# EUROPEAN HERITAGE, DIGITAL MEDIA AND THE INFORMATION

(Università degli Studi)

## Teaching MOBILE APPLICATIONS DEVELOPMENT

GenCod A004199

**Owner professor** Italo EPICOCO

**Teaching in italian** MOBILE APPLICATIONS DEVELOPMENT

**Teaching** MOBILE APPLICATIONS DEVELOPMENT

**SSD code** ING-INF/05

**Reference course** EUROPEAN HERITAGE, DIGITAL MEDIA AND THE

**Course type** Laurea Magistrale

**Credits** 6.0

**Teaching hours** Front activity hours: 42.0

**For enrolled in** 2018/2019

**Taught in** 2018/2019

**Course year** 1

**Language** ENGLISH

**Curriculum** INTERNAZIONALE

**Location**

**Semester** First Semester

**Exam type** Oral

**Assessment** Final grade

**Course timetable** https://easyroom.unisalento.it/Orario

BRIEF COURSE DESCRIPTION

The course covers all of the fundamental aspects related to the development of a mobile application using Apple iOS. Meant for students without previous programming experience, the course starts covering the new programming language Swift, using the integrated development environment Xcode. After introducing the Swift programming language and the use of Xcode to develop a simple application, the students will create a basic prototype application, and, gradually, they will implement the application by adding new features until they implement a real, usable application.

REQUIREMENTS

There are no prerequisites; indeed, the course is meant for students without previous programming experience.

COURSE AIMS

The course aims to provide students with the skills required to develop a mobile application using Apple iOS. Therefore, at the end of this course the students will know:

- The programming language Swift;
- The integrated development environment Xcode;
- The fundamental iOS frameworks and their related APIs.

Moreover, at the end of this course the students will acquire the following expertise and technical capabilities:

- Develop, starting from an initial project idea, a mobile application using Apple iOS;
- Problem solving;
- Reading technical documentation;
- Team working.

| | |
|---|---|
| TEACHING METHODOLOGY | – Classroom lectures;<br>– Laboratory exercises;<br>– Team work.<br>The course is based on classroom lectures and laboratory exercises (for a total of 42 hours), in which the students are directly involved. Moreover, there will be some team work assigned, in order for the students to solve exercises and small homework projects. Attending the lectures is strongly advised, since the course is mainly based on the hands on approach. |
| ASSESSMENT TYPE | Students will be evaluated through an oral exam. The students will be required to discuss a project assigned to them. The exam will evaluate how much the students have reached the following didactic aims:<br>▪ Knowledge of the Swift programming language;<br>▪ Ability to design and implement a mobile application using Apple iOS.<br>Evaluation will take into account the assigned project, the exposition, the formal correctness and the ability to argue and support the student's theses. |
| ASSESSMENT SESSIONS | The exam sessions are available through this link: exam sessions |
| FULL SYLLABUS | Swift Playgrounds<br>Build First App<br>Introduction to Auto Layout<br>Designing UI Using StackViews<br>Introduction to Prototyping<br>Creating a SimpleTable-based App<br>Using UI AlertController<br>Introduction to NavigationController and Segue<br>Introductionto Object-Oriented Programming<br>Self Sizing Cells and Dynamic Type<br>Working with Maps<br>Introduction to StaticTableViews, UIImagePickerController and NSLayoutConstraint<br>Working with CoreData |
| REFERENCE TEXT BOOKS | Textbook:<br>Simon Ng, Beginning iOS 10 Programming with Swift. AppCoda<br>http://www.appcoda.com/swift/<br><br>Additional, useful references:<br>The Swift Programming Language. Apple Inc.<br>Simon Ng, Intermediate Swift and iOS 10 Programming. AppCoda<br>http://www.appcoda.com/intermediate-swift-programming-book/ |