INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Multimedia Applications Development			Field of study	Computer Science										
Bachelor in	Multimedia			School	School of Public Management, Communication and Tourism										
Academic Year	2022/2023	Year of study	3	Level	1-3	ECTS credits	6.0								
Type	Semestral	Semester	1	Code	9213-656-3102-00-22										
Workload (hours)	162	Contact hours	T -	TP 60	PL -	TC -	S -	E -	OT -	O -					

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): Arlindo Costa dos Santos

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. Actionscript and javascript
   - Language syntax
   - Actionscript 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. Distributed evaluation - (Regular, Student Worker) (Final, Supplementary)
   - Projects - 75% (Develop a multimedia applicaton. Individual presentation and justification of the work)
   - Practical Work - 25% (Exercises. .)
2. Exchange students - (Regular, Student Worker) (Final, Supplementary, Special)
   - Projects - 100% (Develop a multimedia applicaton. Individual presentation and justification of the work)
3. Final evaluation - (Regular, Student Worker) (Special)
   - Projects - 100% (Develop a multimedia applicaton. Individual presentation and justification of the work)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

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01-10-2022	07-10-2022	07-10-2022	10-10-2022