1.	Field of study	Computer Science
2.	Academic year of entry	2017/2018 (summer term), 2018/2019 (summer term)
3.	Level of qualifications/degree	second-cycle studies
4.	Degree profile	general academic
5.	Mode of study	full-time

Module: Programming with use of agile methodologies

Module code: 08-IN-IJO-S2-PzUMZ

1. Number of the ECTS credits: 2

2. Learning outcomes of the module

code	description	learning outcomes of the programme	level of competence (scale 1-5)
PzUMZ -K_6	The student is able to collaborate with the rest of the team during project implementation and control the process with agile development methods.	K_2_A_I_K02 K_2_A_I_K03	1 1
PzUMZ -K_7	Student can evaluate and report the progress of the development team. The student simultaneously can analyze the current results of work and characterize the most important stages of the work and evaluate the costs involved.	K_2_A_I_K03 K_2_A_I_K05 K_2_A_I_K06	1 1 1
PzUMZ -U_3	The student is able to use tools for agile project management, plan the process, and estimate the work in work packages and work breakdown structure of project implementation (according to agile methodology).	K_2_A_I_U02 K_2_A_I_U03 K_2_A_I_U15 K_2_A_I_U20 K_2_A_I_U21	1 1 1 1 1
PzUMZ -U_4	The student is able to cooperate in a team in accordance with the principles of agile software development, he can make decisions related to problems arising in the project. He can manage appropriate changes and prepare solutions.	K_2_A_I_U04 K_2_A_I_U13	1 1
PzUMZ -U_5	The student is able to implement a ready project prepared by a development team based on agile methodologies.	K_2_A_I_U02 K_2_A_I_U03 K_2_A_I_U04 K_2_A_I_U16	1 1 1 1
PzUMZ -W_1	The student is knowledgeable about the principles and features of programming using agile methods and specific iterative (incremental) model of designing and programming models.	K_2_A_I_W10	1

PzUMZ -W_2	The student is knowledgeable about project preparation, defining requirements and agile project management, as well as tools for agile project management and project version control.	K_2_A_I_W10 K_2_A_I_W14	1 1

3. Module description	
Description	The purpose of the classes described in this module is to prepare students to work in development teams that work in agile environment. During the course students learn about agile methodologies, their principles and characteristics. They acquire knowledge of specific, most popular iterative (incremental) software development methods. While working on projects, students learn about the most popular agile project management tools and agile based control systems. The teamwork of the selected project, supported by all stages of project management, will deepen the their knowledge of programming in agile teams. Thanks to this, every student should fully understand the ideas associated with agile methodologies and the relevance of using version control systems. Students should be prepared for joint implementation of large programming projects in agile teams.
Prerequisites	

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
PzUMZ _w_1	Presentation	Presentations from the implementation of the team project presented in the form of a cyclic report on the work performed - frequency dependent on the agile method selected. Evaluate their implementation, workload and deadlines according to the agreed schedule.	PzUMZ -K_6, PzUMZ -K_7, PzUMZ -U_3, PzUMZ -U_4, PzUMZ -W_1, PzUMZ -W_2
PzUMZ _w_2	Design documentation	Presentation of project documentation prepared in accordance with agile method.	PzUMZ -U_3, PzUMZ -U_5, PzUMZ -W_1
PzUMZ _w_3	Project implementation	Evaluation of the final form of the implemented project (application, program) in terms of systematic use of project management systems and version control. In addition, the assessment of the actual level of project implementation and workload contributed to the project, through its individual members.	PzUMZ -K_7, PzUMZ -U_4, PzUMZ -U_5

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	
PzUMZ _fs_1	lecture	Presenting educational content in verbal form, with use of content visualization. Presenting theoretical and practical issues connected with work in programming project according to agile methodologies, discussing problems and principles concerning work in agile programming team and indicating most important tools and systems necessary for agile team work.	0	Familiarizing with issues presented during lectures and preparing to laboratory classes connected with lectures.	0	PzUMZ _w_2
PzUMZ _fs_2	laboratory classes	Teaching content in verbal form using	30	Thoroughly familiarize yourself with the	30	

		content visualization. Presentation of theoretical and practical issues related to working in a programming project, based on agile methodologies, discussion of problems and principles of working in an agile team, and identification of the most important tools and systems necessary for agile team work. Detailed refinement of elements related to a team project, based on agile methodologies as well as presentation and discussion of tools necessary for the implementation of a selected project. Meetings organized by agile methods.		programs discussed during the laboratories and prepare a team project. Full implementation of a team development project in accordance with the division of responsibilities within the group.		PzUMZ _w_1, PzUMZ _w_2, PzUMZ _w_3