

804235 - IDI - Interfaces Design and Interaction

Coordinating unit:	804 - CITM - Image Processing and Multimedia Technology Centre
Teaching unit:	804 - CITM - Image Processing and Multimedia Technology Centre
Academic year:	2018
Degree:	BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Teaching unit Compulsory) BACHELOR'S DEGREE IN VIDEO GAME DESIGN AND DEVELOPMENT (Syllabus 2014). (Teaching unit Compulsory)
ECTS credits:	6
Teaching languages:	Catalan, Spanish, English

Teaching staff

Coordinator:	Fábregas Ruesgas, Juan José
Others:	Borras Borrell, Elias del Castillo Figueruelo, Arantzazu

Degree competences to which the subject contributes

Specific:

CEVJ 3. (ENG) Aplicar las metodologías de diseño de interfaces gráficas de una aplicación interactiva siguiendo criterios de usabilidad y accesibilidad y teniendo en cuenta las diferentes plataformas a las que puede ir dirigida.

Transversal:

04 COE. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.

CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.

CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.

07 AAT. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.

Teaching methodology

New contents explanation and guidethrough the stuff given for study or practice making. Students can take part, usually asking issues relating the contents and taking notes.

Discussions opened class where students take part, asking questions and doing side by side with the teacher practices revisions.

In-class practice making and out of them due to the guidelines given from the teacher. During the subject the students will make 2 practices.

Learning objectives of the subject

- Understand and know all the processes, techniques, technologies and softwares related to the GUI creation and being able to apply them to a real project.
- Being able to design, evaluate and test usability, accessibility and playability of videogame interfaces.
- Knowing all standards and regulations related multimedia applications and ussability, accessibility, playability and UCD focused on videogames players.
- Undesrtangind human behaviour in workflows and psichological processes and being able to apply this knowdleges ind

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the decision making videogames process.

- Understand and handle UCD method (User Centeder Design) and all methods, techniques and technologies related for applying them into videogames design and development.
- Understand and beware about social responsibility related to all accessibility guidelines and being able to apply them sutiably to every videogame or multimedia application.
- Plan strategies to prepare and make speeches and organize contents, style and grammar-ortography rules oriented to well structured documents.
- Improve team work skills for organise purposes, being efficient and rewarding communication, well balanced tasks and cohesion.
- Design and plan a good search of specialized resources locating the right information keeping in mind issues as relevance and quality rules. Being able to identifying academic document structure and identifying blibliographic references.
- Make works after basic guidelines given from faculty, organising timelines, making personal contributions and increasing the bibliographic references.

Study load

Total learning time: 150h	Hours large group:	18h	12.00%
	Hours medium group:	30h	20.00%
	Hours small group:	0h	0.00%
	Guided activities:	12h	8.00%
	Self study:	90h	60.00%

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Content

<p>1. User-Player experience.</p>	<p>Learning time: 5h Theory classes: 2h Self study : 3h</p>
<p>Description: Human factor and player experience design.</p>	
<p>2. Theory of production of user interfaces.</p>	<p>Learning time: 5h Theory classes: 2h Self study : 3h</p>
<p>Description: Muthual intelligibility and application to interfaces creation. Terms such as NUI, HID, WIMP? Natural objects with abstract tools manipulation.</p>	
<p>3. Games User Research & User Experience Design</p>	<p>Learning time: 2h 30m Theory classes: 1h Self study : 1h 30m</p>
<p>Description: Study of concepts, procedures and techniques of research and user experience design.</p>	
<p>4. Psychological and technological basis.</p>	<p>Learning time: 2h 30m Theory classes: 1h Self study : 1h 30m</p>
<p>Description: ?Wave edge? in technological context. Fitts & Hick Hyman laws.</p>	
<p>5. Theoretical models of the player experience.</p>	<p>Learning time: 5h Theory classes: 2h Self study : 3h</p>
<p>Description: Theoretical models revision and investigation workflows relating Player eXperience.</p>	

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6. User interface production.	Learning time: 17h 30m Theory classes: 7h Self study : 10h 30m
Description: GUI wireframe definition, fast design techniques. Technical screen issues and terms, DPI, multiresolutions? Adaptative design. Interface prototyping tools. Text entering techniques.	
7. Inquiry methods.	Learning time: 2h 30m Theory classes: 1h Self study : 1h 30m
Description: Review and study of methods of inquiry.	
8. Aesthetics and consistency with conceptual art.	Learning time: 2h 30m Theory classes: 1h Self study : 1h 30m
Description: Look&Feel, skewmorphism, icons, controls. Physical laws applying.	
9. Inspection and evaluation methods.	Learning time: 7h 30m Theory classes: 3h Self study : 4h 30m
Description: Inspection and evaluation methods: revision focusing on videogames development.	
10. Technological optimization.	Learning time: 2h 30m Theory classes: 1h Self study : 1h 30m
Description: Interactivity optimization. Ambient controls, non-graphic controls, specific user interfaces.	

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11. Test methods.	Learning time: 5h Theory classes: 2h Self study : 3h
Description: Concept and procedures of Play testing. Usability test concept and procedures using eye tracking technology.	
12. Game Accessibility.	Learning time: 2h 30m Theory classes: 1h Self study : 1h 30m
Description: Accessibilit: concept and accessibility of video games.	

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Planning of activities

<p>Practice 1. Inspections and test of a video game</p>	<p>Hours: 35h Practical classes: 14h Self study: 21h</p>
<p>Description: The students will develop: a usability test with eye-tracking, a play testing, a heuristic evaluation and a cognitive walkthrough of specific parts of a video game and the corresponding reports of the method and the results.</p> <p>Support materials: Subject notes and additional stuff, eye tracking manual and tutorials. HCI laboratory.</p> <p>Descriptions of the assignments due and their relation to the assessment: Reports with methods and results are delivered.</p> <p>Specific objectives: (Anglès) Aprendre a dissenyar, avaluar i testear la usabilitat i la jugabilitat de videojocs. Comprendre el concepte "factor humà" i els mecanismes i processos psicològics implicats i ser capaç d'aplicar aquest coneixement en el procés d'inspecció i testeig i, en presa de decisions en el disseny de videojocs. Mostrar comprensió del disseny de l'experiència d'usuari i del mètode de disseny centrat en l'usuari" i dels procediments, tècniques i tecnologies implicades i ser capaç d'aplicar-les en el procés de disseny i desenvolupament de videojocs.</p>	
<p>Practice 2. Videogame GUI design.</p>	<p>Hours: 35h Practical classes: 14h Self study: 21h</p>
<p>Description: Creating a videogame prototype.</p> <p>Support materials: Subject notes and additional stuff.</p> <p>Descriptions of the assignments due and their relation to the assessment: Prototype.</p> <p>Specific objectives: Acquire knowllegement relating GUI videogames focusing on usability and playability.</p>	

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Qualification system

Practices.

- . Practice 1, 15% worthing of final grade.
- . Practice 2, 15% worthing of final grade.

Test exams.

Tests average, 10% worthing of final grade.

Mid-term exam.

- . 1 mid-term exam, 25% worthing of final grade.

Final exam

- . 1 final exam, 25% worthing of final grade.

Participation and student learning attitude, 10% worthing of final grade.

Suspended students can reach for the re-evaluation, no matter the final grade obtained (There is no minimum grade to access, if and when the grade is different from NP). The grade obtained in the re-evaluation replaces, if it is higher of the grade obtained in the continuous evaluation, except for the participation and learning attitude. The final grade of the course, calculated from the re-evaluation exam, can not exceed 5.

Regulations for carrying out activities

Practices will be done mostly out of class, in personal work time, but some of the work will be also done in-class with faculty support.

Practices evaluacion doesn't imply only the final result but also in-class public speeches and on-time and format-right deliveries through digital campus.

Documents structure must be due to the guidelines, specially in file-names format and contents organization. Right documentations handling is one of the subject's purpose, so it will be key in subject evaluation.

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Bibliography

Basic:

Bernhaupt, R.. Game user experience evaluation. Springer, 2015.

Complementary:

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Chen, J. (2007). "Flow in games (and everything else)". *Communications of the ACM*, 50(4), 31-34.

El-Nasr, M. S., & Yan, S. (2006, June). "Visual attention in 3D video games". *Proceedings of the 2006 ACM SIGCHI international conference on Advances in computer entertainment technology* (p. 22). ACM..