

Kingdom of Saudi Arabia
Ministry of Education
Prince Sattam Bin
Abdulaziz University
College of Computer Eng.&
Sciences
Department of Information
Systems



المملكة العربية السعودية
وزارة التعليم
جامعة الأمير سطام بن عبدالعزيز
كلية هندسة وعلوم الحاسب
قسم نظم المعلومات

SYLLABUS

IS 4904 – MOBILE AND WEB DEVELOPMENT (IS4904) (CORE COURSE)

Course Catalog Description

This course provides the students with an introduction to the core concepts in mobile and web development with the Flutter framework. It first starts by introducing the Dart programming language, the backbone of Flutter framework. In doing so, it introduces the language and focuses on the aspects related to the Flutter Framework. Finally, this course introduces the Flutter framework by emphasizing first on the mobile aspects and then on the web aspects of the framework.

Course Requirements

- **Pre-requisite:** None
- **Credit Hours:** 4 CHs
- **Contact Hours:** (2 hours lecture, 2 hours tutorial, 0 hour Lab)

References

- **Reference 1:** Dart Apprentice: Fundamentals
 - **Author:** Jonathan Sande
 - **Publisher:** Kodeco Inc.
 - **ISBN:** 978-1950325771
- **Reference 2:** Flutter Apprentice (Third Edition): Learn to Build Cross-Platform Apps
 - **Author:** Michael Katz, Kevin D Moore, Vincent Ngo, Vincenzo Guzzi
 - **Publisher:** Razeware LLC (September 13, 2022)
 - **ISBN:** 978-1950325740

Instructor/Course Coordinator

Dr.Youssef N Altherwy, **Email:** y.altherwy@psau.edu.sa, **Office:** BS25

Grading Policy

Assessment	Week n	Weight
1. MidTerm-Exam#1	#7	10
2. Course Work	During Semester	70

3. Final Exam	#19 or 20	20
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Course Work

This is a course-work focused subject, where the students are expected to perform a lot of tasks during the semester.

Course Learning Outcomes (CLOs)

CLO#	CLOs	Aligned SOs
CLO#1	Introduce the Dart Programming language	--
CLO#2	Discuss Expressions, Loops, and Functions in Dart	--
CLO#3	Introduce Flutter and its unique approach of developing a single codebase for multiple environments	--
CLO#4	Run Flutter applications on different platforms such as a mobile phones and browsers	--

Topics

Main Topic	Weeks	Reference
Overview of Web and Mobile Development	# 1	--
Introduction to Dart Programming Language <ul style="list-style-type: none"> Hello, Dart! (Chapter 1) Expressions, Variables & Constants (Chapter 2) Types & Operations (Chapter 3) Strings (Chapter 4) Control Flow (Chapter 5) Loops (Chapter 6) Functions (Chapter 7) Classes (Chapter 8) Nullability (Chapter 11) Lists (Chapter 12) 	# 2 to 7	Reference 1
Introduction to Flutter framework <ul style="list-style-type: none"> Getting Started (Chapter 1) Hello, Flutter (Chapter 2) 	# 8 & 9	Reference 2
Flutter 101 <ul style="list-style-type: none"> Basic Widgets (Chapter 3) Understanding Widgets (Chapter 4) Scrollable Widgets (Chapter 5) 	# 9 to 12	Reference 2
Flutter 102 <ul style="list-style-type: none"> Interactive Widgets (Chapter 6) Routes & Navigation (Chapter 7) Deep Links & Web URLs (Chapter 8) 	# 12 to 17	Reference 2

Program learning Outcomes (SOs)

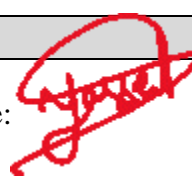
- K1 Identify and define the computing requirements.
- S1 An ability to analyze a problem, and to suggest and select the computing requirements appropriate to its solution.
- S2 An ability to design, implement, and evaluate a computer-based solution to meet a given set of computing requirements in the context of the discipline.
- S3 An ability to make informed judgments in computing practice based on legal and ethical principles.
- C1 An ability to communicate effectively with a range of audiences about technical information
- C2 An ability to function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables.
- C3 An ability to support the delivery, use, and management of information systems within an information systems environment.

Students with special needs/disability

The Prince Sattam bin Abdulaziz University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let the course's instructor know immediately so that you can privately discuss options. You are also welcome to register with Special Education Unit at Deanship of Student Affairs to establish reasonable accommodations. After registration, make arrangements with the course instructor as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. (Include Special Education Unit contact information).

Preparation and Approval

Prepared by: Dr. Youssef N Altherwy

Signature: 

Date: 20/08/2023

Approved by the Dept.: _____

Signature: _____ Date: _____

links

<https://dartpad.dev/>

<https://zapp.run>

<https://flutlab.io>

<https://github.com/altherwy/IS4904>