: **Tues 12pm to 1pm** at H07-BL013
- You can talk to me **after** class if you have quick issues/questions
- Best way to contact me is via **MS Teams chat**

Course Learning Outcomes

1. Design a mobile application based on established **design patterns** and **best practices**.
2. Design and implement an interactive and effective **user interface** for a mobile application.
3. Practice integrating **on-device sensors**, **local data stores** and **Cloud services**
4. **Design, implement and test** a mobile application using appropriate features, tools and application programming interfaces (APIs) of the mobile development platform.

Schedule

Topics	Weeks	Chapters
Dart programming language	1	Online readings
Dart Object-Oriented Programming (OOP), Collections and Lambda	1	
Flutter Fundamentals	1	1
User Interface (UI) development: Components and Layouts	1	3, 6, 14, 22
Displaying Lists and working with Forms	1	9
Navigation between screens	1	Online readings
Managing App State	1	4, 19
Asynchronous programming	1	Online readings
Using Web API	1	Online readings
Data Layer using SQLite	1	11
Firebase Cloud Services: Firestore, Cloud Storage & Firebase Authentication	1	Online readings
Work Manager and Notification Manager	1	27
Camera and Google Maps	1	15, 16
Review & Exams	1	

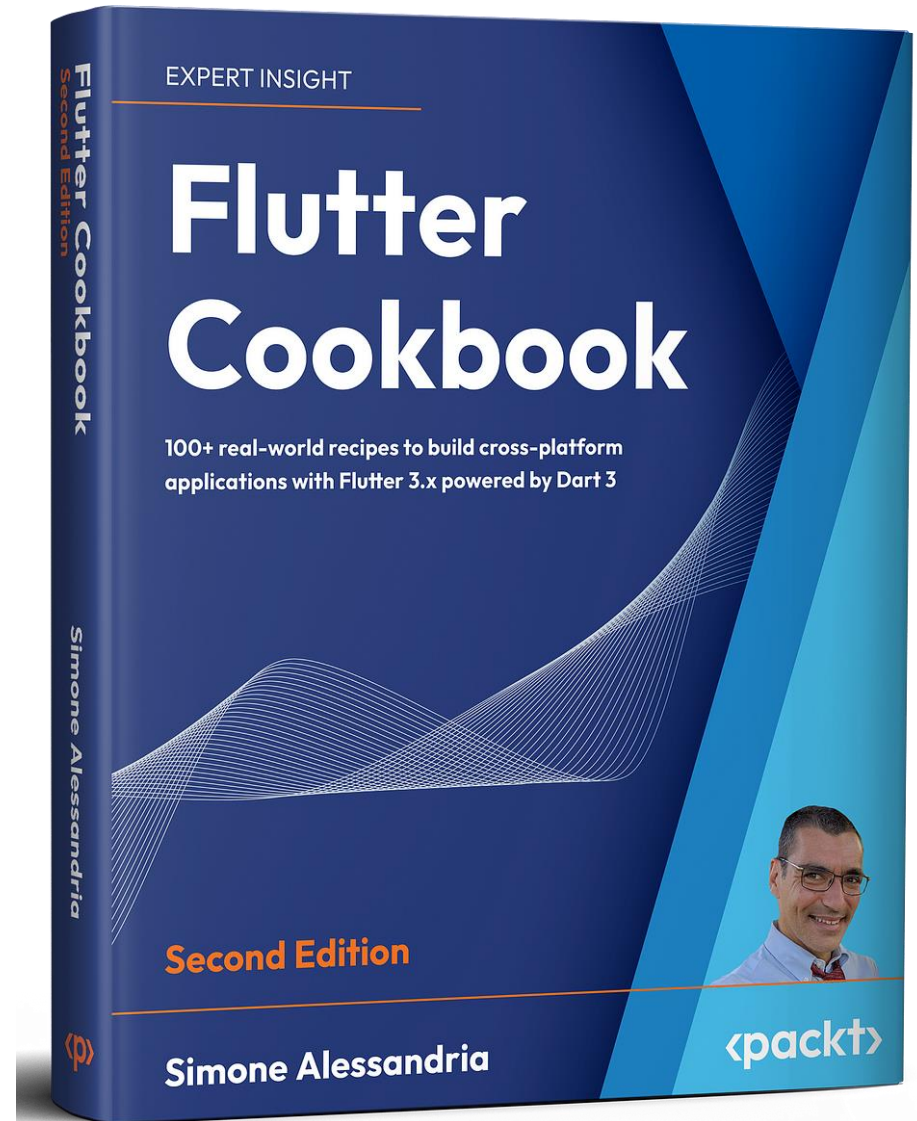
Recommended Textbook

Flutter Cookbook

2nd Edition, 2023

(freely available as [OReilly eBooks](#)
using your QU login)

Plenty of online
resources will be
provided



Your Grade is Based on

Theory:


Quizzes:	10% (5 out of 6) - no make-up quiz if absent
Midterm Exam:	10% (During week 7)
Final Exam:	10% (Consult final exams timetable)
Project Phase 1:	20%
Project Phase 2:	10%

Lab:

Lab Assignments:	20% (4 out of 5)
Midterm Lab Exam:	10% (During week 7)*
Final Lab Exam:	10% (During the last Lab)*

* Students **who get less than 50 pts** out of 100 in the Midterm/Final Lab exam will be a clear evidence of project free-riding

How to succeed in this course....

- ❑ Do your weekly assigned readings
- ❑ **Read the slides before you come to the class**
- ❑ **Exercise a lot – study as many examples as possible**
 -  – Understand and enhance the examples I provide as well as the ones in the textbook and the ones in the provided resources
- ❑ **Attend and participate in class**
 - ❑ Many of the exam questions are from the class explanation
- ❑ Do all the assignments and project yourself. Actively contribute to your project.
- ❑ Seek help when needed and ask questions (and do it EARLY): During Lectures/Labs & Come to office hours



We learn swimming by swimming and we learn design and programming by practicing it!

Software we will use

- VS Code with Flutter SDK and Tools

<https://docs.flutter.dev/get-started/install>

- GitHub Desktop

- For modeling we will use **Visual Paradigm**

<https://ap.visual-paradigm.com/qatar-university/license.jsp>

- Other tools will be communicated to you as we go



**GitHub will be used to deliver Slides,
Examples, Assignments, and Project**

<https://github.com/cmeps312f24/cmeps312-content>

Check it regularly!

Communication

- Post your technical questions to <https://github.com/cmeps312f24/cmeps312-content/issues>

Do NOT send me by email

- To contact me do not send emails but use **Microsoft Teams** chat
- For **guidance** on technical issues come to office hours NOT by email

Important Notes

- **Attendance...** QU attendance policies will be enforced
 - Do not miss classes/labs
- **Start your assignments and project early!!!**
- This is a senior-level course and students are expected to learn independently as much as needed in order to complete the course requirements
 - Do not expect me to find/fix your code bugs
 - Do not expect me to find and fix your technical issues
 - => I can only give you high level suggestions and guidance

No 'Free Riding' allowed

- 'free riders' (who do not contribute much) => not acceptable and not fair for hardworking students
 - You must actively contribute to your project and do your ultimate best to deliver the best possible results
 - Otherwise you will be asked to do the project alone
 - **Report free-riders early**



Plagiarism / Cheating

- “Getting an unfair academic advantage”
 - Using other people's work as your own
 - Not doing your assignments yourself
- All the code you submit must be your own
 - Only exception: Code I have provided or explicitly authorized
 - **NO** code you have found on the web. **NO** sharing with others.
- **Do your homework and project yourself**
 - Do NOT copy from each other or from the Internet - **I will know it!**
 - You can be picked-up randomly to explain your implementation
 - Cheating will be treated very seriously
- Penalties START with a zero on the assignment, failing the course! and other disciplinary actions as per QU policy

To do before next class

- Install the required software: VS Code, Flutter SDK and Tools & GitHub desktop (see announcement on Teams)
- Decide your team members and enter them in the spreadsheet on Teams
- Create your GitHub account (firstname-quUsername)
- Prepare any questions you might have



I wish you a fruitful and enjoyable journey!