

Course Unit	Multimedia Applications Development	Field of study	Computer Science
Bachelor in	Multimedia	School	School of Public Management, Communication and Tourism
Academic Year	2023/2024	Year of study	3
Type	Semestral	Semester	1
Workload (hours)	162	Contact hours	T - , TP 60 , PL - , TC - , S - , E - , OT - , O -
		Level	1-3
		ECTS credits	6.0
		Code	9213-656-3102-00-23

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Joao Aderito Moura Moutinho

### Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Know and understand author languages in the development of multimedia applications.
2. Consider in the development the different inputs and outputs of each device, the different operating systems in order to produce cross-platform applications.
3. Develop scripts, flowcharts, and storyboard (s) to support the cross-platform application development process.
4. Incorporate and interconnect the different types of media elements in the same resource.
5. Apply the programming and design of interfaces knowledge acquired in previous curricular units for different execution contexts.
6. Develop interactive applications that take advantage of the use of different types of man-computer and machine-machine interaction.

### Prerequisites

Before the course unit the learner is expected to be able to:

1. Know the foundations of the programming.
2. Manipulate individually each media element.

### Course contents

Concepts of multimedia authoring, actionscript, javascript.

### Course contents (extended version)

1. Concepts of multimedia authoring.
  - Metaphors
  - Process
  - Interfaces
2. Actionsript and javascript
  - Language syntax
  - Actionsript and the objects and the various types of media
  - Object-oriented programming
  - Human-machine interfaces
  - Capture of man-machine and machine-machine interactions
  - Communication protocols
3. Development process of multimedia application
  - Analysis and planning
  - Design
  - Implementation
  - Test and evaluation
  - Publication
  - Optimization
4. Aspects regarding to publication for different platforms.

### Recommended reading

1. Ribeiro, N. (2012). Multimédia e Tecnologias Interactivas. FCA Editora. ISBN: 9789727227440.
2. Labrecque, J. , Schwartz, R. (2016). Learn Adobe Animate CC for Interactive Media. Peachpit Press. ISBN: 9780134397818.
3. Chun, R. (2020). Adobe Animate Classroom in a Book. Pearson Education. ISBN: 9780135298886
4. Adobe (2020). Guia do Usuário do Adobe Animate. <https://helpx.adobe.com/pt/animate/user-guide.html>.
5. Filipova, O. & Vilao R. (2018). Software Development From A to Z. Apress. ISBN: 9781484239445.

### Teaching and learning methods

Contact hours: Explanation of concepts, conducting practical exercises to apply the concepts. Non-contact hours: Exercises, research work and development of a multimedia project.

### Assessment methods

1. Continuous evaluation - (Regular, Student Worker) (Final)
  - Projects - 50% (Develop a multimedia applicaton, with individual presentation and justification of the work.)
  - Practical Work - 50% (Exercises. .)
2. Exchange students - (Regular, Student Worker) (Final, Supplementary, Special)
  - Projects - 60% (Develop a multimedia applicaton, with individual presentation and justification of the work.)
  - Final Written Exam - 40% (Assessment test, involving theoretical questions and a small program in Actionsript.)
3. Final evaluation - (Regular, Student Worker) (Supplementary, Special)
  - Projects - 60% (Develop a multimedia applicaton, with individual presentation and justification of the work.)
  - Final Written Exam - 40% (Assessment test, involving theoretical questions and a small program in Actionsript.)

### Language of instruction

Portuguese, with additional English support for foreign students.

## Electronic validation

Joao Aderito Moura Moutinho	Ana Lucia Jesus Pinto	Anabela Neves Alves de Pinho	Luisa Margarida Barata Lopes
10-10-2023	10-10-2023	11-10-2023	15-10-2023