

Tárgyleírás

Tárgy neve: Project Management

Tárgyfelelős neve: Dr. Molnár Bálint

Tárgyfelelős tudományos fokozata: PhD

Tárgyfelelős MAB szerinti akkreditációs státusza: AT

Az oktatás célja angolul / Aim of the subject:

The objective of the course is to teach students how to approach project management (PM) and understand all the essential concepts from both a theoretical and applied perspective.

High-level learning objectives include:

- Comprehending principles, values, and characteristics of standard information systems project management models and frameworks, including PMBOK global standard for project management; waterfall, iterative, spiral methodologies; lean and adaptive agile mindset (Scrum and other frameworks), DevOps, and DevSecOps.
- In-depth understanding of PM processes, PM phases, and life cycle.
- Comprehend and become familiar with the use of basic tools and techniques to plan, organize, and manage a project.
- Demonstration of the principles and practice of team leadership.
- Optimizing results while managing the triple constraints (scope/quality, resources/cost and time/schedule).
- Managing stakeholder communications.
- Describing the career paths in the PM profession

Knowledge

Upon completion of the course, students will:

- Have a comprehensive understanding and practical knowledge of modern information systems project management design, development and deployment
- Use project management frameworks, practices, processes, tools, techniques, and skills, in particular agile frameworks for software development;
- Have an overview of software validation and testing techniques,
- Understand how to effectively and efficiently manage project scope, cost, schedule, quality and delivery
- Understand the implications, challenges, and opportunities of organizational dynamics in project management.
- Understand the principles of business and enterprise processes, project organization within enterprises, and the relationships with the project and program management.

Abilities:

- Apply project management frameworks, principles and practices to deliver function and value in information technology projects
- Engage in project management and lead effective information systems projects and teams in the organization
- Perform project planning and management tasks for complex software systems and database management systems.
- Align critical resources for effective project implementation
- Apply management techniques to achieve project objectives and deliver high-quality software
- Skills for cooperation and teamwork, and ability to take a leading role.
- Use interpersonal skills to conduct effective communication and cooperation with project stakeholders
- Using project management professional language and terms, effectively communicate in English and negotiate project approach, budget, roadmap, milestones, schedule, requirements, deliverables, resources, and deliver high-quality artifacts
- Employ strategies to address the ubiquitous issue of resistance to change

Attitude:

- Accountable and act according to professional standards in different (enterprise-level, team-level, and hybrid agile) project roles,
- Use good judgment and skill to develop a project management approach that is suitable for planning and managing the effort,
- Committed to achieving the project goals within designated project constraints,
- Lead, mentor, and coach members of the team as needed to optimize the efficiency of the project team,
- Committed to the principles of lifelong and retrospective learning and knowledge sharing,
- Appreciate and foster the modern organizational cultures (customer-orientation, collaboration, agility, rapid innovation, automation etc.)
- Creative approach to problem-solving with the ability to focus on details while maintaining the “big picture” view.
- Committed to quality standards and IT tools to measure and improve quality.
- Open to initiating collaboration with IT and other specialists.

Autonomy, responsibility:

- Accountable for
 - observing and enforcing deadlines,
 - managerial and professional decisions at work,
 - the accomplishment of the work assigned to their team and the deliverables.
- In the case of operational critical IT systems, he/she can be assigned responsibility for development and operation, according to his/her professional competencies.
- Takes responsibility for building, leading and motivating high-performance agile project teams, and deliver agile projects that provide exceptional business value to customers and users,

- Responsible for planning, organizing, and directing the completion of specific projects for an organization while ensuring these projects are on time, on budget, and within scope.

Az oktatás tartalma angolul / Major topics:

Major topics include:

- Project management (PM) fundamentals
- PM terminology
- frameworks and relevant principles, standards, processes, practices, tools and techniques, with particular emphasis on:
 - PMBOK framework according to PMBOK® Guide 7th Edition
 - Waterfall, iterative, spiral methodologies,
 - Lean and Six Sigma frameworks,
 - Agile mindset (scrum, XP, TDD, BDD and other frameworks),
 - DevOps and DevSecOps)
- Network design (PND, AoA, AoN, CPM etc.)
- Software testing and test automation
- project organization, events and artifacts

A számonkérés és értékelés rendszere angolul / Requirements and evaluation:

Method of examination: colloquium (consolidated examination)

Additional (specific) methods to be used in the knowledge test:

- regular assignments,
- mid-term exam,
- presentation (project manager role, project management tools etc.),
- written test of theoretical knowledge.

Irodalom / Literature:

- 1 *A Guide to the Project Management Body of Knowledge (PMBOK Guide) -- Seventh Edition and The Standard for Project Management*, ISBN: 978-1-62825-664-2
- 2 Ken Schwaber & Jeff Sutherland: *The Scrum Guide, The Definitive Guide to Scrum: The Rules of the Game*, 2020.
- 3 Cecil 'Gary' Rupp. *A practical guide to implementing Value Stream Management to guide your strategic investments in DevOps capabilities and deliver customer-centric value quickly and economically*, Publisher: Packt Publishing, 2021, ISBN: 1801078068, 9781801078061