MODULE DESCRIPTION

Module code	**ID1_PAIII6**
Module name	**Projektowanie aplikacji internetowych 2**
Module name in English	**Internet Application Design 2**
Valid from academic year	**2012/13**

MODULE PLACEMENT IN THE SYLLABUS

Subject	**Computer Science**
Level of education	**1st degree** *(1st degree / 2nd degree)*
Studies profile	**General** *(general / practical)*
Form and method of conducting classes	**Full-time** *(full-time / part-time)*
Specialisation	**Information Systems**
Unit conducting the module	**The Department of Computer Science**
Module co-ordinator	**Konrad Kurczyna, MSc, Eng.**
Approved by:	

MODULE OVERVIEW

Type of subject/group of subjects	**Major** *(basic / major / specialist subject / conjoint / other HES)*
Module status	**Compulsory** *(compulsory / non-compulsory)*
Language of conducting classes	**Polish**
Module placement in the syllabus - semester	**6th semester**
Subject realisation in the academic year	**Summer semester** *(winter / summer)*
Initial requirements	**Databases, Object-Oriented Programming (Java), and Software Engineering** *(module codes / module names)*
Examination	**Yes** *(yes / no)*
Number of ECTS credit points	**4**

Method of conducting classes	Lecture	Classes	Laboratory	Project	Other
Per semester	**15**			**30**	

TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS

Module target	The aim of the module is to familiarise students with Java EE programming platform based on multi-tier component architecture; another aim is to learn the principles of application design in a multi-tier architecture; furthermore, students learn the mechanisms of Object-Relational Mapping (ORM) and the framework of creating a user interface based on the JSF standard.

Effect symbol	Teaching results	Teaching methods *(l/c/l/p/other)*	Reference to subject effects	Reference to effects of a field of study
W_01	Knowledge of Java EE multi-tier component architecture.	l	K_W15, K_W18	T1A_W03, T1A_W05
W_02	Knowledge of EJB presentation layer as well as business logic.	l	K_W10, K_W15	T1A_W04, T1A_W07
W_03	Knowledge of the JPA object-relational mapping.	l	K_W14, K_W15	T1A_W04, T1A_W07
W_04	Knowledge of a framework of creating a user interface in compliance with the JSF specification.	l	K_W15, K_W20	T1A_W04, T1A_W06, T1A_W07
U_01	The ability of designing an Internet application in a three-tier architecture.	l/p	K_U17, K_U20, K_U21	T1A_U03, T1A_U09, T1A_U13, T1A_U14, T1A_U16
U_02	The ability of creating user interface components, business logic, providing safety, and transactionability.	l/p	K_U02, K_U21	T1A_U02, T1A_U10, T1A_U16
U_03	The ability of creating unit tests.	l/p	K_U02, K_U17	T1A_U02, T1A_U15
K_01	Teamwork.	p	K_K03	T1A_K03

Teaching contents:

Teaching contents as regards lectures

Lecture number	Teaching contents	Reference to teaching results for a module
1	Java EE architecture and technologies.	W_01
2	The components of EJB business logic.	W_02, U_02
3	JPA object-relational mapping.	W_03, U_03
4	Designing business logic of Internet applications.	W_02, U_02 W_03, U_03
5	JSF components and navigation.	W_02, W_04, U_02
6	JSF event handling and page life cycle.	W_04, U_02
7	Designing the logic of presentation of Internet applications.	W_02, U_01 W_04, U_02

The characteristics of project assignments

The subject matter covers designing as well as implementing a multi-tier business application in Java EE architecture. As part of the project a student ought to do the following:

1. Design a data tier based on a relational database.
2. Design and implement a business logic tier based on EJB as well as JPA components.
3. Design and implement a presentation logic tier based on JSF.

4. Prepare unit tests for the selected application modules.

The methods of assessing teaching results

Effect symbol	Methods of assessing teaching results *(assessment method, including skills – reference to a particular project, laboratory assignments, etc.)*
W_01	An examination.
W_02	An examination.
W_03	An examination.
W_04	An examination.
U_01	A project.
U_02	A project.
U_03	A project.

STUDENT'S INPUT

ECTS credit points		
	Type of student's activity	**Student's workload**
1	Participation in lectures	**15**
2	Participation in classes	
3	Participation in laboratories	
4	Participation in tutorials (2-3 times per semester)	**3**
5	Participation in project classes	**30**
6	Project tutorials	
7	Participation in an examination	**2**
8		
9	**Number of hours requiring a lecturer's assistance**	**50** *(sum)*
10	**Number of ECTS credit points which are allocated for assisted work** *(1 ECTS credit point=25-30 hours)*	**2**
11	Unassisted study of lecture subjects	**15**
12	Unassisted preparation for classes	
13	Unassisted preparation for tests	
14	Unassisted preparation for laboratories	
15	Preparing reports	
16	Preparing for a final laboratory test	
17	Preparing a project or documentation	**45**
18	Preparing for an examination	
19	Preparing questionnaires	
20	**Number of hours of a student's unassisted work**	**60** *(sum)*
21	**Number of ECTS credit points which a student receives for unassisted work** *(1 ECTS credit point=25-30 hours)*	**2**
22	**Total number of hours of a student's work**	**110**
23	**ECTS credit points per module** *1 ECTS credit point=25-30 hours*	**4**

24	**Work input connected with practical classes** *Total number of hours connected with practical classes*	**75**
25	**Number of ECTS credit points which a student receives for practical classes** *(1 ECTS credit point=25-30 hours)*	**3**