University of Gdańsk

Subject card

Subject name and code	Design of Human-Computer Interaction, PG_00177455						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	Master's studies		Subject group	Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study			
Mode of study	full-time studies		Mode of delivery	at the university			
Year of study	1		Language of instruction	English			
Semester of study	2		ECTS credits	4.0			
Learning profile	academic		Assessment form	credit			
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Michał Kuciapski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	45		3.0		52.0	100
Subject objectives	• overview of methods and devices supporting human-computer interaction, • introduction to human-computer interaction design methodologies, • design of adaptable application prototypes, • preparation of useful human-computer interaction interfaces for web and mobile applications, • mastering the basics of user interface analysis and evaluation.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[IiEMU2_U11] The student can collaborate effectively in teams and assume leadership roles.	mediates between the developer and the contractor of the new application	[SU2] presentation/project/paper/ report
[IiEMU2_K03] The student is ready to think and act entrepreneurially and responsibly, initiate, coordinate, and participate in projects that benefit the social environment and the public interest, and inspire others to use econometrics, informatics, or statistics tools.	Is sensitive to the social aspect of the development of methods and devices for human-computer interaction	[SK2] presentation/project/paper/ report
[IiEMU2_W04] The student possesses a comprehensive understanding of the complex nature of human roles and behaviors in organizations or projects, both at the individual and group levels.	Explains the characteristics of the target user on the selection of methods and devices for interaction with the computer, is able to present the basics of the psychology of human-computer interaction, evaluates the interface - analysis of the interface concept and specification of requirements for the interface	[SW2] presentation/project/paper/ report
[IiEMU2_U09] The student can independently plan and implement the process of learning and improving professional skills in econometrics, informatics or statistics throughout life and guide others in this regard.	Supervises a team of developers implementing interfaces, acts as an intermediary between the developer and the contractor of the new application	[SU2] presentation/project/paper/ report
[IiEMU2_W09] The student possesses a comprehensive understanding of both traditional and modern entrepreneurship principles.	Understands the interdisciplinary nature of the knowledge of human-computer interaction design, understands the differences between the approach to the development of the user interface and the approach to the development of the core part of the software	[SW2] presentation/project/paper/ report
[IiEMU2_U12] The student can adapt, design, create, and operate IT systems that support business entities.	synthesizes ideas on how to interact with the software under development, creates presentations demonstrating how the interface works	[SU2] presentation/project/paper/ report

<table>
<tr><td>Subject contents</td><td>
Lecture:

1. Foundations and Principles of Human Computer Interaction
 1. Foundations
 2. History
 3. Principles and Theories
2. Understanding users and their tasks
 1. Task-centered system design
 2. High level models of human behavior
3. Designing with the user
 1. Sketchbook
 2. User centered design and Prototyping
4. Designing and building visual interfaces
 1. Psychology of everyday things
 2. Beyond screen design
 3. Graphical screen design
 4. Interface design
 5. Physical User Interfaces
5. Principles for Design
 1. Design principles and usability heuristics
6. Quality of UI
 1. Quality of Service
 2. Evaluating Interfaces with Users: Qualitative Methods
 3. Evaluating Interfaces with Users: Controlled Experiments
7. HCI in practise implementation
 1. Web applications
 2. Desktop applications
 3. Mobile applications
8. Future of HCI

Laboratories:

1. Prototype designing
 1. Sketchbook
 2. User centered UI design
 3. Controls mapping
 4. Map of screens
2. Users Experience analysis
3. Exporting prototype:
 1. Exporting sketchflow as interactive solution
 2. Receiveing feedback from user
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<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Team Project Points</td><td>51.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>1. Shneiderman B., Plaisant C., Cohen M., Jacobs S., Designing the User Interface: Strategies for Effective Human-Computer Interaction, 5/E , 2020
2. Budiu R., Nielsen J., Mobile Usability, New Riders 2023</td></tr>
<tr><td>Supplementary literature</td><td>1. Kuciapski M. (2017), A model of mobile technologies acceptance for knowledge transfer by employees, Journal of Knowledge Management, Vol. 21, Issue 5, ISSN: 1367-3270, pp 1053-1076. doi.org/10.1108/JKM-03-2016-0136</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>Design an interactive user interface prototype of a mobile application to support the organization's business processes.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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