APPLICATIONAL INTERFACE DEVELOPMENT

Master in Engenharia Informática

Code: 20615

Main Scientific Area: Computer Graphics and Multimedia

Lecturer: Duarte Filipe Oliveira Duque

Language of Instruction: Portuguese

Regime: S1

Contact Hours: 60h Total Workload: 100h

ECTS: 6,0

Objectives

This course unit has as main objective to create skills for the development and analysis ofa non-functional high-fidelity prototype of an application interface. Usingseveralmethodologies for design, it's intended to build different information levels of a graphical user interface. To achieve this, the critical visual analysis will be stimulated, from the usability point of the view, so as colour, typography and hierarchical composition.

Learning Outcomes

At the end of this course unit, the students should be able to develop a non-functional high-fidelity prototype of an application interface, where will apply the rules of typography, colour, grid system and visual hierarchy. The students should be able to identifythe different design methodologies(Human-Computer Interaction,User Interface, User Experience, User-Centered Design, Human-Computer Interaction, etc).

Course Contents

— HCI: Human-computer interaction.

— UCD: User-centered design.

— User Experience (UX) and User Interface (UI).

— Principles and standards of interaction visual design.

— Content hierarchy.

— Wireframes.

—Prototyping.

— Usability Evaluation.

— Functional and Non-Functional Requirements.—Virtual Reality.

Recommended Bibliography

Cooper, Alan; Reimann, Robert; Cronin, David. (2007). About Face 3: The Essentials of InteractionDesign. Wiley Publishing, Inc.

Caddick, Richard; Cable, Steve. (2011). Communicating the User Experience. Wiley.

Goodwin, Kim. (2009). Designing for the Digital Age: How to Create Human-Centered Products andServices.

Tidwell, Jenifer. (2011). Designing Interfaces: Patterns for Effective Interaction Design. O'Reilly.

Dix, Alan; et al. (2003). Human-Computer Interaction. Prentice Hall.

Saffer, Dan. (2013). Microinteractions: Designing with Details. O'Reilly Media.

Gonçalves, Daniel; Fonseca, Manuel J.; Campos, Pedro. (2017). Introdução ao Design de Interfaces.FCA.

Jerald, Jason. (2016). The VR Book: Human-Centered Design for Virtual Reality. Morgan Claypool Publishers-ACM.

Parisi, Tony. (2015). Learning Virtual Reality: Developing Immersive Experiences and Applications for Desktop, Web, and Mobile. O'Reilly Media.

Learning and Teaching Methods

The programmatic contents represent the different phases ofa project to build a non-functional high-fidelity prototype of an application interface, so they will guide the students to achieve the objectives of this course unit.

Assessment Methods

Distributed evaluation without a final exam, through the development of a group project with many phases.

To be approved, the student needs to have a final grade of10 (out of 20).