Zał. nr 4 do ZW 64/2012

|  |
| --- |
| **FACULTY OF COMPUTER SCIENCE AND MANAGEMENT**  **SUBJECT CARD**  **Name in Polish: Analiza i projektowanie użytecznych systemów interakcyjnych**  **Name in English: Analysis and design of usable interactive systems**  **Main field of study (if applicable): Management**  **Specialization (if applicable): Business Management**  **Level and form of studies: 1st level, full-time studies**  **Kind of subject: optional**  **Subject code: IEZ3125P**  **Group of courses NO** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Lecture | Classes | Laboratory | Project | Seminar |
| Number of hours of organized classes in University (ZZU) |  |  |  | 30 |  |
| Number of hours of total student workload (CNPS) |  |  |  | 90 |  |
| Form of crediting |  |  |  | crediting with grade |  |
| For group of courses mark (X) final course |  |  |  |  |  |
| Number of ECTS points |  |  |  | 3 |  |
| including number of ECTS points for practical (P) classes |  |  |  | 3 |  |
| including number of ECTS points for direct teacher-student contact (BK) classes |  |  |  | 1 |  |

\*delete as applicable

|  |
| --- |
| **PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**  Mathematical competences confirmed by positive grades from courses of Statistics or Probability Calculus or related. |

\

|  |
| --- |
| **SUBJECT OBJECTIVES**  C1: Acquiring basic knowledge about human-computer interactions.  C2: Acquiring skills in using tools for an analysis and a design support of usable information systems interfaces.  C3: Acquisition and consolidation of social skills involving team work. Developing good habits of cooperation with information system designers. |

|  |
| --- |
| **SUBJECT EDUCATIONAL EFFECTS**  relating to knowledge: possesses basic knowledge about software usability  PEK\_W01: knows the software usability terms in the context of the ISO 9241 norm.  PEK\_W02: knows basic principles of the usable information systems analysis and design.  PEK\_W03: knows the methodology that supports the assessment of all usability dimensions and the design of information systems having high usability.  relating to skills: is able to evaluate and design interfaces for information systems according to the principles of ergonomics (usability).  PEK\_U01: is able to apply basic methods for examining the software usability.  PEK\_U02: is able to specify normative conditions of the software usability conditions  PEK\_U03: is able to employ basic tools for the software usability assessment within the framework of the ISO 9241 standard  PEK\_U04: is able to diagnose and correct basic factors determining the level of the software usability  PEK\_U05: is able to apply selected methods to design the information system interface with a high usability.  relating to social competences: Acquiring and strengthening social skills involving the group work. Developing good habits of cooperation with information system designers.  PEK\_K01: Acquiring and developing team work skills in order to optimally solve the assigned problems.  PEK\_K02: Acquiring and developing systematic thinking about software ergonomic properties.  PEK\_K03: developing the capacity of self-esteem and self-control at work |

|  |  |  |
| --- | --- | --- |
| **PROGRAMME CONTENT** | | |
| **Form of classes - lecture** | | **Number of hours** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Form of classes - class** | | **Number of hours** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Form of classes - laboratory** | | **Number of hours** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Form of classes - project** | | **Number of hours** |
| P1 | Tasks analysis as a paradigm of the evaluation and design of interactive systems. | 2 |
| P2 | The assessment of effectiveness and efficiency of software products based on KLM (keystroke level) model, Fitts’s law and users examination | 2 |
| P3 | The subjective assessment of the software usability – constructing valid and reliable research tools. | 2 |
| P4 | Heuristic evaluation methods: check lists, cognitive walkthrough. | 2 |
| P5 | An interface optimization by means of the tasks analysis.  The interface rapid prototyping in „visual” programming environments and Power Point like software. | 2 |
| P6 | Consultations with project teams. | 16 |
| P7 | Projects’ defenses sessions. Presenting the individual groups work results in the form of an oral presentation and the written report. | 4 |
|  | Total hours | 30 |

|  |  |  |
| --- | --- | --- |
| **Form of classes - seminar** | | **Number of hours** |
| Sem 1 |  |  |
|  | Total hours |  |

|  |
| --- |
| **TEACHING TOOLS USED** |
| N1. Traditional lecture with multimedia presentation  N2. Laboratory classes - computer software N3. Consultations N4. Working in groups - preparing the projects |

**EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT**

|  |  |  |
| --- | --- | --- |
| **Evaluation** (F – forming (during semester), P – concluding (at semester end) | Educational effect number | Way of evaluating educational effect achievement |
| P | PEK\_W01 – PEK\_W03  PEK\_U01 – PEK\_U05 | Assessment of the prepared project and its presentation |
|  | | |

|  |
| --- |
| **PRIMARY AND SECONDARY LITERATURE** |
| * Primary literature:   + Nielsen J. 2004, Projektowanie funkcjonalnych serwisów internetowych, Helion   + Preece J. 2002, Interaction design, Wiley   + Mayhew D. 1999, The usability engineering lifecycle, Morgan Kaufman   + Lewis C. Rieman J. 1994 Zadaniowe projektowanie komunikacji z użytkownikiem,. Internetowa wersja książki (wersja polska z ftp.sunrise. pg.gda.pl/pub).   + Górski J. (red) Inżynieria oprogramowania w projekcie informatycznym. Wyd Mikom Warszawa 1999.   + Helander M. (1995). Human-Computer Interaction. Elsevier, Amsterdam. * Secondary literature:   + Artykuły z serwera http://ergonomia.ioz.pwr.wroc.pl   + Artykuły z następujących czasopism: Ergonomics, Human-Computer Interactions, International Journal of Human-Computer Studies, International Journal of Industrial Ergonomics, Interacting with Computers, Applied Ergonomics, Human Factors, Behaviour & Information Technology. |
| **SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)** |
| Rafał Michalski, Ph.D [rafal.michalski@pwr.wroc.pl](mailto:Katarzyna.jach@pwr.wroc.pl), phone: 71 348 5050 |

MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT

**Analysis and design of usable interactive systems**

AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY **Management**

AND SPECIALIZATION **Business Management**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subject educational effect** | **Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)\*\*** | **Subject objectives\*\*\*** | **Programme content\*\*\*** | **Teaching tool number\*\*\*** |
| **PEK\_W01** | **K1\_ZARZ\_W26, K1\_ZARZ\_W15** | **C1** | **P1-P7** | **N1 – N4** |
| **PEK\_W02** | **K1\_ZARZ\_W15; K1\_ZARZ\_W24** | **C1** | **P1-P7** | **N1 – N4** |
| **PEK\_W03** | **K1\_ZARZ\_W24; K1\_ZARZ\_W26** | **C1** | **P1-P7** | **N1 – N4** |
| **PEK\_U01** | **K1\_ZARZ\_U05** | **C2** | **P1-P7** | **N1 – N4** |
| **PEK\_U02** | **K1\_ZARZ\_U06** | **C2** | **P1-P7** | **N1 – N4** |
| **PEK\_U03** | **K1\_ZARZ\_U06** | **C2** | **P1-P7** | **N1 – N4** |
| **PEK\_U04** | **K1\_ZARZ\_U07; K1\_ZARZ\_U12** | **C2** | **P1-P7** | **N1 – N4** |
| **PEK\_U05** | **K1\_ZARZ\_U07; K1\_ZARZ\_U12** | **C2** | **P1-P7** | **N1 – N4** |
| **PEK\_K01** | **K1\_ZARZ\_K02** | **C3** | **P1-P7** | **N1 – N4** |
| **PEK\_K02** | **K1\_ZARZ\_K02; K1\_ZARZ\_K04** | **C3** | **P1-P7** | **N1 – N4** |
| **PEK\_K03** | **K1\_ZARZ\_K01** | **C3** | **P1-P7** | **N1 – N4** |

\*\* - enter symbols for main-field-of-study/specialization educational effects

\*\*\* - from table above