MaCICT

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MA Software Testing

Course: Software Testing

Faculty: Information technology	Amount of student effort (hours): 108
Department: Computing Systems and Networks	Class contact time (hours): 48
Level: MA, Year 2	Term period(s): Sem. 1
Language of instruction: Russian	Course status: Mandatory core
Course leader: Tatsiana Hlukhava	Entry requirements: At least 30 ECTS of the first degree's studies in the fields of Designing programs and programming languages, Technologies for developing and testing software, Fundamentals of Algorithmization and programming.
ECTS: 3	Contact: t.gluhova@psu.by

Objectives:

The purpose of teaching the discipline is to provide students with both theoretical knowledge in the field of project management, the tools used, development prospects and main trends, as well as practical skills related to the deployment of tools, structuring and task planning.

Achieving this goal involves solving the following tasks:

- ✔ Study of existing project management concepts;
- ✔ Study of the process approach and RUP;
- ✔ The acquisition of skills to deploy basic tools;
- ✔ The acquisition of skills in setting up processes in an organization related to software development.

Learning Outcomes:

As a result of studying the discipline, the student should know:

- ✔ The history of the development of project management systems;
- ✔ The basic concepts of project management in IT;
- ✔ Features of the process approach;
- ✔ Basic project management tools in IT;
- ✔ RUP processes;
- ✔ Prospects for the development of this field of science;

be able to:

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- ✔ To analyse the current state of processes in the enterprise and to develop proposals for improving processes;
- ✔ Deploy the necessary tools (planning, costing, development, testing, product assembly automation tools, version control, bug tracking systems);
- ✔ Carry out project management/

able to use:

- ✔ The main tools for managing all stages of the project life cycle;
- ✔ Tools for assessing the value of both the project as a whole and changes;
- ✔ Skills in the formulation of requirements and preparation of pre-project documentation;

have an understanding of:

- ✔ Methods of selection and work with staff;
- ✔ Ways to resolve conflicts;
- ✔ Scientific research conducted in this field.

Curriculum Outline:

Project management is a structured activity to achieve stated goals, aimed at meeting the real needs of people. The emergence of a project approach in the field of information technology brought a specific structuring of not only the activities of developers, but also affected the structuring of companies as a whole, planning tools, costing, development, testing, automation of product assembly, version control, and error tracking systems.

Contents:

There is a wide range of concepts based on the process approach. The basic structure of processes is RUP. Depending on the scale of the project and the specifics of the team, RUP modifications (Scrum, Agile, XP, Kanban) can be selected.

A separate component of project management is work with staff, staff recruitment, team motivation, the art of resolving conflict situations.

Course literature:

1. Ехлаков, Ю.П. Управление программными проектами / Ю.П. Ехлаков ; Министерство образования и науки Российской Федерации, Томский Государственный Университет Систем Управления и Радиоэлектроники (ТУСУР). – Томск : Томский государственный университет систем управления и радиоэлектроники, 2015. – 217с. : схем., табл. – Режим доступа: по подписке. – URL: http://biblioclub.ru/index.php?page=book&id=480634. – ISBN 978-5-86889-723-8.
2. Аньшин, В.М. Управление проектами: фундаментальный курс / В.М. Аньшин, А.В. Алешин, К.А. Багратиони ; ред. В.М. Аньшин, О.М. Ильина. – Москва : Издательский дом Высшей школы экономики, 2013. – 624 с. – (Учебники Высшей школы экономики). – Режим доступа: по подписке. – URL: http://biblioclub.ru/index.php?page=book&id=227270. – ISBN 978-5-7598-0868-8.
3. Бочкарёва, Л. В. Системы автоматизации проектирования программного обеспечения. Работа в среде Rational Rose : учебно-метод. пособие для студентов специальности

«Программное обеспечение информ. технологий» всех форм обучения / Л. В. Бочкарёва, М. В. Кирейцев. – Минск : БГУИР, 2006. – 38 с.

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