1.	Field of study	Computer Science
2.	Faculty	Faculty of Science and Technology
3.	Academic year of entry	2021/2022 (summer term)
4.	Level of qualifications/degree	second-cycle studies
5.	Degree profile	general academic
6.	Mode of study	full-time

Module: Web applications

Module code: W4-INA-S2-20-F-AI

1. Number of the ECTS credits: 4

2. Learning outcomes of the module			
code	description	learning outcomes of the programme	level of competence (scale 1-5)
M_001	The student can characterise applications in the client-server architecture, particularly Internet ones, lists the essential elements of the multi-layer structure of this type of application.	K_W03 K_W05	1 1
M_002	The student can define the concept of network application and application server and characterise the application requirements for implementation on servers based on various technologies.	K_W03 K_W06	1 1
M_003	The student can distinguish and describe elements of internet technologies on the selected platform.	K_W05 K_W06	1 1
M_004	The student can characterise the rules of connecting and using relational database servers in Internet technologies.	K_W06 K_W09	1 1
M_005	The student can describe the MVC structure (Model-Viewer-Controller) application, especially in creating database web applications.	K_W05	1
M_006	The student can use programming environments to create internet projects, create applications divided into packages/modules, and apply appropriate comments.	K_U01 K_U03 K_U09	1 1 1
M_007	The student can create controllers, i.e. request handling objects and handle requests based on the GET and POST methods. They can also install network applications on the application server and configure it in the basic scope.	K_U01 K_U02 K_U08 K_U09 K_U10	1 1 1 1 1

M_008	The student can create web applications based on the selected technology, use component libraries and cookie and session mechanisms.	K_K01	1
		K_K02	1
		K_U01	1
		K_U02	1
		K_U09	1
		K_U10	1
M_009	The student can use libraries/modules for communication with the database to implement the data layer, design and manage the connection to the database from the application itself, and the application server.	K_U01	1
		K_U09	1
		K_U10	1
M_010	The student can use the MVC (Model-View-Controller) model in database projects created in the selected technology.	K_U09	1
		K_U10	1
M_011	The student can work independently, planning the implementation of assigned tasks.	K_K01	1

3. Module description	
Description	The class aims at providing operational basics in web applications development in the chosen technology (PHP, Java, ASP .NET, Ruby, Python or other). Through practical laboratory class and project development, the students gain knowledge, skills and competences related to the subject. The students can design a web application using a database, implement it, and deploy on a web server on completing the course
Prerequisites	

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
W_001	Test	The test comprises several questions selected from the thematic groups covering all the sections discussed in the classes.	M_001, M_002, M_003, M_004, M_005
W_002	Subject tasks	The students should complete subject tasks during the laboratory classes.	M_006, M_007, M_008, M_009, M_010, M_011
W_003	Project	The students should complete their projects.	M_006, M_007, M_008, M_009, M_010, M_011

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	
Z_001	lecture	The lectures have a verbal form with the support of multimedia and other materials available on the Internet.	15	The students study lecture topics based on available materials.	25	W_001
Z_002	laboratory classes	The laboratory classes introduce to practical	30	The students solve practical tasks given by	50	W_002, W_003

		aspects of the module domain. The students discuss the problems with the teacher who support them in the task completion, discuss the project topics and help them in the implementation.		the teacher and implement the assigned project using the provided documentation and laboratory examples.		