

## Effects of education at the major of computer science, 2nd degree, general academic profile

### Specialty: Computer Engineering (CE)

| Symbol                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                           | Reference to effects of education for the area of technical sciences                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>EFFECTS OF EDUCATION</b>                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
| <b>KNOWLEDGE</b>                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
| K2INF_W06_S2CE_W01                                                                                                                                                                  | Has extensive and deepened knowledge about the scope of architecture of computers ensuring parallel and dispersed calculations, including hybrid architectures.                                                                                                                                                                                                                           | T2A_W04                                                                              |
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                           | T2A_W05 T2A_W06<br>T2A_W07                                                           |
| K2INF_W06_S2CE_W02                                                                                                                                                                  | Has extensive and deepened knowledge about smart methods, their applications and the methods of their validation                                                                                                                                                                                                                                                                          | T2A_W03                                                                              |
| K2INF_W06_S2CE_W03                                                                                                                                                                  | Has detailed knowledge concerning processing and share media data, designing interfaces of multimedia computer applications and on development trends and the most important current achievements in the area of modern multimedia technologies. Knows and understands basic notions and principles related to the protection of industrial property and copyright                        | T2A_W05<br>T2A_W07                                                                   |
| K2INF_W06_S2CE_W04                                                                                                                                                                  | Knows basic programming methods, techniques, tools used when solving complex engineering tasks related to designing and constructing mobile systems. Has knowledge essential for interpretation of social, economic, legal and other non-technical the conditions of engineering activity and their application in practice of designing and construction of mobile and embedded systems. | T2A_W03<br>T2A_W05<br>T2A_W10                                                        |
| K2INF_W06_S2CE_W05                                                                                                                                                                  | Has extensive and deepened knowledge on web systems and new accomplishments in this field and is familiar with the basic methods and tools used in solving complex engineering tasks concerning modelling and analysis of web systems.                                                                                                                                                    | T2A_W02<br>T2A_W07<br>T2A_W08                                                        |
| Has knowledge essential for interpretation of significant problems of security and the methods of detecting and counteracting security problems in web, mobile and embedded systems |                                                                                                                                                                                                                                                                                                                                                                                           | T2A_W03                                                                              |
| <b>SKILLS</b>                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
| K2INF_U08_S2CE_U01                                                                                                                                                                  | Has the ability to build dispersed applications, combine applications operating in different environments as well as applications operating in mobile systems                                                                                                                                                                                                                             | T2A_W04<br>T2A_W05<br>T2A_W07<br>T2A_U07<br>T2A_U12<br>T2A_U15<br>T2A_U17<br>T2A_U18 |

|                    |                                                                                                                                                                                                                                                                                                                                                                                           |                                          |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| K2INF_U08_S2CE_U02 | Is able to identify and describe the multimedia system user's requirements. Has the ability to select tools, T2A_U12 design, implement and manage the process of generation and and effective distribution of a multimedia application                                                                                                                                                    | T2A_U15<br>T2A_U17<br>T2A_U18<br>T2A_U19 |
| K2INF_U08_S2CE_U03 | Has the ability to select mobile technology. Is able to design and implement a mobile system and estimate the costs T2A_U12 of implementation and operation of the system                                                                                                                                                                                                                 | T2A_U15<br>T2A_U17<br>T2A_U18            |
| K2INF_U08_S2CE_U04 | Is able to use available methods and tool to identify problems of security and ensure the desired level security of web, mobile and embedded systems                                                                                                                                                                                                                                      | T2A_U09<br>T2A_U10<br>T2A_U18            |
| K2INF_U08_S2CE_U05 | Has the ability to select appropriate smart techniques and validate them for the set task                                                                                                                                                                                                                                                                                                 | T2A_U16<br>T2A_U18                       |
| K2INF_U08_S2CE_U06 | Has the ability to select appropriate architecture of a parallel/dispersed system to the problem being solved                                                                                                                                                                                                                                                                             | T2A_U15<br>T2A_U18                       |
| K2INF_U08_S2CE_U07 | Is able to select a proper method and algorithm for solving the undertaken problem, as well as make critical analysis and evaluation of the proposed solution.                                                                                                                                                                                                                            | T2A_U16                                  |
| K2INF_U08_S2CE_U08 | Is able to plan and carry out experiments, including measurements and computer simulations for parallel systems and the Internet network, interpret any obtained results and draw proper conclusions                                                                                                                                                                                      | T2A_U08<br>T2A_U09<br>T2A_U18            |
| K2INF_U08_S2CE_U09 | Is able to formulate and test hypotheses related to engineering problems and simple research problems, is able to select and use appropriate techniques and technologies for implementation of an IT solution related to the studied field, is able to perform a critical analysis of the method of operation of the prepared solutions and propose improvements for the used techniques. | T2A_U11<br>T2A_U12<br>T2A_U15<br>T2A_U16 |
| K2INF_U08_S2CE_U10 | Is able to design and implement an IT project related to the Internet engineering dispersed systems or parallel systems, with observance of the assumed schedule of an implemented enterprise, taking into account the initial requirements, using, the mastered techniques for implementation of such projects.                                                                          | T2A_U19                                  |