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: Programming with use of agile methodologies

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

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)
PzUMZ -K_6	Student is able to co-operate with other team members and control on equal bases connected with agile methods of software development.	K_2_A_I_K02 K_2_A_I_K03	1 1
PzUMZ -K_7	Student can assess and report level of programming teamwork advancement. In this case, the student at the same time is able to analyze current work results , characterize its most important stages and assess costs connected with it.	K_2_A_I_K03 K_2_A_I_K05 K_2_A_I_K06	1 1 1
PzUMZ -U_3	Student can use tools referring to agile project management, plan further proceedings and estimate workload which is needed for specific project stages (according to agile methodologies principles).	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	Student can co-operate in a team according to principles of agile software development, is able to make decisions connected with issues arising in the process of the project execution. Is able to prepare appropriate changes and solutions.	K_2_A_I_U04 K_2_A_I_U13	1 1
PzUMZ -U_5	Student can deploy the ready project prepared by a programming team operating according to 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	Student has knowledge in the field of principles and features of programming with use of agile methodologies and specific method of iterative (incremental) model of designing and programming.	K_2_A_I_W10	1

PzUMZ -W_2	Student possesses knowledge concerning project preparation, formulating demands and agile project management and also tools connected with agile project management and project version control.	K_2_A_I_W10 K_2_A_I_W14	1 1

3. Module description	
Description	Aim of the classes in this module is preparing the students to work in programming teams performing according to agile methodologies. During the lectures, the students get acquainted with issues of agile methodologies, their principles and features. They gain knowledge in the field of specific, most popular iterative (incremental) methods of software development. During work over projects, the student get acquainted with most popular tools for agile projects management and version control systems customized for agile methodologies. Team execution of the chosen project will deepen students' knowledge in the field of application programming in agile teams. The result is that each student should fully understand the ideas connected with agile application designing and legitimacy of version control use. The students should be prepared to joint execution of big programming designs in agile programming teams.
Prerequisites	

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
PzUMZ _w_1	Presentation	Presentations of team design execution in the form of periodical report of the executed works – frequency dependent on the agile methodology chosen. Evaluation of the level of work realization, workload terms in accordance with fixed schedule.	PzUMZ -K_6, PzUMZ -K_7, PzUMZ -U_3, PzUMZ -U_4, PzUMZ -W_1, PzUMZ -W_2
PzUMZ _w_2	Design documentation	Introduction of design documentation prepared according to principles of agile software development.	PzUMZ -U_3, PzUMZ -U_5, PzUMZ -W_1
PzUMZ _w_3	Design implementation	Evaluation of the final form of the executed design (application, program) according to regularity of design management and version control systems use. Moreover, evaluation of the real level of design execution and workload contributed to the design by each team member.	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.	15	Familiarizing with issues presented during lectures and preparing to laboratory classes connected with lectures.	5	PzUMZ _w_2
PzUMZ _fs_2	laboratory classes	Detailed fine-tuning of elements connected with team programming project realized according to agile methodologies and presentation and discussion over tools necessary to execution of the chosen project. Meetings held according to agile methodologies.	30	Detailed familiarizing with software discussed during laboratory classes and team project preparation. Complete realization of team programming project according to accepted by the team division of work.	40	PzUMZ _w_1, PzUMZ _w_2, PzUMZ _w_3