1.3. Module/ course form

To be completed by Course Team							
	Module name :					Module code: M17	
	Course name: Methodology of Software Development Process					Course code:	
	Faculty: **Institute of Applied Informatics**						
	Field of study: **Informatics**						
	Mode of study : **daily**		Learning profile: **practical**			Speciality:	
	Year/ semester: 3/6		Module/ course status: **compulsory**			Module/ course language: **English**	
	Type of classes	lecture	lessons	lab	project	tutorial	other (please specify)
	Course load	**15**	**15**				

Module/ course coordinator	**mgr inż. Marzanna Skowrońska**
Lecturer	**mgr inż. Marzanna Skowrońska**
Module/ course objectives	Introduction to the various techniques and approach of software development process; development of modeling skills, analytical thinking, project management, teamwork.
Entry requirements	General knowledge of computer programming

LEARNING OUTCOME		
Nr	LEARNING OUTCOME DESCRIPTION	Learning outcome reference
01	To identify problems around methodological software systems development process.	K_W13
02	To know elementary techniques, approaches, models, software tools commonly used in the software development process.	K_W13
03	To describe different approaches or methods and their application and limitation.	K_W13
	Skills	
04	To apply techniques of different methods to do tasks of software systems project development.	K_U07
05	To choose a right model to a particular development problem and adequate CASE tools to the model. To create model in the chosen CASE tool.	K_U01 K_U03 K_U06
06	To form software system project documentation using different methods as a member of a team and present it publicly.	K_U03 K_U02
	Social competence	
07	To analyse approaches for no IT graduated project stackholders.	K_K02
08	To join to a group to do a final project. To find himself in a role that suits him the most because of	K_K04

	personal predispositions.	
09	To present the result of work openly in the way understanding for people IT off.	K_K07

CURRICULUM CONTENTS

Lecture

1. Introduction to the subject by defining the concepts of software as a software product, software system, system design, IT project, IT project of software systems, success in a software project, software engineering, CASE, methodology, notation.
2. Methodology of software systems development process, definition, components of the methodology.
3. Classification methods, approaches; modeling as the basis for creating projects. Social method.
4. Structural method.
5. Object-oriented method.
6. MDA - Model Driven Architecture.
7. Approach Agile - Agile Manifesto.
8. Business approach to IT project, positive and negative examples of Polish IT projects.
9. Methodology RUP (Rational Unified Process).
10. Methodology MSF (Microsoft Solution Framework).
11. Agile method: SCRUM, XP - Extreme Programming.
12. PRINCE2 -project management method.
13. Repetition and summary.

Tutorial

The main objective of classes is practical using the methods presented during the lecture and training modeling skills, teamwork.
It is commonly discussed about various methods of software development process and documenting IT project (without programming phase). Then t the knowledge is used in team work to create a project documentation. Each student performs his or her contribution of the project documentation.
Students prepares notes or does tasks during classes, validate them at home.
Additionally, student analysis of the selected programming large IT project in terms of success or failure.

Basic literature	„Software engineering" - Sommerville Ian
Additional literature	Current publication in Internet devoted to software development.

Teaching methods	The lecture and multimedia presentation, laboratory exercises, discussion, individual work and teamwork, personal consultation with the lecturer.

Assessment method	Learning outcome number
Student does written tasks related to the current topic of exercises, reviews them at home, passes them to judge in the next class.	02,03,04,05
Student writes a semester test of theory.	01,02,03
Student creates the project documentation of the common team project at the end of the term.	06,04,05
Student presents verbally and publicly the private part of the project documentation.	09

Form and terms of an exam	teamwork: student participation in the common project, personal conversation on project documentation and the student's contribution; active participation in exercises and fulfill the tasks; the test of lectures;

STUDENT WORKLOAD	
	Number of hours
Participation in lectures	15
Independent study of lecture topics	5
Participation in tutorials, labs, projects and seminars	15
Independent preparation for tutorials*	10
Preparation of projects/essays/etc.*	20
Preparation/ independent study for exams	5
Participation during consultation hours	5
Other	
TOTAL student workload in hours	75
Number of ECTS credit per course unit	**3 ECTS**
Number of ECTS credit associated with practical classes	45 **1,8 pkt ECTS**
Number of ECTS for classes that require direct participation of professors	35 **1,5 pkt ECTS**