NAME OF THE COURSE	Human Computer Interaction:: Fundamentals and Principles					
Code	PMIH30	Year of study				
Course teacher	prof.dr. sc. Andrina Granić	Credits (ECTS)	5,0			
Associate teachers	dr. sc. Jelena Nakić doc.dr. sc. Nikola Marangunić	Type of instruction (number of hours)	L	S	E	F
			30		30	
Status of the course	mandatory/elective	Percentage of application of e-learning	25%			

COURSE DESCRIPTION	
Course objectives	Acquisition of fundamental knowledge related to the interaction between human and computer, the importance of good user interface design, along with its role in effective communication between humans and interactive computer systems. Introduction to basic aspects and principles of usable and accessible design as well as design for good user experience. Acquisition of knowledge related to techniques and methods of usability and user experience evaluation.
Course enrolment requirements and entry competences required for the course	No formal prerequisites, but is assumed that students have already acquired basic knowledge about interactive computer systems.
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	1. Name and explain fundamental terminology and concepts from the Human-Computer (HCI) field. 2. Critically evaluate selection of the principles for the design of usable and accessible user interface. 3. Explain the design for good user experience. 4. Compare and value different approaches to usability evaluation. 5. Decide on adequate methodology for user interface evaluation. 6. Use case: critically evaluate reasons for the development of interactive computer system (product, service); decide on the key functionality according to the set goals; apply principles of usable interface design; decide on and employ adequate evaluation approach.
Course content broken down in detail by weekly class schedule (syllabus)	Lectures: 1. Human-Computer Interaction (HCI): definitions and fundamental principles (2h) 2. Design of everyday things (2h) 3. Usability, accessibility and user experience (2h) 4. Short chronology on interface and interaction design (2h) 5. Human aspects of interaction (4h) 6. Modelling of human-computer interaction (2h) 7. Computer aspects of interaction (2h) 8. Invited lecture (2h) 9. Development of interactive computer systems (2h) 10. User interface design (2h) 11. Prototyping (2h) 12. User interface evaluation (4h) 13. Future interfaces and interactions (2h) Exercises: 1. Introduction to course exercises – generally about structure of exercises; gained knowledge and skills; topics which will be covered; work flow; individual and group tasks; grading. 2. Psychology of everyday things – examples of usable and unusable design of everyday things; analysis of unnecessary design, design with

	potential and design with new purpose; emotional design; design of future things; 1. Individual task for students (analysis of everyday things, usable and unusable design). 3. Presentations of the 1. Individual student tasks – analysis and discussion. 4. Role of the cognitive psychology – area of interest, influence on the Human Computer Interaction field; information processing; Model of Human Processor; user interface perception. 5. Cognitive "lab" – practical exercises in solving problems from the field of cognitive abilities (attention, perception, memory, learning, problem solving). 6. User interface usability – examples of web interfaces; usability testing methodology; 2. Individual task for students (interface usability analysis of the 3 web sites). 7. Presentations of the 2. Individual student tasks – analysis and discussion. 8. Introduction to group project – iteration procedure of designing web site interfaces; usability testing introduction; goal and methods; task description for preparing and conducting the testing; instructions for writing an usability report. 9. Allocation of tasks and web site interface for usability testing – group work. 10. Developing measurement instruments, questionnaires and questions for user interviews – group work. 11. Implementation of interface usability testing through 6 steps – group work. 12. Group presentations of conducted testing – analysis and discussion. 13. Defining necessary changes on web site interfaces – group work. 14. Implementation of necessary changes on web site interfaces – group work. 15. Group projects – final presentations of student projects.
Format of instruction	☒ lectures ☒ seminars and workshops ☒ exercises ☐ on line in entirety ☐ partial e-learning ☐ field work ☒ independent assignments ☐ multimedia ☒ laboratory ☒ work with mentor ☐ homework assignments
Student responsibilities	Active participation in all activities: lectures, consultations, searching the literature, individual work in the assigned project and given use case; final oral exam

Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*

Name	Ects	Name	Ects	Name	Ects
Class attendance	1	Research		Experimental work	
Oral exam	1	Report		Homework assignments	
Seminar essay		Essay		Independent work	2
Tests		Practical training			

	Written exam	1	Project			

Grading and evaluating student work in class and at the final exam	Individual /group projects (50%). Final/Oral Exam (50%).

	Title	Number of copies in the library	Availability via other media
Required literature (available in the library and via other media)	J. Preece, et al.: Human-Computer Interaction, Addison-Wesley, Harlow, England, 1994.	1	
	B. Schneiderman and C. Plaisant: Designing the User Interface. Strategies for Effective Human-Computer Interaction, 5th Edition, Addison-Wesley, Reading, MA, 2010.	1	online

Optional literature (at the time of submission of study programme proposal)	1. S. Krug: Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability. 3rd Edition, New Riders, 2014. 2. J. Nielsen: Usability Engineering, Boston: AP Professional, 1993. 3. D. Norman: The Psychology of Everyday Things, Basic Books, 1988. all course material is available on-line, including related research articles
Quality assurance methods that ensure the acquisition of exit competences	student discussion, anonymous student evaluation questionnaire, student success rate, self-assessment
Other (as the proposer wishes to add)	