**Course description (general description)**

**Title of the course:** Ergonomics and Psychological Ecology of Workplaces

**Course code:** PSYM21-WO-109

**Head of the course:** Kiss Orhidea

**Academic degree:** PhD

**Position:** Associate professor

**MAB Status:** A (T)

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| **Az oktatás célja angolul** |

**Aim of the course:**

The aim of this course is to introduce students to the field of ergonomics and psychological ecology and to present theoretical models and develop practical skills that will enable students to perform analyses related to human-machine, human-environment interactions. The main focus of the course is to answer how we can perceive and interpret the stimuli of an extremely complex human environment as a meaningful unit and how we can support the anthropometric, perceptual, cognitive, affective-motivational fit between person and (any type of) environment in the aim of creating efficient, safe and convenient environments. The course introduces fundamental methods, principles and tools for designing and testing interactive systems. In addition, the course reviews recent developments in HCI, virtual environments, intelligent systems, including emerging interaction styles and a variety of interaction techniques. The essence of ergonomics and psychological ecology is discussed related to the physical and mental stress and other psychological characteristics. Furthermore, special attention is given to the topic of safety culture and the needs of user groups with different disabilities.

**Learning outcome, competences**

knowledge:

* Students will be familiar with some basic principles of analyses and developments in the field of ergonomics and psychological ecology
* Students will have knowledge of special user groups and will be familiar with techniques of supporting them

attitude:

* Students will be able to generate new and original ideas contributing to technical, technological problem solving
* Therefore they will be able to give differential counselling depending on the real needs of user groups.

skills:

* Students will be able to perform ergonomic analyses
* Students will be able to identify the special needs of different user groups and to reflect on them by elaborating appropriate developmental conceptions
* Students will be able to collaborate with specialists in technical, technological developments
* Students will be able to organise their experience in the field of ergonomics and environmental psychology systematically and to use them in critical thinking about new models, knowledge, phenomenon and problems
* Students will be able to conceptualise developmental goals, and to select, perform and control all developmental conceptions and methods.

autonomy, responsibility:

* Students are able to adapt their knowledge of ergonomy and work environment to the analysis and measurement of new situations/environment.
* They represent the protection and promotion of mental and physical health, when forming an opinion.

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| **Az oktatás tartalma angolul** |

**Topics of the course**

* The basics of holistic psychology and psychological ecology; Ergonomics as a scientific and practical field: efficiency-safety-convenience in transforming, development of different environments, especially work environments
* The role of anthropometrical data in ergonomic assessments and developments, issues of physiological person-environment fit: evolutionary and medical aspects
* Characteristics of human information processing, the issues of perceptual, cognitive and affective-motivational person-environment fit
* Aspects of physical and mental activities in developing an efficient, safe and convenient environment: issues related to the appearance and measurement of mental stress at workplaces, possibilities for interventions. Neuropsychological aspects
* Mental health aspects of different jobs, especially with focus on physiological risks of sedentary jobs; inconvenient, extreme working conditions in the human-environment interactions, anomalies of space use
* Ergonomic assessment and planning for special user groups, learning about special tools and applications
* Dynamic relationship with the environment: dynamic and/or evolutionary psychology: affordances and planning for future needs.

**Learning activities, learning methods**

* Presentation
* Min. 10 hours of consultation using an e-learning platform, debates about some selected topics: min. 2 comments related to presented ergonomic cases. Looking for articles about new models, cases, methods, etc.
* Case collection (using Youtube, or collecting some design heuristics in some topics)
* Performing an *ergonomic* analysis.

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| **A számonkérés és értékelés rendszere angolul** |

**Learning requirements, mode of evaluation, criteria of evaluation:**

requirements

* 1. test or presentation, 2. ergonomic analysis, 3. case collection and comments.

mode of evaluation: Practice mark

* Test/presentation 30 points
* Ergonomic analysis 20 points
* Case collection: 10 points
* Comments: 10-10 points
* Max. 80 points
* Points and marks

65-80: 5

50-64: 4

35-49: 3

20-34: 2

1-19: 1

criteria of evaluation:

* Participation in all tasks performed individually, in pairs and in groups
* Correct answers to test items / or a scientifically and methodologically correct presentation of a case
* Participation in data collection and writing comments
* Performing of an ergonomic analysis

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| **Idegen nyelven történő indítás esetén az adott idegen nyelvű irodalom:** |

**Compulsory reading list**

* Helander, M. (2006) A Guide to Human Factors and Ergonomics, Second Edition, Taylor and Frrancis Group
* Attrill, A. (2015) Cyberpsychology. Oxford University Press
* Hercegfi, K., Kiss, O. E. (2009): Assessment of E-Learning Material with the INTERFACE System. In: Bernáth, U., Szűcs, A., Tait, A., Vidal, M. (eds): Distance and E-Learning in Transition. John Wiley & Sons, Hoboken, Chapter 45, 645-657.
* Izsó L (2001): Developing Evaluation Methodologies for Human-computer Interaction, Delft: Delft University Press, 236 p. Applied Psychology in Hungary, 2001-2002. 83-95.
* Kiss, O. E. (2009): Information searching behaviour from the perspective of information structuring and navigational tools offered by hypertext-based systems. In: Cecília Sik Lányi (ed): Principles and practice in Europe for e-Accessibility. EDeAN Publication, Pannonian University Press,149-157084646) John Wiley & Sons, Inc., New York

**Recommended reading list**

* Gallitz, W. O. (2002) The Essential Guide to User Interface Design, 2nd edition, (ISBN 0-471-084646) John Wiley & Sons, Inc., New York
* [Steve Krug](http://www.amazon.com/Steve-Krug/e/B001KHCFUU/ref=la_B001KHCFUU_ntt_srch_lnk_1?qid=1447147786&sr=1-1) [(2014) Don't Make Me Think, A Common Sense Approach to Web Usability (3rd Edition) (Voices That Matter)](http://www.amazon.com/Dont-Make-Think-Revisited-Usability/dp/0321965515/ref=la_B001KHCFUU_1_1/190-8925378-1177102?s=books&ie=UTF8&qid=1447147786&sr=1-1)

**Course-specific information (specific to a given lecture or seminar)**

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| **General data** |

**Specific (sub)title of the course (if relevant):**

**Specific (sub)code of the course (if relevant):**

**Date and place of the course:**

**Name of the lecturer:**

**Department of the lecturer:**

**Email of the lecturer:**

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| **Specific syllabus/schedule of the lecture/seminar (if relevant)** |



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| **Further specific information (eg. requirements) (if relevant)** |