# Project Cycle Management in IT v.2.

**Project Cycle Management in IT v.2.**

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.

**Planned ECTS:** 4

**Number of learners:** 35

**Mode of delivery**: Blended

**Status**: IN PLANNING

**Course public access**: Private

**Contributors:**
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| Course learning outcome | Level | Weight |
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| Analyze the basic features of IT projects. | Analysing | 10 |
| Apply project management methods and appropriate software tools to the project cycle of an IT project. | Applying | 20 |
| Create a financial plan, time plan and risk management plan. | Applying | 15 |
| Analyze EU programs and funds to support the funding of an IT R&D project. | Analysing | 10 |
| Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. | Creating | 20 |
| Analyze project success criteria and the importance of making valid and timely decisions in project cycle phases. | Analysing | 10 |
| Evaluate a project application based on tender criteria and conditions. | Evaluating | 10 |
| Plan competence development to support IT project management in the context of EU funds and programs. | Understanding | 5 |
| | | **Total weight: 100** |

| Topic / Unit name | Workload | Learning type | Mode of delivery | | Groups | Collaboration | Feedback | Mandatory activity | Assessment | | |
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| | | | | | | | | | Points | Type | Providers |
| **Introduction to IT Projects and Priorities**<br>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<br>An instructor-led lecture covering the key concepts of IT projects, including basic definitions and specifities of IT projects. | 45 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No | |
| Group Discussion on IT Project Examples<br>Students will discuss various examples of IT projects in small groups, identifying the core components and challenges of each example. | 15 min | Discussion | Onsite | Synchronous | Teacher present | No | Yes | No | No | No | |
| Similarities and differences between IT projects and EU funded projects<br>Teacher will inform students about basic concepts of EU funded projects to provide a big picture on the entire course content. | 20 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No | |

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| Project Manager Profession<br>Teacher will inform students about the PM proffession and competences needed by project managers. | 20 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Discussion on latest trends in IT project management<br>Teacher will present some of the latest research in IT project management and encourage a discussion with students. | 20 min | Discussion | Onsite | Synchronous | Teacher present | No | Yes | No | No | No |
| Independent learning<br>Students use the material and links in Moodle for further investigation and independent learning. | 120 min | Investigation | Online | Asynchronous | Teacher not present | No | No | No | No | No |
| Total unit workload | 4h | | | | | | | | | |
| Seminar - creating a project charter | | | | | | | | | | |
| Analysis of IT projects financed from EU funds<br>Students search and analyse IT projects financed from EU funds, from Erasmus+ and Horizon project databases, prior to lecture. | 60 min | Investigation | Online | Asynchronous | Teacher not present | No | No | No | No | No |
| Presentation and discussion on project ideas<br>Students presents and discuss about the type of IT projects that can be financed from EU funds. | 15 min | Discussion | Onsite | Synchronous | Teacher present | No | No | Teacher | No | No |

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| Competency-Based Grouping Activity<br>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...).<br><br>Another important aspect is student interest for certain horizontal priority! | 15 min | Practice | Onsite | Synchronous | Teacher present | No | Yes | No | No | No |

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| Project ideas brainstorming sprint<br>Plan for brainstorming session (generated with ChatGPT):<br>• ◦ **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.<br>◦ **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.<br>◦ **Phase 3: Project Brief (10 minutes)**: Teams outline the chosen project idea, specifying:<br>▪ Project Title<br>▪ Target Problem/Need<br>▪ Target Group/Users<br>▪ Expected Impact<br>▪ Alignment with EU Priorities<br>• **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 | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |

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| Project canvas<br>Based on the idea, students create project canvas, including:<br>• **Project Name & Description**: Short summary of the project idea.<br>• **Stakeholders**: Key individuals or organizations involved or impacted.<br>• **Objectives & Goals**: Main outcomes and objectives of the project.<br>• **Value Proposition**: The unique value the project delivers.<br>• **Key Activities**: Critical actions or steps needed to achieve objectives.<br>• **Resources**: Key resources (e.g., people, tools, finances).<br>• **Timeline & Milestones**: Major phases and milestones.<br>• **Risks & Assumptions**: Potential risks and assumptions.<br>• **Budget**: High-level budget estimate.<br>• **Success Metrics**: Criteria to measure project success. | 30 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Total unit workload | 2.5h | | | | | | | | | |
| IT Project Management Methods and Tools<br>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%)** | | | | | | | | | | |
| Project management methodologies | | | | | | | | | | |

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| Project lifecycle<br>Lecture including topics of project lifecycle and differences between project and product development. | 30 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No | | |
| Project management methodologies<br>Lecture on basics of traditional and agile methodologies, methods and tool for managing IT projects. | 30 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No | | |
| Students experiences with PM methodologies<br>Plenary discussion with students on certain aspects of different PM methods and tool, and their application in practice. | 30 min | Discussion | Onsite | Synchronous | Teacher present | No | No | No | No | No | | |
| Total unit workload | 1.5h | | | | | | | | | | | |
| Seminar on project methodologies | | | | | | | | | | | | |
| The Agile Paper Airplane Game<br>A simulation of scrum will be done though an interactive game: https://www.ppm.academy/post/the-agile-paper-airplane-game | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No | | |
| Project idea refinement<br>Based on the prepared project canvas, students present their idea in 3 minutes and receive feedbak from teacher | 45 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | 0 | Formative | Teacher |
| Project implementation in a tool<br>Students have to explore and choose one of the PM tool in which they will plan and manage their projects (i.e. Asana, Trello, Jira...) | 60 min | Investigation | Online | Asynchronous | Teacher not present | Yes | Yes | No | No | 5 | Formative | Teacher |
| Total unit workload | 2.5h | | | | | | | | | | | |

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| **IT Project Requirements (+Communication) and Work Breakdown Structure**<br>Create a financial plan, time plan and risk management plan. (**10%),** Analyze the basic features of IT projects. (**5%)** | | | | | | | | | | |
| Project requirements and WBS | | | | | | | | | | |
| Lecture on requirements<br>Teacher presents basic concepts related to functional, non-functional requirements and other project requirements. | 30 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Lecture on WBS<br>Teacher presents basic concepts related to WBS in It projects. | 30 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Examples of project requirements and WBS<br>Students recognize some project requirements and WBS based on their previous projects. | 30 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No |
| Total unit workload | 1.5h | | | | | | | | | |
| Seminar on project requirements and WBS | | | | | | | | | | |

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| Defining project requirements<br>Students have to define project requirements, including:<br>• **Functional Requirements** which define **what** the software should do.<br>• **Non-Functional Requirements** which specify **how** the system should perform.<br>• **Project Requirements** which provide the **constraints and conditions** for the project's execution and management. | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Creating project WBS<br>Students have to create WBS including at least 4 levels, i.e.:<br>• **Level 1**: Project Name (e.g., "E-commerce Website Development")<br>• **Level 2**: Major Deliverables/Phases (e.g., "Development and Coding")<br>• **Level 3**: Sub-deliverables or Components (e.g., "Develop Front-End")<br>• **Level 4**: Work Packages or Tasks (e.g., "Code homepage layout") | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Total unit workload | 1.5h | | | | | | | | | |

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| **Project Timeline and Financial Planning in IT Projects**<br>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<br>Teacher presents basic cost and scheduling techniques. | 60 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Discussion and example of project scheduling<br>Discussion on examples of projects estimations | 90 min | Discussion | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Exploring the examples<br>Students explore examples of different projects, related to their estimation and scheduling | 90 min | Investigation | Online | Asynchronous | Teacher not present | No | No | No | No | No |
| Total unit workload | 4h | | | | | | | | | |
| Seminar on estimating cost and schedule | | | | | | | | | | |
| Estimating project duration<br>Students have to create CPM and Gantt chart for their project | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No |
| Estimating project cost<br>Students have to prepare project cost estimation, including direct and indirect costs | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No |

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| Preparing final schedule and cost estimation<br>Students have to prepare project cost and schedule estimation in a tool | 60 min | Practice | Online | Asynchronous | Teacher not present | Yes | Yes | Teacher, Other | No | 0 | Formative | Teacher |
| Total unit workload | 2.5h | | | | | | | | | | | |
| **Organizational Breakdown Structure and RACI Matrix**<br>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%),** Analyze the basic features of IT projects. (**10%)** | | | | | | | | | | | | |
| Lecture on OBS | | | | | | | | | | | | |
| Introcution to staffing in IT projects<br>Teacher presents topics related to staffing in IT projects, including Organizational Breakdown Structure (OBS) and RACI matrix | 60 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No | | |
| Roles in IT projects<br>Students discuss on different roles in IT projects, including IT project manager, scrum master, product owner, developers etc. | 30 min | Discussion | Onsite | Synchronous | Teacher present | No | No | No | No | No | | |
| Total unit workload | 1.5h | | | | | | | | | | | |
| Seminar of staffing in IT projects | | | | | | | | | | | | |

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| Creation of OBS<br>Students create OBS for their project | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No |
| Creation of RACI matrix<br>Students create RACI matrix for their project | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No |
| Total unit workload | 1.5h | | | | | | | | | |
| **Risk Management in IT projects**<br>Create a financial plan, time plan and risk management plan. (**10%),**<br>Analyze the basic features of IT projects. (**5%)** | | | | | | | | | | |
| Lecture on risk management in IT projects | | | | | | | | | | |
| Risk management plan<br>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 | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Discussion on risk project management<br>Examples, and group discussions | 30 min | Discussion | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Total unit workload | 1.5h | | | | | | | | | |
| Seminar on risk management | | | | | | | | | | |
| Creating risk management plan<br>Students prepare risk management plan for their projects. | 60 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No |

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| Discussion on risk management plan<br>Students presents their risk management plan and receive feedback from teachers and peers | 30 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No |
| Total unit workload | 1.5h | | | | | | | | | |
| **Periodical Exam 1**<br>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%)** | | | | | | | | | | |
| Preparation | | | | | | | | | | |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 120 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 120 min | Practice | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 120 min | Practice | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |

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| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 120 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No | | |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 60 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No | | |
| Total unit workload | 9h | | | | | | | | | | | |
| Exam | | | | | | | | | | | | |
| Taking Part in the Exam<br>Student take the exam. | 45 min | Assessment | Onsite | Synchronous | Teacher present | No | No | No | No | 20 | Summative | Teacher, Automated |
| Reflection on the Results<br>Students reflect on the results of the exam based on the analysis presented by the teacher. | 30 min | Discussion | Onsite | Synchronous | Teacher present | No | No | Teacher | No | No | | |
| Total unit workload | 1.25h | | | | | | | | | | | |
| Final IT Project Applications and Evaluation<br>Apply project management methods and appropriate software tools to the project cycle of an IT project. (**20%),** Analyze the basic features of IT projects. (**10%),** Evaluate a project application based on tender criteria and conditions. (**20%)** | | | | | | | | | | | | |
| Final Project Applications and Evaluation | | | | | | | | | | | | |

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| Finalization of IT Project Applications<br>Teams work collaboratively to finalize their IT project applications, integrating feedback received throughout the course. | 300 min | Production | Onsite | Asynchronous | Teacher not present | Yes | Yes | No | No | No | | |
| Project Evaluation From<br>Students will analyze the evaluation criteria for IT projects. Based on that, they will make further adjustments to their IT project applications. | 90 min | Investigation | Onsite | Asynchronous | Teacher not present | Yes | Yes | No | No | No | | |
| Teacher and Employer Assessment of IT Projects<br>Students submit their final project proposals. The teacher and employers will assess the final projects. | 30 min | Assessment | Onsite | Synchronous | Teacher present | No | No | No | No | 20 | Summative | Teacher, Peer |
| Total unit workload | 7h | | | | | | | | | | | |
| R&D Project: EU Funding Opportunities and Case Studies<br>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 | | | | | | | | | | | | |

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| Lecture on EU Strategic Planning and Funding Programs<br>This lecture will provide an overview of the EU's strategic planning of funding programs, covering the Horizon scanning, the main goals, priorities, and structure of key funding programs such as Horizon Europe, Erasmus+, and the European Structural and Investment Funds. Students will gain an understanding of how these programs contribute to R&D projects in IT. | 45 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Group Discussion on EU Funding Criteria<br>Students will be given several examples of funded IT-related projects. In this discussion session, students will engage in a group discussion focusing on the eligibility criteria and evaluation process for EU funding of IT projects. They will critique and debate how these criteria influence project planning and execution. | 45 min | Discussion | Onsite | Synchronous | Teacher present | Yes | No | Teacher, Peer | No | No |
| Investigating EU policy creation and programs characteristics<br>Students work independently and investigate on their own Horizon Scanning publications and different EU programs based on provided e-book, links and material in Moodle and external sources. Additionally, they research EU fund absorption capacity and project success factors. | 120 min | Investigation | Online | Asynchronous | Teacher not present | No | No | No | No | No |
| Total unit workload | 3.5h | | | | | | | | | |
| IT project ideas and EU programs | | | | | | | | | | |

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| Case Study Analysis of Funded IT Projects<br>Students will investigate and analyze case studies of successful IT projects funded by the EU. This activity will involve searching for relevant documentation, identifying key factors that contributed to their approval, and discussing these findings in groups. Students will classify several projects into suitable programs. | 30 min | Investigation | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | 1 | Formative | Teacher |
| Exercise on Preparing Project idea<br>A practical workshop where students will work in teams to develop a mock project idea for an EU-funded IT R&D project. They will create elements basic description of the project and find appropriate project calls for which the project idea can be eligible. | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No | | |
| Peer Review Session of Proposal Drafts<br>Students will exchange their draft proposals with peers and provide detailed feedback. This peer review session focuses on evaluating the completeness, coherence, and feasibility of the proposals, encouraging students to refine their ideas based on peer suggestions. | 15 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No | | |
| Reflection on project idea<br>Based on the inputs from the other team, the project team investigates further and prepares a new project idea. | 60 min | Investigation | Hybrid | Asynchronous | Teacher not present | Yes | Yes | No | No | No | | |
| Total unit workload | 2.5h | | | | | | | | | | | |

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| **Needs Analysis and Project Charter**<br>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%)** | | | | | | | | | | |
| **Needs analysis in line with EU program requirements** | | | | | | | | | | |
| Introduction to needs analysis for EU Programs and Funding<br>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? | 30 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Interactive Discussion: Aligning Project Needs with EU Requirements<br>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. | 20 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No |

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| Lesson: Problem tree - project objective tree<br>Students watch a short video on problem tree and objective tree construction or listen the lecture on the topic. | 20 min | Acquisition | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |
| Starting a Problem Tree<br>In teams, students discuss the most pressing issues related to their project idea. They start building a problem tree. | 20 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Investigative Task: Researching EU Funding Program Criteria<br>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 | Investigation | Online | Asynchronous | Teacher not present | No | No | No | No | No |
| Total unit workload | 2h | | | | | | | | | |
| Creating project chartner | | | | | | | | | | |
| Developing an Objectives Tree<br>Students work in teams to finish the problem trees and identify the wider and specific objectives of their project proposal. | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No |
| Starting a Project Charter<br>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 | Investigation | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No |

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| Project Charter & Needs Analysis Assignment<br>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. | 90 min | Practice | Onsite | Asynchronous | Teacher not present | Yes | Yes | No | No | 3 | Formative | Teacher |
| Total unit workload | 3h | | | | | | | | | | | |
| **Logical Framework Matrix**<br>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%)** | | | | | | | | | | | | |
| Introduction to Logical Framework Matrix | | | | | | | | | | | | |
| Video on Logical Framework Matrix Basics<br>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. | 30 min | Acquisition | Onsite | Asynchronous | Teacher not present | No | No | No | No | No | | |

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| Lecture: Plenary Discussion<br>Students will discuss the LFM basics and have an opportunity to ask questions during class time with a teacher. | 30 min | Discussion | Onsite | Synchronous | Teacher present | No | No | Teacher, Peer | No | No |
| Group Discussion on Example LFMs<br>Students are presented with examples of Logical Framework Matrices from past projects. They participate in a group discussion, where they will analyze and critique the examples. This will help them understand how to effectively use the matrix and how to identify common mistakes. | 20 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No |
| Practical Exercise: Starting a Draft of a Logical Framework Matrix<br>Working in teams, students will start drafting a Logical Framework Matrix for their project. In this first step, they will fill in the first column and the second row. They will present their drafts to the class for feedback. | 40 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No |
| Investigation Activity: Researching Successful LFM Applications<br>Students will independently research online and offline resources to find case studies and examples of successful applications of the Logical Framework Matrix. They will gather information on best practices and look for examples of indicators and measures of indicators. | 60 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |
| Total unit workload | 3h | | | | | | | | | |
| Developing a Logical Framework Matrix for IT Projects | | | | | | | | | | |

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| Pre-Class Research on Indicators<br>Students engage in individual research to identify suitable indicators for their IT project proposals. They will explore various resources, including EU-funded project databases, to understand which indicators align well with their specific objectives and strategic goals. | 45 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No | | |
| Teamwork: Constructing an LFM<br>Building on the first draft and their findings on indicators, students will continue working on the LFM for their IT project. They will further develop project objectives, results, activities, and indicators. Students will align their LFM with the strategic goals of their proposed EU-funded projects. | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No | | |
| Peer Review and Feedback to LFM<br>Teams will present their draft LFM to peers for critique. They will receive constructive feedback aimed at improving clarity, alignment with project objectives, and comprehensiveness of risk management strategies. This activity helps students refine their projects based on peer insights. | 45 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No | | |
| Finalizing the LFM<br>Based on the received feedback, students will further upgrade the draft LFM for their IT projects. They will submit the final version for assessment. | 60 min | Production | Onsite | Asynchronous | Teacher not present | Yes | Yes | Teacher | No | 3 | Formative | Teacher |
| Total unit workload | 3.25h | | | | | | | | | | | |

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| **Work Breakdown Structure, Dissemination, Project Management and Timeline of an R&D Project**<br>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%)** | | | | | | | | | | |
| Work Breakdown Structure | | | | | | | | | | |
| Discussion on WBS Examples<br>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). | 45 min | Discussion | Onsite | Synchronous | Teacher present | No | Yes | Teacher, Peer | No | No |
| Lecture: Dissemination<br>Students engage in a lecture with discussion on dissemination. | 25 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No |
| Lecture: Project Management<br>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. | 20 min | Discussion | Onsite | Synchronous | Teacher present | No | No | No | No | No |

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| Preparing a WBS for the R&D project<br>Students reflect on their knowledge on WBS from the first part of the course, reading materials and their LFM and prepare the first draft of the WBS for their R&D project. | 90 min | Investigation | Onsite | Asynchronous | Teacher not present | Yes | Yes | No | No | No | | |
| Total unit workload | 3h | | | | | | | | | | | |
| Dissemination and Timeline | | | | | | | | | | | | |
| Discussion on WBSs<br>Teams present the WBSs for their R&D projects and get feedback from teachers and peers. | 45 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No | | |
| Dissemination Plan<br>Working in teams, students prepare dissemination plans for their R&D projects. | 30 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No | | |
| Peer Review and Feedback on the Dissemination Plan<br>Teams switch their dissemination plans and provide peer feedback. They can also ask the teacher for feedback. | 15 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | 0 | Formative | Teacher, Peer |
| Finalizing the Dissemination Plan<br>Teams finalize their dissemination plans, incorporating the received feedback. They submit the assignment for assessment. | 60 min | Production | Onsite | Asynchronous | Teacher not present | Yes | Yes | Teacher | No | 2 | Formative | Teacher |
| Total unit workload | 2.5h | | | | | | | | | | | |

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| **Budget of an R&D Project**<br>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%)** | | | | | | | | | | | | |
| Understanding EU R&D Project Financing Rules | | | | | | | | | | | | |
| Independent Investigation on Financial Rules<br>Students investigate the financal rules of the given call ahead of the class. | 60 min | Acquisition | Onsite | Asynchronous | Teacher not present | No | No | No | No | No | | |
| Lecture and Discussion on EU R&D Project Financing Rules<br>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. | 30 min | Discussion | Onsite | Synchronous | Teacher present | No | No | No | No | No | | |
| Quiz on Project Financing<br>Students will take a short quiz covering the basics of project financing. | 10 min | Assessment | Onsite | Synchronous | Teacher present | No | No | No | No | 1 | Formative | Automated |

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| Investigation of Previous Funded Projects<br>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. | 20 min | Investigation | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Starting a Draft Financial Plan for an R&D Project<br>Students will start creating a basic financial plan for their R&D project. They will categorize eligible costs and allocate funds in accordance with the EU financing rules learned in the unit. | 30 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Total unit workload | 2.5h | | | | | | | | | |
| Developing a Detailed Project Budget | | | | | | | | | | |
| Budget Breakdown Workshop<br>Students will work to estimate costs and categories of costs for each work package. Facilitated by teachers, the workshop will provide guidance and feedback on appropriate cost allocation. | 45 min | Practice | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Budget Proposal Presentation and Feedback<br>Each project team will consolidate their budgeting efforts into a formal presentation that outlines their financial plan, cost justifications, and alignment with financing rules. This presentation will be assessed by teachers and peers. | 45 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher, Peer | No | No |

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| Finalizing the R&D Project Budget<br>Students will work in teams to finalize the budget for their R&D projects, incorporating the received feedback. They will submit the assignment for assessment. | 90 min | Production | Onsite | Asynchronous | Teacher not present | Yes | Yes | Teacher | No | 3 | Formative | Teacher |
| Total unit workload | 3h | | | | | | | | | | | |
| Impact Plan, Implementation, Monitoring, and Reporting<br>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%)** | | | | | | | | | | | | |
| Impact and Implementation of R&D Projects | | | | | | | | | | | | |
| Lecture on Impact Planning and Implementation<br>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. | 45 min | Acquisition | Onsite | Synchronous | Teacher present | No | No | No | No | No | | |

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| Case Study on Successful R&D Project Implementation<br>Students will investigate real-world case studies of successful R&D project implementations. This activity involves exploring project documentation to identify critical success factors, challenges, and the methods used to address them in alignment with EU project rules. Student will be provided with project reports, impact plans, evaluations. | 45 min | Investigation | Onsite | Synchronous | Teacher present | Yes | Yes | No | No | No |
| Total unit workload | 1.5h | | | | | | | | | |
| Consolidation of an R&D Project Proposal | | | | | | | | | | |
| Workshop: Developing an Impact Plan<br>In a hands-on workshop, students will work in teams to create a detailed impact plan for their R&D project proposal. They will be tasked with drafting strategies to ensure consistent monitoring and successful achievement of the predefined impacts. | 45 min | Production | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Draft Project Application<br>Teams will consider the project application form (in line with the call) and ask the teacher any questions related to the finalization of the project proposal. | 45 min | Discussion | Onsite | Synchronous | Teacher present | Yes | Yes | Teacher | No | No |
| Total unit workload | 1.5h | | | | | | | | | |

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| **Periodical Exam 2**<br>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%)** | | | | | | | | | | |
| Preparation | | | | | | | | | | |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 60 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 180 min | Practice | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 120 min | Practice | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |
| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 120 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No |

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| Preparation for the Exam<br>Student independently prepare for the periodical exam. | 180 min | Investigation | Onsite | Asynchronous | Teacher not present | No | No | No | No | No | | |
| Total unit workload | 11h | | | | | | | | | | | |
| Exam | | | | | | | | | | | | |
| Taking Part in the Exam<br>Student take the exam. | 60 min | Assessment | Onsite | Synchronous | Teacher present | No | No | No | No | 20 | Summative | Teacher, Automated |
| Reflection on the Results<br>Students reflect on the results of the exam based on the analysis presented by the teacher. | 30 min | Discussion | Onsite | Synchronous | Teacher present | No | No | Teacher | No | No | | |
| Total unit workload | 1.5h | | | | | | | | | | | |
| Final Project Applications and Evaluation<br>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. (**60%),** Create a project application for an R&D IT project based on a tender for EU funding through collaborative teamwork. (**20%)** | | | | | | | | | | | | |
| Final Project Applications and Evaluation | | | | | | | | | | | | |

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| Finalization of R&D Project Applications<br>Teams work collaboratively to finalize their R&D IT project applications, integrating feedback received throughout the course and aligning with specific EU tender criteria. | 300 min | Production | Onsite | Asynchronous | Teacher not present | Yes | Yes | No | No | No | | |
| Project Evaluation From<br>Students will analyze the evaluation criteria for R&D IT projects. Based on that, they will make further adjustments to their R&D project applications. | 60 min | Investigation | Onsite | Asynchronous | Teacher not present | Yes | Yes | No | No | No | | |
| Peer Review and Teacher Assessment of Project Applications<br>Students submit their final project proposals and participate in a peer review session, evaluating each other's project applications based on the tender criteria and conditions. They provide feedback to peers to improve the quality of the applications. Teacher will assess the final applications. | 180 min | Assessment | Onsite | Synchronous | Teacher present | No | No | No | No | 30 | Summative | Teacher, Peer |
| Total unit workload | 9h | | | | | | | | | | | |
| **Total course workload** | **96h** | | | | | | | | | | | |