



Polytechnic Institute of Viseu

International Semesters for students

Informatics

Spring Semester

Semester title	Informatics	Semesters	Spring
Person responsible	Filipe Caldeira	E-mail address	caldeira@estv.ipv.pt
Coordinator	Filipe Caldeira	E-mail address	caldeira@estv.ipv.pt
Language of instruction	English	ECTS points total	30
Course type	Course title	Name of the lecturer	ECTS points
Compulsory	ICT Network and Security	Filipe Caldeira	4
Compulsory	Database Technology	Paulo Tomé	4
Compulsory	Usability	Rui Pedro Duarte	4
Compulsory	Web Development of Rich Internet Applications	Steven Abrantes	4
Compulsory	Project	A tutor will be assigned	14

Course title	ICT Network and Security		
Teaching method	During the course many different teaching methods will be used: self study, case studies, lectures, discussions.		
Person responsible for the course	Filipe Caldeira	E-mail address:	caldeira@esgtv.ipv.pt
Language of instruction	English	ECTS points	4
Semester	Spring	Type of course	Compulsory
Hours per week	1,5	Hours per semester	19,5
Objectives of the course	Plan and design ICT networks, with special emphasis on ICT security.		
Entry requirements	Does not apply.		
Course contents	Lectures Communication architectures and technologies, wiring infrastructures and network equipment; Convergence; Networking applications; Network planning and project; ICT security. Practical classes Mechanisms for secure communication; Web applications security; Virtual private networks; Authentication systems; Firewalls; VOIP systems.		
Assessment methods	Final Exam and practical work evaluated during the semester.		
Recommended readings	Computer Networks, Andrew S. Tanenbaum, David J. Wetherall, 5nd edition, Prentice-Hall 2010, ISBN: 978-9332518742 Computer and Information Security Handbook, John Vacca, 3rd Edition, Elsevier, 2009, ISBN 9780128038437. The history of information security: a comprehensive handbook, Karl de Leeuw, Jan Bergstra, Elsevier, 2007, ISBN 978-0-444-51608-4		
Additional information			

Course title	Database Technology		
Teaching method	During the course many different teaching methods will be used: self study, case studies, lectures, discussions.		
Person responsible for the course	Paulo Tomé	E-mail address:	ptome@estgv.ipv.pt
Language of instruction	English	ECTS points	4
Semester	Spring	Type of course	Compulsory
Hours per week	1,5	Hours per semester	19,5
Objectives of the course	Developing client-server web applications supported on database systems		
Entry requirements	Data Modelling		
Course contents	Lectures Database systems; Query languages; Client-server applications; Database management Practical classes Client-server applications for the web; ASPX technology.		
Assessment methods	Final exam		
Recommended readings	Damas, L. (2005), SQL : Structured Query Language, 6ª edição, FCA ISBN: 972-722-443-1 Prince, A., Murach's (2003) VB .NET Database Programming with ADO .NET, ISBN: 1-890774-19-7 Prince, A., Murach's (2003) Beginning VB .NET, ISBN: 1-890774-15-4		
Additional information			

Course title	Usability		
Teaching method	During the course many different teaching methods will be used: self study, case studies, lectures, discussions.		
Person responsible for the course	Rui Pedro Duarte	E-mail address:	pduarte@estgv.ipv.pt
Language of instruction	English	ECTS points	4
Semester	Spring	Type of course	Compulsory
Hours per week	1,5	Hours per semester	19,5
Objectives of the course	<p>The main objective of the course focuses on the usability evaluation of user-centered interfaces. For this, the student is required to understand:</p> <ul style="list-style-type: none"> - the interaction phenomena in the real world. - the design of Conceptual Models; - the role of interface design in order to obtain good user interaction. <p>The course intends to apply the knowledge acquired in the conception of interfaces for informatics systems. Also, it is intended to apply specific Usability evaluation techniques to graphical interfaces:</p> <ul style="list-style-type: none"> - Heuristic Evaluation - Prototype construction - User centered Evaluation 		
Entry requirements	Does not apply.		
Course contents	<p>Lectures Human factors; Usability; Task analysis, Conceptual models; Prototyping; Heuristic evaluation of interfaces; Predictive models</p> <p>Practical classes Case study — interface with severe usability issues; Development of user-friendly prototypes.</p>		
Assessment methods	Practical work evaluated during classes.		
Recommended readings	<p>Norman, D. (2002) The Design of Everyday Things. Basic Books. Nielsen, J. (1994) Usability Engineering. Academic Press. Rubin, Jeffrey (1994) Handbook of Usability Testing. John Wiley and Sons Dix, Alan; et al (2003) Human Computer Interaction. Prentice Hall. Nielsen, J. (2000) Designing Web Usability. New Riders. Nielsen, J. (2001) Homepage Usability. New Riders. Microsoft Corporation (1999) Microsoft Windows User Experience: Guidelines for MS Windows. Microsoft Press International.</p>		
Additional information			

Course title	Web Development of Rich Applications		
Teaching method	During the course many different teaching methods will be used.		
Person responsible for the course	Steven Abrantes	E-mail address:	steven@estgv.ipv.pt
Language of instruction	English	ECTS points	English
Semester	Spring	Type of course	Spring
Hours per week	1,5	Hours per semester	1,5
Objectives of the course	This course has the main goal to provide students the knowledge to design and implement web sites using HTML5 and JQuery Mobile.		
Entry requirements	HTML and CSS		
Course contents	Lectures Development cycle of web projects Practical classes Development of web applications based on HTML5 and JQuery Mobile.		
Assessment methods	Project: The students have to build a project using HTML5 and JQuery Mobile; Exam: Students will have to take an exam about the material taught		
Recommended readings	Information Architecture for the world wide Web, Louis Rosenfeld & Peter Morville, O'Reilly,1998 The complete reference Web Design. Thomas Powell. FCA . Osbourne/McGraw-Hill, 2000. Responsive Web Design with HTML5 and CSS3, Ben Frain, 2012 W3Schools, http://www.w3schools.com/ jQuery Mobile: Up and Running, Maximiliano Firtman, 2012		
Additional information			

Course title	Project		
Teaching method	Besides the formal classes, during the course the teaching method will be mostly self study and project development with a supervisor choosed according with the project's area.		
Person responsible for the course	A tutor will be assigned	E-mail address:	
Language of instruction	English	ECTS points	14
Semester	Spring	Type of course	Compulsory
Hours per week	1,5	Hours per semester	19,5
Objectives of the course	Promoting working experience in an enterprise scenario, applying competences acquired in other courses of this international semester		
Entry requirements	Project context dependent		
Course contents	Project planning, development and implementation; Write reports; Public presentation.		
Assessment methods	Assessment of the project report complemented with a final presentation and defense.		
Recommended readings	Project context dependent. It will be given by the assigned tutor.		
Additional information			