

Project Cycle Management in IT v.2.

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The aim of the course is to train students for a project approach to problems and situations in research and development projects (R&D) in ICT, which includes applying methods and tools characteristic of project management.

Working in teams, in the first part of the course, students will work on a standard IT project concept and conceptualize a software tool, with its user requirements. They will prepare an appropriate timeline, work breakdown structure, organizational breakdown structure, RACI matrix, financial plan, and a risk management plan.

In the second part, they will work in a team to extend the developed IT project concept, and create an R&D project proposal: they will prepare a project proposal for the EU funded projects in line with the requirements of a specific call (e.g. Erasmus+, European Structural and Investment Funds). Students will be able to use EU funds and programs for financing of development IT projects.

Planirani ECTS: 4

Broj polaznika: 35

Način izvođenja: Miješano

Status: U PLANIRANJU

Javni pristup tečaju: Privatno

Suradnici:

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Ishod učenja tečaja	Razina	Težina
Analyze the basic features of IT projects.	Analiziranje	10
Apply project management methods and appropriate software tools to the project cycle of an IT project.	Primjena	20
Create a financial plan, time plan and risk management plan.	Primjena	15
Analyze EU programs and funds to support the funding of an IT R&D project.	Analiziranje	10
Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork.	Kreiranje	20
Analyze project success criteria and the importance of making valid and timely decisions in project cycle phases.	Analiziranje	10
Evaluate a project application based on tender criteria and conditions.	Evalucija	10
Plan competence development to support IT project management in the context of EU funds and programs.	Razumijevanje	5

Ukupna težina: 100

Naziv teme / cjeline	Opterećenje	Vrsta učenja	Način izvođenja	Grupe	Suradnja	Povratne	Obavezna	Vrednovanje
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						informacije	aktivnost	Bodovi	Tip	Pružatelji
Introduction to IT Projects and Priorities Plan competence development to support IT project management in the context of EU funds and programs. (10%) , Analyze the basic features of IT projects. (40%) , Analyze project success criteria and the importance of making valid and timely decisions in project cycle phases. (10%)										
Understanding IT Projects										
Lecture on IT Project Fundamentals An instructor-led lecture covering the key concepts of IT projects, including basic definitions and specificities of IT projects.	45 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
Group Discussion on IT Project Examples Students will discuss various examples of IT projects in small groups, identifying the core components and challenges of each example.	15 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Da	Ne	Ne	Ne
Similarities and differences between IT projects and EU funded projects Teacher will inform students about basic concepts of EU funded projects to provide a big picture on the entire course content.	20 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
Project Manager Profession Teacher will inform students about the PM profession and competences needed by project managers.	20 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne

Discussion on latest trends in IT project management Teacher will present some of the latest research in IT project management and encourage a discussion with students.	20 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Da	Ne	Ne	Ne
Independent learning Students use the material and links in Moodle for further investigation and independent learning.	120 min	Istraživanje	Online	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
Ukupna opterećenja cjeline	4h									
Seminar - creating a project charter										
Analysis of IT projects financed from EU funds Students search and analyse IT projects financed from EU funds, from Erasmus+ and Horizon project databases, prior to lecture.	60 min	Istraživanje	Online	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
Presentation and discussion on project ideas Students presents and discuss about the type of IT projects that can be financed from EU funds.	15 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Nastavnik	Ne	Ne
Competency-Based Grouping Activity Students are divided into teams of 4 based on their competency assessment - it is important to cover students with different background (knowledge about project management, developer, specific knowledge in the field...). Another important aspect is student interest for certain horizontal priority!	15 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Da	Ne	Ne	Ne

<p>Project ideas brainstorming sprint Plan for brainstorming session (generated with ChatGPT):</p> <ul style="list-style-type: none"> • ◦ Phase 1: Research (5 minutes): Each team reviews a list of EU funding priorities (e.g., digital transformation, sustainability, or social inclusion). Briefly discuss the goals. ◦ Phase 2: Idea Generation (15 minutes): Teams brainstorm IT project ideas, ensuring they align with at least one EU funding priority. Choose the top 1-2 ideas. ◦ Phase 3: Project Brief (10 minutes): Teams outline the chosen project idea, specifying: <ul style="list-style-type: none"> ▪ Project Title ▪ Target Problem/Need ▪ Target Group/Users ▪ Expected Impact ▪ Alignment with EU Priorities • Outcome: Each group presents their project idea briefly (2 minutes per team) at the end, focusing on its potential impact and alignment with EU funds. 	30 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik	Ne	Ne
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<p>Project canvas Based on the idea, students create project canvas, including:</p> <ul style="list-style-type: none"> • Project Name & Description: Short summary of the project idea. • Stakeholders: Key individuals or organizations involved or impacted. • Objectives & Goals: Main outcomes and objectives of the project. • Value Proposition: The unique value the project delivers. • Key Activities: Critical actions or steps needed to achieve objectives. • Resources: Key resources (e.g., people, tools, finances). • Timeline & Milestones: Major phases and milestones. • Risks & Assumptions: Potential risks and assumptions. • Budget: High-level budget estimate. • Success Metrics: Criteria to measure project success. 	30 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik	Ne	Ne
Ukupna opterećenja cjeline	2.5h									
<p>IT Project Management Methods and Tools</p> <p>Apply project management methods and appropriate software tools to the project cycle of an IT project. (40%), Analyze the basic features of IT projects. (5%)</p>										
Project management methodologies										

<p>IT Project Requirements (+Communication) and Work Breakdown Structure</p> <p>Create a financial plan, time plan and risk management plan. (10%), Analyze the basic features of IT projects. (5%)</p>										
<p>Project requirements and WBS</p>										
<p>Lecture on requirements Teacher presents basic concepts related to functional, non-functional requirements and other project requirements.</p>	30 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
<p>Lecture on WBS Teacher presents basic concepts related to WBS in It projects.</p>	30 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
<p>Examples of project requirements and WBS Students recognize some project requirements and WBS based on their previous projects.</p>	30 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Ne	Ne	Ne
<p>Ukupna opterećenja cjeline</p>	1.5h									
<p>Seminar on project requirements and WBS</p>										

Project Timeline and Financial Planning in IT Projects Create a financial plan, time plan and risk management plan. (10%) , Analyze the basic features of IT projects. (5%) , Analyze project success criteria and the importance of making valid and timely decisions in project cycle phases. (10%)										
Estimating Cost and Schedule										
Cost and Schedule Teacher presents basic cost and scheduling techniques.	60 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
Discussion and example of project scheduling Discussion on examples of projects estimations	90 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
Exploring the examples Students explore examples of different projects, related to their estimation and scheduling	90 min	Istraživanje	Online	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
Ukupna opterećenja cjeline	4h									
Seminar on estimating cost and schedule										
Estimating project duration Students have to create CPM and Gantt chart for their project	45 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Ne	Ne	Ne
Estimating project cost Students have to prepare project cost estimation, including direct and indirect costs	45 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Ne	Ne	Ne

Creation of OBS Students create OBS for their project	45 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Ne	Ne	Ne
Creation of RACI matrix Students create RACI matrix for their project	45 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Ne	Ne	Ne
Ukupna opterećenja cjeline	1.5h									
Risk Management in IT projects Create a financial plan, time plan and risk management plan. (10%) , Analyze the basic features of IT projects. (5%)										
Lecture on risk management in IT projects										
Risk management plan Plenary lecture on risk management that involves identifying, assessing, prioritizing, and mitigating potential risks that could impact project objectives such as scope, budget, timeline, and quality.	60 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
Discussion on risk project management Examples, and group discussions	30 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
Ukupna opterećenja cjeline	1.5h									
Seminar on risk management										
Creating risk management plan Students prepare risk management plan for their projects.	60 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Ne	Ne	Ne

<p>Discussion on risk management plan</p> <p>Students presents their risk management plan and receive feedback from teachers and peers</p>	30 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik, Vršnjak	Ne	Ne
Ukupna opterećenja cjeline	1.5h									
<p>Periodical Exam 1</p> <p>Plan competence development to support IT project management in the context of EU funds and programs. (20%), Apply project management methods and appropriate software tools to the project cycle of an IT project. (20%), Create a financial plan, time plan and risk management plan. (10%), Analyze the basic features of IT projects. (20%), Analyze project success criteria and the importance of making valid and timely decisions in project cycle phases. (20%)</p>										
Preparation										
<p>Preparation for the Exam</p> <p>Student independently prepare for the periodical exam.</p>	120 min	Istraživanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
<p>Preparation for the Exam</p> <p>Student independently prepare for the periodical exam.</p>	120 min	Vježbanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
<p>Preparation for the Exam</p> <p>Student independently prepare for the periodical exam.</p>	120 min	Vježbanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne

Finalization of IT Project Applications Teams work collaboratively to finalize their IT project applications, integrating feedback received throughout the course.	300 min	Kreacija	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Da	Da	Ne	Ne	Ne			
Project Evaluation From Students will analyze the evaluation criteria for IT projects. Based on that, they will make further adjustments to their IT project applications.	90 min	Istraživanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Da	Da	Ne	Ne	Ne			
Teacher and Employer Assessment of IT Projects Students submit their final project proposals. The teacher and employers will assess the final projects.	30 min	Vrednovanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	20	Sumativno	Nastavnik, Vršnjak	
Ukupna opterećenja cjeline	7h												
R&D Project: EU Funding Opportunities and Case Studies Plan competence development to support IT project management in the context of EU funds and programs. (20%) , Analyze EU programs and funds to support the funding of an IT R&D project. (70%)													
EU strategic planning of funding programs & EU programs													

<p>Needs Analysis and Project Charter</p> <p>Analyze EU programs and funds to support the funding of an IT R&D project. (10%), Evaluate a project application based on tender criteria and conditions. (10%), Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. (30%)</p>										
<p>Needs analysis in line with EU program requirements</p>										
<p>Introduction to needs analysis for EU Programs and Funding The teacher will present a need analysis for various EU funding programs relevant to IT R&D projects as well as evaluation criteria that include need analysis. How to find similar projects, and research papers to support project ideas? How to build problem tree?</p>	30 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
<p>Interactive Discussion: Aligning Project Needs with EU Requirements In small groups, students will discuss how to align a project's specific needs with the eligibility criteria of suitable EU programs. They will articulate their understanding and challenge each other's ideas on the best programs for hypothetical project scenarios.</p>	20 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik, Vršnjak	Ne	Ne

Lesson: Problem tree - project objective tree Students watch a short video on problem tree and objective tree construction or listen the lecture on the topic.	20 min	Usvajanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
Starting a Problem Tree In teams, students discuss the most pressing issues related to their project idea. They start building a problem tree.	20 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik	Ne	Ne
Investigative Task: Researching EU Funding Program Criteria Students will independently investigate different EU funding programs. They will compare criteria, eligible activities, and application processes, documenting their findings in a comprehensive report.	30 min	Istraživanje	Online	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
Ukupna opterećenja cjeline	2h									
Creating project chartner										
Developing an Objectives Tree Students work in teams to finish the problem trees and identify the wider and specific objectives of their project proposal.	45 min	Vježbanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik, Vršnjak	Ne	Ne
Starting a Project Charter Students will start preparing a project charter. They will consider the funding program priorities, possible partners, overall budget and duration, in line with the chosen line of financing.	45 min	Istraživanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik, Vršnjak	Ne	Ne

<p>Project Charter & Needs Analysis Assignment Students will practice writing a needs analysis document for a mock IT R&D project, ensuring alignment with EU program requirements. They will prepare a problem tree and an objectives tree (supported by references - policy documents, research papers, previous projects) and develop a project charter.</p>	90 min	Vježbanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Da	Da	Ne	Ne	3	Formativno	Nastavnik
<p>Ukupna opterećenja cjeline</p>	3h											
<p>Logical Framework Matrix Create a financial plan, time plan and risk management plan. (10%), Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. (20%)</p>												
<p>Introduction to Logical Framework Matrix</p>												
<p>Video on Logical Framework Matrix Basics Students will watch a video that provides an overview of the Logical Framework Matrix (LFM), including its purpose, structure, and application in project management. Key concepts such as goals, objectives, outputs, and activities will be discussed.</p>	30 min	Usvajanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne		
<p>Lecture: Plenary Discussion Students will discuss the LFM basics and have an opportunity to ask questions during class time with a teacher.</p>	30 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Nastavnik, Vršnjak	Ne	Ne		

<p>Work Breakdown Structure, Dissemination, Project Management and Timeline of an R&D Project</p> <p>Create a financial plan, time plan and risk management plan. (10%), Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. (10%)</p>										
<p>Work Breakdown Structure</p>										
<p>Discussion on WBS Examples In class, the teachers presents students with examples of WBSs from real projects. The examples are discussed based on the questions given by the teacher (e.g., what is the difference in WPs considering the rules of different calls; how many levels and WPs seems plausible with regard to projects of different complexity and budget; where are the WBS elements placed in an LFM).</p>	45 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Da	Nastavnik, Vršnjak	Ne	Ne
<p>Lecture: Dissemination Students engage in a lecture with discussion on dissemination.</p>	25 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne
<p>Lecture: Project Management Students engage in a lecture with discussion on project management in the context of an international R&D project compared to an IT project performed by one provider.</p>	20 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne

<p>Budget of an R&D Project</p> <p>Create a financial plan, time plan and risk management plan. (30%), Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. (10%)</p>													
<p>Understanding EU R&D Project Financing Rules</p>													
<p>Independent Investigation on Financial Rules</p> <p>Students investigate the financial rules of the given call ahead of the class.</p>	60 min	Usvajanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne			
<p>Lecture and Discussion on EU R&D Project Financing Rules</p> <p>Students will attend a lecture where they discuss with the teacher the specific financing rules of EU-funded R&D projects. The session will cover the categories of eligible costs and how funds are allocated for different activities and work packages.</p>	30 min	Diskusija	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne			
<p>Quiz on Project Financing</p> <p>Students will take a short quiz covering the basics of project financing.</p>	10 min	Vrednovanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	1	Formativno	Automatizirano	
<p>Investigation of Previous Funded Projects</p> <p>Students will investigate examples of previous R&D projects that were successfully funded by the EU. They will explore and analyze the financial structures and allocations presented in these project proposals, gaining insights into practical applications of the rules.</p>	20 min	Istraživanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Da	Da	Nastavnik	Ne	Ne			

<p>Impact Plan, Implementation, Monitoring, and Reporting</p> <p>Plan competence development to support IT project management in the context of EU funds and programs. (20%), Analyze project success criteria and the importance of making valid and timely decisions in project cycle phases. (20%), Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. (5%)</p>										
<p>Impact and Implementation of R&D Projects</p>										
<p>Lecture on Impact Planning and Implementation Students will attend a lecture that provides an overview of theoretical insights and practical guidelines on impact planning, implementation, and monitoring of R&D projects. The lecture will address key components such as analyzing roles and responsibilities, preparing a detailed impact plan, and ensuring the fulfillment of project goals.</p>	45 min	Usvajanje	Na lokaciji	Sinkrono	Nastavnik prisutan	Ne	Ne	Ne	Ne	Ne

<p>Periodical Exam 2</p> <p>Plan competence development to support IT project management in the context of EU funds and programs. (10%), Create a financial plan, time plan and risk management plan. (10%), Analyze EU programs and funds to support the funding of an IT R&D project. (20%), Analyze project success criteria and the importance of making valid and timely decisions in project cycle phases. (20%), Evaluate a project application based on tender criteria and conditions. (10%), Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. (5%)</p>										
<p>Preparation</p>										
<p>Preparation for the Exam Student independently prepare for the periodical exam.</p>	60 min	Istraživanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
<p>Preparation for the Exam Student independently prepare for the periodical exam.</p>	180 min	Vježbanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
<p>Preparation for the Exam Student independently prepare for the periodical exam.</p>	120 min	Vježbanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne
<p>Preparation for the Exam Student independently prepare for the periodical exam.</p>	120 min	Istraživanje	Na lokaciji	Asinkrono	Nastavnik nije prisutan	Ne	Ne	Ne	Ne	Ne

