Software Project Management

Course code: GOC261

The use of any methodology without a professional evaluation of the nature of the methodology and the subsequent adjustment of the methodology for the real environment can lead to disappointment and financial losses. We will teach you to modify and combine existing methodologies so that the final result will be of maximum benefit to you.There are currently many methodologies used in SW development, but this course does not promote any specific methodology.In the course we will teach you what categories of methodologies exist, how individual methodologies differ and what methodologies are actually intended for.You will get acquainted with software development techniques that do not depend on any particular methodology and appear in many methodologies.We will introduce you to the issue of software project management according to the classic and agile approach.We will briefly introduce the methodologies: PMBOK ®, PRINCE2®, IPMA®, OpenUP, MMSP AV, Scrum, Lean Software Development, Agile Modeling, Simple Agile Modeling (SAM), Feature Driven Development.We will introduce you to practical examples of techniques: Atomic Requirement, User Story, Use Case Scenario, Gantt Diagram, Task Board, Kanban, Planning Poker, COCOMO II, Conceptual Component Diagram and many more.

Requirements per participant

- • This course does not require any previous courses. You will learn everything you need to know to understand the topics covered during the course.

What we will teach you

- Create your own modified methodology from the existing methodologies, which will be maximally beneficial for your company.
- Rationally determine the structure of the SW product and the sequence of work during development.
- Practically use different methods of estimating labor.
- Link analytical and architectural models with code development.

Teaching methods

- Expert explanation with practical examples, exercises on computers.

Studying materials

- Online presentation of the subject matter and exercises.

Course syllabus

- Introduction to the categorization of software development methodologies (SW)
- Categories of methodologies used in SW development
- methodologies for planning, financing and reporting,
- methodologies for people management,
- methodologies for SW development.
- Project Management versus Agile Development. What does the Agile Manifesto actually tell us?
- Methodologies for planning, financing and reporting (PMBOK®, PRINCE2®).
- Program and correct methodology.
- Waterfall approach to SW creation.
- Iterative methodologies for SW development (OpenUp, Czech methodology MMSP AV).
- Processes (operating procedures) that appear during SW development.
- Roles that appear in SW development.
- Artifacts created during SW development.
- Methodologies for collecting requirements for SW application.
- Determining the structure of the SW product and the sequence of work during development.
- Methods for estimating the laboriousness of software projects:
- basic principles of labor estimation,
- estimation of labor according to the elements of the SW product model,

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- Planning Poker,
- COCOMO II method (estimation of labor using functional points).
- Introduction to Scrum methodology, analysis of methodology properties.
- Agile SW development and SW product modeling.
- Agile SW development versus Modeling SW products.
- A brief introduction for managers to Modeling SW products.
- A brief introduction for managers to the use of analytical, architectural and design patterns.
- Introduction to Agile Modeling (AM), Simple Agile Modeling (SAM), and Feature Driven Development (FDD) methodologies.

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