

## COURSE DESCRIPTIONS

|                      |                                    |                   |   |                     |           |
|----------------------|------------------------------------|-------------------|---|---------------------|-----------|
| <b>Faculty</b>       | Science and Information Technology |                   |   |                     |           |
| <b>Department</b>    | Software Engineering               |                   |   | <b>NQF level</b>    | 6         |
| <b>Course Title</b>  | Mobile Application                 | <b>Code</b>       | 503410  | <b>Prerequisite</b> | 501317    |
| <b>Credit Hours</b>  | 3                                  | <b>Theory</b>     | 3   | <b>Practical</b>    | 0         |
| <b>Course Leader</b> | Dr. Azmi Halasa                    | <b>email</b>      | <a href="mailto:halasa@jadara.edu.jo">halasa@jadara.edu.jo</a>                                  |                     |           |
| <b>Lecturers</b>     | Dr. Azmi Halasa                    | <b>emails</b>     | <a href="https://sites.google.com/site/azmihalasa">https://sites.google.com/site/azmihalasa</a> |                     |           |
| <b>Lecture time</b>  | 11:30- 13:00 Sun, Tue              | <b>Classroom</b>  | D103  |                     |           |
| <b>Semester</b>      | Second                             | <b>Production</b> |   | <b>Updated</b>      | 2021-2022 |
| <b>Awards</b>        | Bachelor Degree                    |                   |   | <b>Attendance</b>   | Fulltime  |

## Short Description

In this course, the students will be learning the essentials for Android application development, and provides students with the required skills for the design and implementation of different mobile applications. Topics include: building user interfaces, using internet resources, managing files and preferences, using maps and location- based services, working with audio, video and using the camera. This course is a lab-based course which includes in-class practical assignments and tasks.

## Course Objectives

- Describe the platforms upon which the Android operating system will run.
- Create a simple application that runs under the Android operating system.
- Access and work with the Android file system.
- Create an application that uses multimedia under the Android operating system.
- Access and work with databases under the Android operating system.

## Learning Outcomes

## A. Knowledge - Theoretical Understanding

a1. Describe the main concepts of mobile application development. (K1)

## B. Skills - Generic Problem Solving and Analytical Skills

b1. Compare between Android Views, Activities, and Fragments. (S1)

## C. Competence: Autonomy, Responsibility, and Context

c1. Work effectively taking both individual and collective responsibility to create mobile application. (C1)

## Teaching and Learning Methods

- Lecture,
- Lab (online),
- Discussion

## Assessment Methods

- Formative Assignment
- Assignment and Labs
- Midterm exam,
- Final exam

| Course Contents |       |       |  |                                    |                         |
|-----------------|-------|-------|--|------------------------------------|-------------------------|
| Week            | Hours | CILOs | Topics   | Teaching & Learning Methods        | Assessment Methods      |
| 1               | 3     |       | Introduction to Mobile Apps Development<br>Lab 1 : Setting up Android Studio               | Standard Lecture+<br>Physical Labs |                         |
| 2               | 3     |       | App Architecture<br>Lab 2: Build your first app<br>Lab 3 Event Handling and Intent Objects | Standard Lecture+<br>Physical Labs | Tests – Quiz 1          |
| 3               | 3     |       | Mobile User Interface Design<br>Lab 4 Build a Simple User Interface (UI)- Calculator App   | Standard Lecture+<br>Physical Labs |                         |
| 4               | 3     |       | Designing UI for Android<br>Lab 5 More UI Controls   | Standard Lecture                   | Case Study Introduction |
| 5-6             | 6     |       | Navigation and Application Structure<br>Lab 6 More UI Controls<br>Lab 7 Spinner            | Standard Lecture+<br>Physical Labs | Tests – Quiz 1          |
| 7-8             | 6     |       | Notification & Alerts<br>Lab 8 Alert Dialogs<br>Lab 9 Notification                         | Standard Lecture+<br>Physical Labs | Mid Exam                |
| 9               | 3     |       | Accessing Local Files<br>Lab 10 Accessing Local Files                                      | Standard Lecture+<br>Physical Labs |                         |
| 10-11           | 3     |       | Local Data Storage<br>Lab 11 SQLite and Shared Preferences                                 | Standard Lecture+<br>Physical Labs | Practical 1             |
| 12              | 3     |       | Maps and Geolocation<br>Lab 12 Google Maps   | Standard Lecture+<br>Physical Labs | Practical 2             |
| 14              | 3     |       | Deployment<br>Lab 13 Geocoding<br>Lab 14 Current Location                                  | Standard Lecture                   | Final Exam              |

| Infrastructure       |  |
|----------------------|--|
| Textbook             | Bill Phillips, Chris Stewart, Brian Hardy, and Kristin Marsicano, <b>Android Programming: The Big Nerd Ranch Guide</b> , Big Nerd Ranch LLC, 3rd edition, 2017   |
| References           | Rajiv Ramnath, Roger Crawfis, and Paolo Sivilotti, <b>Android SDK 3 for Dummies</b> , Wiley.   |
| Required reading     |  |
| Electronic materials | – Safari Text Books Online, <a href="http://library.ohio-state.edu/search/y?SEARCH=Safari">http://library.ohio-state.edu/search/y?SEARCH=Safari</a><br>– Business Source Complete, <a href="http://library.ohio-state.edu/record=e1000557">http://library.ohio-state.edu/record=e1000557</a> |
| Other                |  |

| Assessment Method             |                            | Grade | a1 | b1 | c1 |
|-------------------------------|----------------------------|-------|----|----|----|
| First (Midterm)               |                            | 30    | 15 | 15 |    |
| Second (if applicable)        |                            | 0     |    |    |    |
| Final Exam                    |                            | 50    | 15 | 15 | 20 |
| Coursework                    |                            | 20    |    |    |    |
| Coursework assessment methods | Assignments                |       | 10 | 5  | 5  |
|                               | Case study                 |       |    |    |    |
|                               | Discussion and interaction |       |    |    |    |
|                               | Group work activities      |       |    |    |    |
|                               | Lab tests and assignments  |       |    |    |    |
|                               | Presentations              |       |    |    |    |
|                               | Quizzes                    |       |    |    |    |
| Total                         |                            | 100   | 40 | 35 | 25 |

| Plagiarism   |
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| <p>Plagiarism is claiming that someone else's work is your own. The department has a strict policy regarding plagiarism and, if plagiarism is indeed discovered, this policy will be applied. Note that punishments apply also to anyone assisting another to commit plagiarism (for example by knowingly allowing someone to copy your code).</p> <p>Plagiarism is different from group work in which a number of individuals share ideas on how to carry out the coursework. You are strongly encouraged to work in small groups, and you will certainly not be penalized for doing so. This means that you may work together on the program. What is important is that you have a full understanding of all aspects of the completed program. In order to allow proper assessment that this is indeed the case, you must adhere strictly to the course work requirements as outlined above and detailed in the coursework problem description. These requirements are in place to encourage individual understanding, facilitate individual assessment, and deter plagiarism.</p> |