

Программа учебной дисциплины “Agile Methodology and Project Management”

Утверждена

Академическим советом ОП

Протокол № от «__»_____20__ г.

Автор	Климов Борис Анатольевич
Число кредитов	8
Контактная работа (час.)	60
Самостоятельная работа (час.)	244
Курс	4
Формат изучения дисциплины	Без использования онлайн курса

1. Course Description

1.1. Title of a Course

Agile Methodology and Project Management

1.2. Pre-requisites

None

1.3. Course Type

Elective

1.4. Abstract

How to plan development, integration, scaling and management of large projects in the field of product development and software?

How to scale and manage Scrum projects?

How to identify appropriate practices and methods for the management and development of the project?

It is necessary to maximize the chances that you will get from your teams. To remain competitive - you must respond to ever-changing customer needs.

This course allows you to gain the knowledge and skills needed to become Agile. This course describes the best practices to ensure high quality training.

Today you have to be Agile.

The program of the discipline: «Agile Methodology and Project Management», sets out minimum requirements for the knowledge and skills of the student and determines the contents and types of studies and reports.

The program is designed for teachers leading this discipline, teaching assistants and students of the Bachelor Program "Software Engineering" studying the discipline «Agile Methodology and Project Management» at the Faculty of Computer Science, HSE.

2. Learning Objectives

Objectives:

- the acquisition of knowledge and practical experience in the field of software project management using modern agile methods and SBoK standard in the management of IT projects;
- practices in modern agile methods used to automate the management of software development;
- acquisition of research skills, self-study and tools for software project management in different areas of software engineering.

3. Learning Outcomes

To know:

- Principles and methodology for agile project management;
- Components of management models in agile project management;
- Possibilities and methods of work with software tools using the agile project management.

To be able to:

- Apply agile methods for the success of all kind of project.

Skills:

- Work with the requirements using agile methods in project management;
- Scheduling and allocation of resources using agile methods in project management;
- Work with software development tools using agile methods in project management.

4. Course Plan

№	Section name	Total hours	Classroom hours		Self-study
			Lectures	Seminars	
1	Scrum elementariness	72	5	7	60
1.1	What is mean to be Agile?		1	1	12
1.2	Adapting to Agile		1	1	12
1.3	Patterns for Adopting Agile		1	2	12
1.4	Iterating Toward Agility		1	2	12
1.5	First Project		1	1	12
2	People	57	4	5	48
2.1	Change Resistance		1	1	12
2.2	Roles in Agile and Scrum		1	1	12
2.3	Changed Roles		1	1	12
2.4	Technical Practices		1	2	12
3	Teams	106	8	14	84
3.1	Team Structure		1	2	12
3.2	Teamwork		1	2	12
3.3	Self-Organizing Team		1	2	12
3.4	The Product Backlog		2	2	12
3.5	Iterations / Sprints		1	2	12
3.6	Planning		1	2	12
3.7	Quality		1	2	12
4	Organization	61	5	8	48
4.1	Scaling Agile		2	2	12
4.2	Distributed Teams		1	2	12
4.3	Coexisting with Other		1	2	12

	Approaches				
4.4	Human Resources, Facilities, and the PMO		1	2	12
5	Improvement	8	2	2	4
Total		304	24	36	244

5. Reading List

5.1. Required

1. Agile adoption rate survey, February. <http://www.ambysoft.com/surveys/agileFebruary2008.html> Ambler Scott. 2008.
2. Year of living dangerously: How Salesforce.com delivered extraordinary results through a “big bang” enterprise agile revolution. Session presented at Scrum Gathering, Stockholm. <http://www.slideshare.net/sgreene/scrum-gathering-2008-stockholm-salesforcecom-presentation> Greene Steve, and Chris Fry. 2008
3. What is the ROI of agile vs. traditional methods? An analysis of extreme programming, test-driven development, pair programming, and Scrum (using real options). A downloadable spreadsheet from David Rico’s personal website. <http://davidfrico.com/agile-benefits.xls> Rico David F. 2008.
4. The state of agile development: Third annual survey. Posted as a downloadable PDF in the Library of White Papers on the VersionOne website. http://www.versionone.com/pdf/3rdAnnualStateOfAgile_FullDataReport.pdf VersionOne. 2008.

5.2. Optional

None

6. Grading System

Current control: control of attendance and knowledge of students in seminars and hometask. Control work (3d module) includes questions on the theoretical material of all previous lectures.

Homework includes automated development of software project management and report generation.

Final exam: at the end of the third module. The final exam includes questions about the theoretical and practical material of all 3 modules.

7. Guidelines for Knowledge Assessment

All type of works are evaluated on a scale from 1 to 10. Ehe cumulative score « $K_{cumulative}$ » is formed as a weighted sum:

$$K_{cumulative} = 0,4HT + 0,2A + 0,4C,$$

where homework (HT), attendance (A) and control work (C) are rounded to the nearest whole number. When rounding is taken into account the student's work at seminars.

If $K_{cumulative}$ is more than 8 points, the final score can be set without an examination.

The final score « K_{final} » is formed as a weighted sum:

$$K_{final} = 0,5K_{cumulative} + 0,5E,$$

where cumulative score ($K_{cumulative}$) and exam (E) are rounded to the nearest whole number.

8. Special Equipment and Software Support

- The projector for lectures and seminars;
- Self-adhesive stickers with pens and markers;
- Whiteboard with markers.
- Internet access for self-study