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: Intelligent computer graphics

Module code: 08-IN-GWK-S2-IGK

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)
IGK -K_7	Can work individually or in a team, understands meaning of intellectual honesty in his own and other people activities, acts ethically. Understands the need of constant improvement of his competences.	K_2_A_I_K01 K_2_A_I_K03 K_2_A_I_K04	1 1 1
IGK -K_8	Can think creatively, formulate opinions about basic issues, current state and developmental trends in IT and understands non-technical issues of professional activity.	K_2_A_I_K02 K_2_A_I_K05 K_2_A_I_K06	1 1 1
IGK -U_4	Can define a problem, find a solution, elaborate mathematical model, use chosen artificial intelligence algorithms.	K_2_A_I_U01 K_2_A_I_U02 K_2_A_I_U03 K_2_A_I_U07 K_2_A_I_U08 K_2_A_I_U17 K_2_A_I_U18	1 1 1 1 1 1 1
IGK -U_5	Can properly model 3D scene and visualize simulated physical processes in virtual space.	K_2_A_I_U08 K_2_A_I_U13 K_2_A_I_U14	1 1 1
IGK -U_6	Is able to acquire meta-information from the image, can use data mining and data exploitation algorithms.	K_2_A_I_U13 K_2_A_I_U14	1 1

		K_2_A_I_U17 K_2_A_I_U18	1 1
IGK -W_1	Knows evolutionary algorithms, neural networks and methods of machine learning, understands issues of control optimization.	K_2_A_I_W01 K_2_A_I_W03 K_2_A_I_W08 K_2_A_I_W09	1 1 1 1
IGK -W_2	Knows principles of 3D scene modeling, issue of physical environment simulation, movement planning, object detection, collision avoidance.	K_2_A_I_W15	1
IGK -W_3	Knows the issues of events prediction, data mining and data exploitation, acquisition of meta-information from the image. Understands trends in IT development and methods of software engineering.	K_2_A_I_W14 K_2_A_I_W17 K_2_A_I_W18	1 1 1

3. Module description	
Description	Aim of the subject is making the student familiar with issues connected with use of artificial intelligence in computer graphics.
Prerequisites	

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
IGK _w_1	Exam	Checking theoretical knowledge of the module. Final grade constitutes arithmetic average from grades of exam test.	IGK -W_1, IGK -W_2, IGK -W_3
IGK _w_2	Reports	Systematic execution of reports of laboratory proceedings connected with executed project.	IGK -K_7, IGK -K_8, IGK -U_4, IGK -U_5, IGK -U_6
IGK _w_3	Project	Effecting semester project in the range of accepted in the module education effects.	IGK -K_7, IGK -K_8, IGK -U_4, IGK -U_5, IGK -U_6, IGK -W_1, IGK -W_2, IGK -W_3
IGK _w_4	Presentation	Giving an audio-visual presentation in front of the group, discussion over assumptions and accepted method of a given problem solution, analysis and evaluation of the project goal.	IGK -K_7, IGK -K_8

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	
IGK _fs_1	lecture	Educational content of the module presented with use of audio-visual aids.	15	Individual studying of lectures subject matter and advised literature.	5	IGK _w_1
IGK _fs_2	laboratory classes	Practical realization of educational content in the form of tasks solving. Classes are effected with use of computer stations and appropriate software.	30	Systematic preparation of reports of project works proceedings. Individual or in a group of several persons, executing of the project and its documentation. Preparing audio-visual presentation concerning the executed project and presenting it in front of the group.	40	IGK _w_1, IGK _w_2, IGK _w_3, IGK _w_4