Study programme(s): Computer science	

Level: Master studies

Course title: Human computer interaction

Lecturer: Aleksandra Klašnja-Milićević

Status: elective

ECTS: 6

Requirements: -

Learning objectives

Introducing students to the core theories, principles and models from the field of Human Computer Interaction (HCI) and enabling them to design, implement and evaluate effective, useful and usable interfaces of their own design.

Learning outcomes

Minimum: At the end of the course, successful students should be able to apply theories, tools and techniques in the field of HCI for design and implementation a simple user interface.

Desirable: At the end of the course, successful students should be able to understand theories, tools and techniques in the field of HCI, understand the fundamental aspects of designing and evaluating interfaces, apply appropriate HCI techniques to design systems that are usable by people and develop practical user interface design skills.

Syllabus

Theoretical instruction

The course integrates theories and methodologies from the literature of computer science, cognitive psychology, and industrial design, with intention to introduce the student to the concepts of human-computer interaction. Foundations of human–computer interaction and interaction design. Physical capabilities and cognitive models that inform interaction design. Social models and emotional interaction design. Data analysis, interpretation, and presentation. Paradigms, visions, theories, and frameworks for interaction. Design process and rules. Models of interaction, ergonomics and interaction styles. Implementation support: design patterns, open source resources and tools for interaction design. Evaluation methodologies: inspection, analytics and predictive models.

Practical instruction

Students participate in individual/group projects to design, implement, and evaluate user interfaces. User interaction development activities include requirements and task analysis, usability specifications, design, prototyping, and evaluation. Students are required to gather functional requirements, identify the problem, form a solution and present this solution.

Literature

Recomended

Preece J., Sharp H., and Rogers Y. (2015). *Interaction Design: Beyond Human-Computer Interaction.*

MacKenzie, I. S. (2012). *Human-computer interaction: An empirical research perspective.*

Weekly teaching load

Lectures: 2	Exercises: 2	Practical Exercises: 0	Student research:	Other:

Teaching methodology

Teaching strategies of HCI course includes lectures, presentations, and demonstrations that emphasize discussion and illustration of methods, as well as hands-on and practical exercises. Students complete assigned readings, individual/group projects, and participate in exercises and discussions. Groups of about 2-3 students can form teams to work on the various project assignments. Knowledge of students is tested through colloquiums, project tasks and final exam.

Grading method (maximal number of points 100)

Pre-exam obligations	points	Final exam	points
Colloquia	**20**	Oral exam	**40**
Project tasks	**40**		