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| **Course code** | CC4 |
| **Type and description** | TCS core curriculum |
| **ECTS credit** | 1 |
| **Course name** | **Advanced human-computer interaction methods** |
| **Course name in Polish** | **Zaawansowane metody wspomagania interakcji człowiek-komputer** |
| **Language of instruction** | English |
| **Course level** | 8 PRK |
| **Course coordinator** | **dr hab. inż. Adam Wojciechowski** |
| **Course instructors** | **dr hab. inż. Adam Wojciechowski** |
| **Delivery methods and course duration** | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | **Lecture** | **Tutorials** | **Laboratory** | **Project** | **Seminar** | **Other** | **Total of teaching hours during semester** | | Contact hours | 3 |  |  | 12 |  |  | 15 | | E-learning | No | No | No | No | No | No |  | | Assessment criteria (weightage) |  |  |  | 100% |  |  |  | |
| **Course objective** | Understanding and ability to use advanced human-computer interaction methods |
| **Learning outcomes** | Knowledge and ability to use and evaluate advanced, multi modal, intelligent human-computer interaction methods |
| **Assessment methods** | Evaluation of project |
| **Prerequisites** | Image processing and analysis, machine learning, fundamentals of mathematics |
| **Course content with delivery methods** | Lecture:  - challenges of human computer interaction  - research methods in human computer interaction  - computer vision methods in human-machine interfaces  - multi modal interfaces – signal processing, analysis and integration  - machine learning methods for human computer interaction  Project:  - designing, implementation and evaluation of selected human-machine interaction methods |
| **Basic reference materials** | 1) Handbook of Human-Computer Interaction, *M.G. Helander, T.K. Landauer, P.V. Prabhu*, Elsevier, 2014  2) Research methods in Human-Computer Interaction, *J. Lazar, J.H. Feng, H. Hochheiser,* Elsevier, 2017  3) The oxford handbook of affective computing*, R.A. Calvo, S. D’Mello, J Gratch, A. Kappas,* Oxford 2015 |
| **Other reference materials** | 1) Learning OpenCV,  *G. Bradski, A. Kaehler*, O’Reilly, 2008  2) Human-Computer Interaction: Development Process, *A. Sears, J.A. Jacko*, Taylor and Francis, 2017  3) Metody i techniki sztucznej inteligencji, *L. Rutkowski*, PWN 2019 |
| **Average student workload outside classroom** | 10 h |
| **Comments** |  |
| **Last update** |  |