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: Data Mining

Module code: 08-IN-ISI-S2-ED

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)
ED _K_10	Is able to formulate opinions on various issues concerning current state and developmental trends in analysis and data mining.	K_2_A_I_K01 K_2_A_I_K06	3 2
ED _K_9	Can work on various tasks and realize them on time; knows how to co-operate in several persons team, undertaking different roles.	K_2_A_I_K03	3
ED _U_5	Can acquire information from literature, data bases and other appropriately chosen sources, also in English in the field of data mining; can integrate obtained information, perform critical analysis and evaluation and also, draw conclusions and formulate opinions.	K_2_A_I_U01 K_2_A_I_U18	3 2
ED _U_6	Is able to identify and formulate specification of tasks from the field of data mining; can differentiate main stages in discovering knowledge from data.	K_2_A_I_U18	5
ED _U_7	Can choose appropriate methods of data mining and choose algorithms solving the given problem. Is able to evaluate the obtained results (patterns).	K_2_A_I_U03 K_2_A_I_U18 K_2_A_I_U22	1 5 1
ED _U_8	Is able to take advantage of available programs in order to perform analysis process.	K_2_A_I_U02 K_2_A_I_U18	1 5
ED _W_2	Knows main methods of data mining including: discovering association, classification (prediction), grouping, singular points discovering. Knows fields of various data mining methods usage.	K_2_A_I_W03 K_2_A_I_W09 K_2_A_I_W17	1 1 5
ED _W_3	Knows software used in data mining.	K_2_A_I_W09	1

			K_2_A_I_W17	5
ED _W_4	Possesses knowledge of developmental trends and most important new achievements in the field of discovering knowledge from data.		K_2_A_I_W14	2
			K_2_A_I_W17	5
ED_W_1	Has knowledge from the field of basic notion of data mining and discovering knowledge from data.		K_2_A_I_W17	5

3. Module description

Description	The aim of classes in this module is preparing the students to use various methods (algorithms) in data mining, used in practice, implemented in various systems (programs) supporting the process of discovering knowledge from data. Thank to this class, the student should exhibit full understanding of issues connected with data mining, especially should know the role of data mining in the process of discovering knowledge from data. The result will be ability to use the most important `used in data mining. The student should be able to choose appropriate algorithms for the specific data analysis task. To perform the process of data mining efficiently, necessary is software which supports the process. Therefore, the student should seamlessly use programs used in data mining, especially these, which are disseminated free of charge, among others RapidMiner, RSES and Weka.
Prerequisites	

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
ED _w_1	Written test in lecture knowledge	Evaluation of the student's knowledge in lecture knowledge by a test	ED _W_2, ED _W_3, ED _W_4, ED_W_1
ED _w_2	Preparing projects/programs	Preparing a project/program in a group of 1-3 students, which realizes the process of discovering knowledge from data, taking advantage of available programs.	ED _K_10, ED _K_9, ED _U_5, ED _U_6, ED _U_7, ED _U_8, ED _W_2, ED _W_3, ED _W_4, ED_W_1
ED _w_3	Reports	Preparing project reports, with description of the results obtained and sending electronic copy in a fixed date.	ED _K_10, ED _K_9, ED _U_5, ED _U_6, ED _U_7, ED _W_2, ED _W_3, ED_W_1

5. Forms of teaching

code	form of teaching		number of hours	required hours of student's own work	number of hours	assessment of the learning outcomes of the module
	type	description (including teaching methods)		description		
ED _fs_1	lecture	Giving educational content orally, with use of content visualization. Drawing attention to material conceptually complex and indicating additional material.	15	Familiarizing with topic of the lecture, taking advantage of: lectures electronic version, websites, recommended literature.	15	ED _w_1
ED _fs_2	laboratory classes	Designed for students' detailed preparation to realize assigned projects indicating methodology of proceedings, pointing the	30	Preparation for laboratory class Individual projects preparation, effecting reports on the realized projects and sending	30	ED _w_2, ED _w_3

		sequence of performed activities.		them on the fixed time.		