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| 1. | Field of study | Computer Science |
| 2. | Academic year of entry | 2016/2017 (summer term) |
| 3. | Level of qualifications/degree | second-cycle studies |
| 4. | Degree profile | general academic |
| 5. | Mode of study | full-time |

Module: Tools supporting software development

Module code: 08-IN-S2-NWWO

1. Number of the ECTS credits: 3

| 2. Learning outcomes of the module | | | |
|---|--|------------------------------------|---------------------------------|
| code | description | learning outcomes of the programme | level of competence (scale 1-5) |
| NWWO -U_4 | Can use methods and tools used in software engineering. | K_2_A_I_U15 | 2 |
| NWWO -U_5 | Can use tools supporting software modelling and development. | K_2_A_I_U21 | 3 |
| NWWO -W_1 | Has basic knowledge in the field of software optimization. | K_2_A_I_W07 | 1 |
| NWWO -W_2 | Revives knowledge in the field of modelling and developing software. | K_2_A_I_W10 | 2 |
| NWWO -W_3 | Possesses knowledge about version control systems and methods and about methods of code sharing. | K_2_A_I_W14 | 3 |

| 3. Module description | |
|------------------------------|---|
| Description | The main aim of the module is making the students familiar with modern tools and techniques necessary in the process of development, testing, modifying and maintaining IT systems. |
| Prerequisites | |

| 4. Assessment of the learning outcomes of the module | | | |
|---|--------|--|---|
| code | type | description | learning outcomes of the module |
| NWWO _w_1 | Test | Tests after each topic completed during classes together with theoretical knowledge of the lecture subject matter control. | NWWO -U_4, NWWO -U_5, NWWO -W_1, NWWO -W_2, NWWO -W_3 |
| NWWO _w_2 | Credit | Solving test tasks covering the issues discussed during lectures and classes. | |

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| | | | NWWO -U_4, NWWO -U_5, NWWO -W_1, NWWO -W_2, NWWO -W_3 |
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| 5. Forms of teaching | | | | | | |
|----------------------|--------------------|--|-----------------|--|-----------------|---|
| code | form of teaching | | | required hours of student's own work | | assessment of the learning outcomes of the module |
| | type | description (including teaching methods) | number of hours | description | number of hours | |
| NWWO_fs_1 | lecture | Presenting educational content in verbal form with use of content visualization. Focusing on conceptually complex material and indicating sources. | 15 | Familiarizing with lecture subject matter using the advised sources. | 15 | NWWO_w_2 |
| NWWO_fs_2 | laboratory classes | Detailed preparation of the students to solve problems indicating proceedings methodology and sequence. | 30 | Preparing appropriate documentation basing on the lecture content. | 30 | NWWO_w_1 |