



SUSTAINABLE PROJECT MANAGEMENT THROUGH PM²



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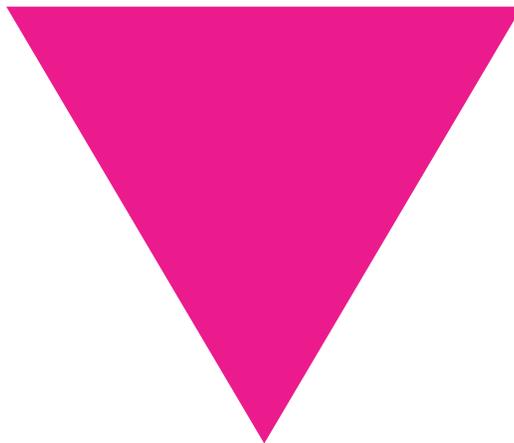


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Deliverable 3.1

SPM² Curriculum Framework

WP 3 - SPM² Curriculum Development and Digital Resource Hub Integration with Piloting Engagement



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Description of the Deliverable: (3-5 lines)	This deliverable presents the standardized Course Syllabus Template for the Sustainable Project Management with PM ² (SPM ²) curriculum. It provides a unified structure for developing, delivering, and evaluating course modules across higher education and vocational training contexts. The syllabus template ensures coherence in learning objectives, outcomes, pedagogical approaches, and assessment strategies, while embedding sustainability principles throughout the PM ² project management lifecycle.
Key Words:	<i>Sustainable Project Management, SPM², Curriculum Development, Higher Education, Vocational Education, Digital Learning</i>

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EXECUTIVE SUMMARY

The SPM² Curriculum Framework: Course Syllabus Template is a key deliverable under WP3 of the SPM² Erasmus+ project. Its purpose is to ensure that all modules developed for the Sustainable Project Management with PM² course follow a standardized structure and align with the project's pedagogical and competency-based principles.

The syllabus template incorporates:

- A unified course identification and description format
- Clearly defined learning objectives and learning outcomes for each module
- Standardized workload breakdowns and ECTS allocation
- A consistent pedagogical approach rooted in active, blended, and sustainability-oriented learning
- An aligned assessment strategy, teaching materials, and digital tools
- Instructor tailoring notes to adapt the course to different EQF levels

The methodology for developing this template was collaborative and iterative, involving project partners from multiple HEIs and VET providers. Drafts were reviewed by academic and industry experts to ensure relevance, clarity, and applicability across contexts. The final version is intended for both immediate use in piloting activities and long-term adoption in partner curricula, as well as for open dissemination to the wider academic community.

By integrating sustainability principles into every stage of the PM² methodology and aligning learning outcomes with market-relevant competencies, the template supports a systemic shift toward more sustainable project management education and practice.



INTRODUCTION

1. About the SPM² Project

The SPM² initiative aims to integrate sustainability principles into the PM² project management methodology, addressing critical gaps in sustainable practices across industries and education. By developing comprehensive tools, frameworks, and training programs, the project supports professionals and institutions in aligning with green and digital transitions, fostering long-term impact and sustainability.

Key Objectives

1. **Develop the SPM² Guide and Digital Resource Hub:**
 - A practical guide and online platform providing tools, templates, and educational resources for sustainable project management.
 - **Indicators:** 200+ downloads within the first three months, 500+ user engagements.
2. **Standardize Professional Profiles and Curriculum:**
 - Define essential competencies and align HEI and VET curricula to industry standards.
 - **Indicators:** Adoption by HEIs and VETs, industry validation, and surveys evaluating curriculum relevance.
3. **Establish Micro-Credential Framework:**
 - Design ISO-compliant micro-credentials for SPM² skills with flexible, scalable frameworks.
 - **Indicators:** Development of 4-6 micro-credentials, 300 pilot participants, and partnerships with accreditation bodies.
4. **Secure Endorsement and Certification:**
 - Institutionalize SPM² methodology through widespread adoption by HEIs, VETs, and industry partners.
 - **Indicators:** Endorsements from 3+ European decision-makers and real-world case studies.

Target Groups

- **Primary:** HEIs, VET providers, project managers, and students seeking to embed sustainability in project management practices.
- **Secondary:** NGOs, policymakers, and industry partners advocating for sustainable development.

Work Plan Highlights

- **Needs Analysis & Stakeholder Engagement:** 500+ stakeholders, 200 surveys, and 5 focus groups.
- **Curriculum Development & Piloting:** Educational content piloted in HEIs and VETs with over 300 participants.
- **Micro-Credentials & Accreditation:** ISO-compliant framework and validation in 10+ settings.
- **Dissemination & Policy Impact:** Engaging stakeholders through 20+ materials, 10 events, and online communities.



Expected Outcomes

1. Comprehensive SPM² Guide and resource hub to enable widespread adoption.
2. Industry-aligned professional profiles and curriculum fostering sustainable project management education.
3. Flexible micro-credential framework to support lifelong learning and professional mobility.
4. Institutionalized SPM² methodology through certifications and endorsements.

2. About This Deliverable

The *SPM² Curriculum Framework: Course Syllabus Template* presented in this deliverable serves as the foundation for the structured development and delivery of the SPM² curriculum. It provides a comprehensive, modular framework adaptable to higher education, vocational training, and professional development contexts.

The template ensures that:

1. **Learning objectives and outcomes** are aligned with sustainability-integrated PM² competencies.
2. **Pedagogical approaches** promote active, reflective, and collaborative learning experiences.
3. **Assessment strategies** measure both knowledge acquisition and skill application in realistic project scenarios.
4. **Teaching materials and digital tools** are harmonized for accessibility, reusability, and alignment with open education practices.

By offering a standardized yet adaptable structure, this deliverable directly supports the SPM² project's broader goals-enabling institutions, educators, and learners to adopt sustainability-oriented project management practices that are relevant, effective, and scalable.



COURSE SYLLABUS TEMPLATE (CST)

1. COURSE IDENTIFICATION

Purpose

This section provides a standardized overview of the course, including its title, scope, delivery language, and academic alignment across EQF levels. It enables harmonized documentation and comparability across all partner institutions.

Notes:

- The **ECTS credit value provided below is a standard recommendation (4 ECTS)**. Each institution should validate and align this with their **internal credit system and national/EQF/NQF requirements**.
- This course is designed to be adaptable for Bachelor, Master and MBA levels, with appropriate tailoring of teaching depth, assessments, and complexity. See Section 12 (Tailoring Notes) for level-specific guidance.

Table 1. Course Identification

Field	Description
Course Title	Sustainable Project Management with PM ²
Lead Institution	University of Novi Sad
Participating Institutions	The University of Information Technology and Management in Rzeszow, The University of Thessaly
Academic Level	BSc/MSc / MBA / (adaptable with tailored assessment)
Course Coordinator	Dr. Danijela Ćirić Lalić, danijela.ciric.lalic@uns.ac.rs
Language of Instruction	English
Delivery Mode:	onsite/online/blended
ECTS Credits	4 (subject to NQF/EQF alignment at institutional level)
Total Workload (hours)	~120 h

2. COURSE DESCRIPTION

Purpose

This section provides a concise academic summary of the course, suitable for syllabi, institutional catalogues, and online platforms. It communicates the course's thematic focus, relevance to green and digital transitions, and its intended knowledge and skill contributions-without listing objectives or outcomes.

This course introduces students to the principles and practices of sustainable project management using an enhanced and tailored version of the *European Commission's PM²* methodology. Developed within the Sustainable Project Management through PM² (SPM²) project, this extended framework systematically integrates sustainability into all structural



dimensions of PM²-encompassing governance structures, lifecycle phases, management processes, and project artefacts.

Students will learn how to embed sustainability considerations into each step of the project lifecycle: from the initial development of the Business Case and stakeholder mapping, through the Planning Phase (including sustainability-driven objectives, scope, schedule, and resource allocation), the Execution Phase (including coordination and implementation of sustainable actions), the Monitoring and Controlling Phase (including sustainability indicators and progress reporting), and finally to the Closing Phase (including final sustainability impact assessment, knowledge transfer, and institutional learning).

The course emphasizes alignment with global sustainability goals such as the United Nations Sustainable Development Goals (SDGs), the European Green Deal, and frameworks including Environmental, Social and Governance (ESG) criteria.

Students will acquire both conceptual and applied competencies-ranging from lifecycle-based sustainability integration, ethical stakeholder engagement, and trade-off analysis to the adaptation and use of enhanced PM² artefacts and decision-support tools. These competencies are essential for professionals managing projects or working in organizations committed to sustainable transformation.

The course is designed for graduate and postgraduate students in engineering, economics, environmental science, and management, as well as early-career professionals seeking to upskill in sustainable project design, implementation, and reporting aligned with global and EU standards.

3. LEARNING OBJECTIVES

Purpose

This section outlines the general aims of the course from a pedagogical perspective. Learning objectives define the *conceptual scope* of what students will achieve by the end of the course. They reflect intended cognitive engagement at the level of understanding, analysis, and application, aligned with Bloom's Taxonomy (mid-high levels).

Upon successful completion of this course, students will be able to:

- **LO-1:** Understand the structure, roles, lifecycle phases, and artefacts of the PM² project management methodology.
- **LO-2:** Analyze how sustainability principles and ESG considerations can be systematically integrated into all PM² phases, processes, and decision points.
- **LO-3:** Evaluate the role of project governance, stakeholder engagement, and risk management in supporting sustainability outcomes.
- **LO-4:** Apply enhanced PM² artefacts and templates adapted to reflect sustainability objectives, constraints, and impact metrics.
- **LO-5:** Design and assess project management strategies that align with global sustainability frameworks (e.g., SDGs, GRI, CSRD).
- **LO-6:** Interpret and use sustainability indicators and reporting mechanisms throughout the project lifecycle.



- **LO-7:** Recognize the ethical, environmental, and social responsibilities of project professionals in sustainable transitions.
- **LO-8:** Synthesize project management and sustainability knowledge to propose context-relevant improvements to project plans and delivery.

4. LEARNING OUTCOMES

Purpose

This section defines *observable and measurable* outcomes that students will achieve upon successful completion of the course. Learning outcomes reflect the concrete skills, knowledge, and abilities developed through learning activities.

Upon completion, students will be able to:

- **Outcome-1:** Manage projects using the full PM² lifecycle, integrating sustainability at each phase—from initiation and planning to execution, monitoring, and closure.
- **Outcome-2:** Adapt PM² artefacts (e.g., Business Case, Project Charter, Stakeholder Matrix, Risk Log, Phase Gates) to reflect sustainability priorities and ESG factors.
- **Outcome-3:** Design stakeholder engagement and communication strategies that promote transparency, co-ownership, and long-term sustainability impact.
- **Outcome-4:** Monitor project progress and sustainability performance using defined indicators, impact analysis, and structured reporting frameworks.
- **Outcome-5:** Communicate project and sustainability results effectively through professional documentation, visual tools, and oral presentations.
- **Outcome-6:** Collaborate in diverse teams using digital tools to develop and deliver sustainability-aware project solutions aligned with responsible project delivery principles.

5. ALIGNMENT WITH THE SPM² COMPETENCY FRAMEWORK

Purpose

This course develops a structured set of **50 professional competencies** fully aligned with the applied learning philosophy of the Sustainable Project Management through PM² (SPM²) methodology. The competencies integrate sustainability into project management practice while ensuring progression across European Qualification Framework (EQF) levels. They are directly relevant to project teams and employers across sectors aiming to deliver projects with positive long-term impacts.

The competencies are grouped into three interrelated domains:

1. **Project Management Core** – Mastery of project lifecycle processes, governance,
2. **Sustainability Integration** – Ability to embed sustainability principles, criteria, and performance measurement in project design and delivery.
3. **Transversal and Collaborative Skills** – Competence in teamwork, communication, ethical decision-making, and use of digital tools.



Table 2. Competency Mapping Table

Competency Domain	Code	Competency Description
Project Management Core	C1	Apply PM ² processes across initiation, planning, execution, monitoring, and closure phases.
	C2	Develop and maintain a project Business Case linked to organisational strategy.
	C3	Prepare a Project Charter capturing scope, objectives, and sustainability commitments.
	C4	Conduct stakeholder analysis and maintain an updated Stakeholder Register.
	C5	Develop a comprehensive Project Work Plan aligned with sustainability priorities.
	C6	Manage project scope, schedule, and budget using PM ² artefacts.
	C7	Implement risk management procedures, including sustainability-related risks.
	C8	Apply issue and change management processes with documented decision trails.
	C9	Facilitate effective Phase Gate reviews with governance bodies.
	C10	Coordinate project governance layers and role assignments transparently.
	C11	Use quality management plans to ensure delivery meets agreed standards.
	C12	Monitor progress using integrated performance indicators.
	C13	Close projects with formal acceptance and lessons learned capture.
	C14	Maintain accurate and compliant project documentation.
	C15	Adapt PM ² methodology to project size, complexity, and context.
	C16	Integrate procurement processes aligned with project sustainability objectives.
	C17	Manage resource allocation to ensure balanced workload and capacity.
Sustainability Integration	S1	Identify sustainability objectives relevant to project scope.
	S2	Integrate environmental, social, and economic considerations into planning.
	S3	Map project contributions to the UN Sustainable Development Goals (SDGs).
	S4	Apply sustainability indicators to monitor project performance.
	S5	Include sustainability criteria in supplier and partner selection.
	S6	Assess potential long-term impacts during project design.
	S7	Develop sustainability-specific logs (e.g., Sustainability Log) to track actions.
	S8	Incorporate circular economy principles into project deliverables.
	S9	Align reporting with recognised sustainability frameworks (e.g., CSRD, GRI) when applicable.
	S10	Apply eco-efficiency principles in resource usage.
	S11	Plan for transition and handover to ensure sustainability benefits are maintained.



	S12	Manage stakeholder expectations regarding sustainability performance.
	S13	Use participatory methods to engage stakeholders in sustainability planning.
	S14	Evaluate trade-offs between cost, schedule, quality, and sustainability goals.
	S15	Communicate sustainability performance transparently to relevant audiences.
	S16	Integrate feedback loops to improve sustainability practices during project execution.
	Transversal & Collaborative Skills	T1
T2		Present project results using professional-level visual and written outputs.
T3		Facilitate effective meetings that drive decision-making.
T4		Collaborate in interdisciplinary teams respecting diverse perspectives.
T5		Resolve conflicts constructively in a project environment.
T6		Demonstrate cultural competence in international project contexts.
T7		Apply ethical decision-making in complex project situations.
T8		Uphold transparency and accountability in all project communications.
T9		Use digital collaboration tools effectively for teamwork.
T10		Manage information securely in line with data protection requirements.
T11		Provide constructive feedback to peers and stakeholders.
T12		Support team learning and knowledge sharing throughout the project.
T13		Engage in reflective practice to improve personal project performance.
T14		Adapt communication style to different stakeholder needs.
T15		Use live polling and feedback tools to engage stakeholders.
T16		Prepare and deliver persuasive project pitches to decision-makers.
T17		Mentor less experienced team members in project management practices.



6. COURSE WORKLOAD BREAKDOWN

Purpose

This section defines the recommended workload and ECTS allocation for the course. The workload includes structured contact hours, guided teamwork, individual preparation, and assessment-related activities. The breakdown ensures consistency with EQF-based curriculum design while allowing flexibility in delivery modes.

Table 3. ECTS Allocation

Field	Instruction / Description	Value
ECTS Credits	Recommended value for this course, validated at institutional level	4
Total Workload	Based on national formula (1 ECTS ≈ 30 hours)	~120 hours

Table 4. Workload Breakdown Table

Component	Contact Hours	Independent Workload	Description / Notes
Lectures	30 h	-	Foundations of PM ² , sustainability integration, artefacts, governance, case studies
Practical Workshops	30 h	-	Sustainability-in-action: scenario simulations, tools, role play
Supervised Group Work	10 h	-	Coaching sessions for group projects, artefact adaptation, peer feedback
Self-Study	-	20 h	Required readings, module preparation, individual analysis
Preparation and Knowledge Quizzes	-	10 h	Preparation for sessions and completion of knowledge-check quizzes across modules
Reflection	-	20 h	Individual written reflections on assigned topics after class, including preparation and writing
Total	70 h	50 h	≈ 120 hours (based on 4 ECTS)

7. COURSE STRUCTURE

Purpose

This section defines the modular architecture of the course, ensuring pedagogical coherence, logical progression, and workload balance. By structuring the course into 10 distinct yet interconnected modules, students are guided through the full PM² lifecycle—from project initiation to closure—while learning how to embed sustainability considerations into all phases, roles, processes, and artefacts. Each module represents a compact, competency-aligned learning unit with a clear thematic focus and a practical application. The 10-module structure also facilitates the development of supporting microlearning tools, video materials, and scenario-based assessments that reflect the extended SPM² methodology.



Table 5. Module Structure Table

Module	Title	Short Description	Suggested Key Task / Method
M1	Introduction to PM ² and Sustainability Integration	Provides an overview of the PM ² methodology and explains the rationale for integrating sustainability throughout the project lifecycle. Introduces the SPM ² extension, core principles, and sustainability dimensions.	Kick-off reflection; mapping sustainability entry points in project contexts
M2	Governance and Roles for Sustainable PM ²	Examines the PM ² governance model, key roles and responsibilities, and escalation paths. Includes sustainability-aligned role mapping, ethical leadership, and accountability mechanisms.	Role-mapping simulation; stakeholder responsibility matrix with sustainability considerations
M3	Project Initiation and Sustainability Entry Assessment	Focuses on the Initiating Phase, including the Initiation Request, Business Case, and Project Charter, with enhanced sustainability entry scans. Covers stakeholder analysis and institutional alignment.	Develop a sustainability-aware Business Case and Project Charter using entry checklist
M4	Planning Phase I: Project Start, Tailoring, and Management Plans	Initiates the Planning Phase with the Kick-off Meeting, tailoring of PM ² methodology, and systematic development of Project Management Plans. Emphasizes sustainability integration within planning artefacts and controlling processes.	Tailoring worksheet; initiate and partially develop selected PM Plans with sustainability logic
M5	Planning Phase II: Work Planning, Scheduling, and Resource Allocation	Focuses on developing the Work Plan as the central artefact linking WBS, schedule, budgeting, and resource planning. Emphasizes integration of sustainability criteria into time–cost–resource optimization and execution readiness.	Design integrated planning grid (schedule–budget–resources) with sustainability criteria
M6	Execution Phase: Project Work with Sustainability Focus	Covers the Executing Phase, including coordination of work, stakeholder communication, quality assurance, change implementation, and sustainability action monitoring.	Real-life execution case simulation; managing sustainability actions and adaptive communication loops
M7	Closing Phase and Sustainability Impact Assessment	Explores Project Closure with focus on acceptance criteria, sustainability impact assessment, lessons learned, and post-project knowledge capitalization.	Prepare a sustainability-integrated Closing Report with reflection and impact summary



M8	Monitoring & Controlling: Logs and Indicators	Introduces PM ² monitoring practices with focus on key artefacts: Risk, Issue, Change, and Decision Logs, plus a proposed new Sustainability Log. Covers dashboards, KPI tracking, and sustainability reporting frameworks (e.g., SDGs, GRI, CSRD).	Scenario-based task: interpret dashboards and log entries; design prototype for Sustainability Log
M9	Ethical and Inclusive Stakeholder Communication for Sustainable Projects	Explores ethical, transparent, and culturally sensitive communication strategies in sustainability-oriented projects. Covers concepts such as sustainability “of” vs. “by” the project, greenwashing risks, inclusivity, and trust-building mechanisms.	Ethical Communication Redesign Workshop; before-and-after scenario presentation
M10	Integrative Simulation and Reflection	Serves as the capstone of the course, engaging students in a full-cycle simulation of a sustainability-integrated project. Teams manage all phases from initiation to closure, including governance alignment, sustainability trade-offs, and board-level decision defense. The module concludes with structured individual reflection.	Full-cycle simulation; oral project board presentation; peer feedback loop and individual reflection



8. PEDAGOGICAL APPROACHES (STANDARDIZED INSTRUCTIONAL APPROACH)

Purpose

This section outlines the pedagogical foundations that guide the design and delivery of the course *Sustainable Project Management with PM² (SPM²)*. The aim is to ensure that instructional approaches are consistent with the principles of outcome-based education, sustainability integration, and competence development. The methods described below are applied across all modules to support active learning, engagement, and professional skill acquisition.

The use of these methods ensures that learners not only acquire theoretical knowledge but also build practical competencies for sustainable project management through guided exploration, teamwork, digital interaction, and reflective practice.



Table 6. Pedagogical Approaches Table

Instructional Approach	Explanation & Implementation
Active Learning (Project-Based, Case-Based, and Simulation-Based Learning)	Learners engage in authentic, project-like situations across all modules, including case studies, role-play, stakeholder mapping, full-cycle simulations, and artefact adaptation. Activities focus on exploring complex sustainability trade-offs, governance decisions, and adaptive responses, mirroring real-world project contexts.
Competency-Based Assessment	Formative and summative assessments are explicitly linked to course learning outcomes. Tasks include sustainability-integrated artefact development, scenario-based decision justification, peer review, reflective essays, and group deliverables. Assessment rubrics emphasize both technical PM ² proficiency and sustainability-oriented decision-making.
Microlearning and Visual Aids	Core models, templates, and tools (e.g., sustainability entry checklists, role maps, integrated planning grids) are delivered in modular visual formats to support incremental learning. Learners use them in pre-class preparation and as in-class task resources.
AI-Supported Instruction	Each module begins with an AI-generated micro-video (2–4 minutes) introducing the topic, learning objectives, and real-world relevance. AI tools also support in-class rapid scenario generation, log population exercises, and peer feedback prompts.
Blended & Flipped Learning	Pre-class activities (videos, guided readings, template reviews) prepare learners for in-class application. Contact hours are dedicated to collaborative problem-solving, simulation, and instructor-facilitated feedback. This maximizes active participation and deepens conceptual mastery.
Digital Platform Integration	All learning components (materials, assignments, artefact templates, collaboration spaces, and feedback) are hosted on a digital learning platform (e.g., Moodle). Tools like Miro, Google Workspace, and shared dashboards enable synchronous and asynchronous co-creation.
Peer Learning and Feedback Loops	Structured peer-to-peer review is embedded in key modules (e.g., M4, M7, M9, M10) to simulate governance feedback cycles. Learners critique artefacts and communication plans against sustainability and governance criteria, fostering critical thinking and collaborative skills.
Reflective Practice	Reflection is systematically integrated-both within modules (e.g., post-task mini-reflections) and as a final capstone component in M10. Learners assess their own performance, identify strengths and areas for improvement, and plan for transferring SPM ² practices to real-world projects.



9. ASSESSMENT STRATEGY

Purpose:

The course applies competency-based assessment strategies aligned with the learning outcomes and key competencies defined through the SPM² framework. The assessment strategy ensures a balance between individual and group performance, formative and summative tasks, and the integration of sustainability logic into all evaluated activities. It emphasizes the application of knowledge, reflective analysis, collaboration, and communication-core dimensions of sustainability-conscious project work.

To ensure fairness, transparency, and constructive feedback, clearly defined rubrics are used for each graded component. These support learners in understanding performance expectations, aligning their work with assessment criteria, and self-monitoring progress throughout the course.

9.1 Assessment Components & Weighting

Types of Assessment

- **Formative Assessment** (low-stakes, feedback-focused)
 - *Knowledge Check Quizzes*: Eight online quizzes to reinforce learning progressively.
 - *Participation & Peer Evaluation*: Encourages continuous engagement, professional behavior, and mutual accountability in teamwork.
- **Summative Assessment** (high-stakes, outcome-measured)
 - *Integrative Simulation & Project Board Presentation*: Assesses applied PM² competence, sustainability integration, and persuasive communication in a realistic decision-making environment.
 - *Individual Written Task (Scenario + Reflection)*: Evaluates independent critical thinking, ethical reasoning, and ability to resolve sustainability-oriented dilemmas.

Clarification of Components

- **Integrative Simulation & Project Board Presentation**
 - Linked to **Module 10** as the capstone activity. Simulates full project cycle execution with governance decision defense.
- **Knowledge Check Quizzes (8)**
 - Provide checkpoints for essential knowledge areas such as governance, artefact purposes, and sustainability indicators.
- **Individual Written Task**
 - Combines practical decision-making with reflective learning to foster continuous improvement.
- **Participation & Peer Evaluation**
 - Strengthens collaborative and interpersonal skills essential for sustainable project delivery.



Table 7. Assessment Components Table

Assessment Component	Description / Format	Weight (%)	Assessment Type
Integrative Simulation & Project Board Presentation (Module 10)	Serving as the capstone task, learners work in teams to manage a sustainability-integrated project scenario from initiation to closure, using selected SPM ² artefacts (e.g., Business Case, Project Charter, Stakeholder Register, Risk Log, Sustainability Log). The project is presented and defended before a simulated project board.	35%	Summative
Knowledge Check Quizzes (8)	Eight short online quizzes via LMS (M2–M9), spaced across the course. Each quiz tests key concepts from SPM ² methodology, artefacts, governance roles, and sustainability frameworks (e.g., SDGs, CSRD).	20%	Formative
Individual Written Task (Scenario + Reflection)	A structured individual assignment combining a scenario-based decision-making task with a reflective analysis. Students address sustainability trade-offs, justify their decisions, and identify personal lessons learned.	20%	Summative
Participation & Peer Evaluation	Continuous engagement in group work, simulations, and feedback activities. Includes structured peer evaluation of teamwork, professionalism, and collaboration.	25%	Formative



9.2 Rubrics & Performance Criteria

The rubrics below define performance levels for each assessed component, with clear criteria and four rating levels (Excellent to Needs Improvement).

Rubric 1 – Integrative Simulation & Project Board Presentation evaluates the team’s ability to execute a full project lifecycle using the SPM² methodology with embedded sustainability considerations. It measures artefact quality, integration of governance and sustainability logic, strategic decision-making, communication skills, and collaborative effectiveness.

Table 8. Rubric 1 – Integrative Simulation & Project Board Presentation (35% of final grade)

Criterion	Weight within Component	5 – Excellent	4 – Good	3 – Satisfactory	2–1 – Needs Improvement
Integration of PM ² Phases and Sustainability Logic	30%	All PM ² phases applied with seamless sustainability integration; artefacts fully aligned with scenario	Most phases applied with minor gaps in sustainability alignment	Some phases applied but sustainability integration partial or inconsistent	Limited application of PM ² ; sustainability aspects minimal or missing
Quality of Artefacts	25%	All required artefacts complete, accurate, and tailored to the scenario	Artefacts complete but minor errors or generic elements	Artefacts partially complete; several inaccuracies	Artefacts incomplete or incorrect
Strategic Decision-Making & Problem-Solving	20%	Decisions consistently justified with data, governance logic, and sustainability criteria	Most decisions justified; occasional gaps in logic or data	Some decisions justified; reasoning limited	Decisions largely unjustified or ad hoc
Presentation & Communication Skills	15%	Clear, confident delivery; excellent visual aids; professional board interaction	Mostly clear delivery; effective visuals; minor issues in flow	Delivery adequate but with weak visuals or engagement	Unclear delivery; poor visuals; low engagement
Team Collaboration	10%	Full participation and synergy; seamless role integration	Good participation; roles mostly integrated	Uneven participation; some role confusion	Minimal collaboration; unclear roles

Rubric 2 – Knowledge Check Quizzes (8) rubric assesses the learner’s retention and understanding of core SPM² concepts and sustainability frameworks. It focuses on accuracy and consistency in quiz performance across the course.

Table 9. Rubric 2 – Knowledge Check Quizzes (8) (20% of final grade)

Criterion	Weight	5 – Excellent	4 – Good	3 – Satisfactory	2–1 – Needs Improvement
Score Achievement	100%	≥ 90% correct across all quizzes	80–89% correct	65–79% correct	< 65% correct

Rubric 3 – Individual Written Task (Scenario + Reflection) rubric measures the depth and quality of individual analysis in addressing a sustainability-oriented project scenario. It assesses decision justification, ethical considerations, reflective learning, and written communication.

Table 10. Rubric 3 – Individual Written Task (Scenario + Reflection) (20% of final grade)

Criterion	Weight within Component	5 – Excellent	4 – Good	3 – Satisfactory	2–1 – Needs Improvement
Scenario Analysis & Decision Justification	40%	Deep, evidence-based analysis; decisions fully justified using governance and sustainability criteria	Clear analysis; most decisions justified; minor gaps in evidence	Limited analysis; partial decision justification	Minimal analysis; decisions unsupported
Ethical & Sustainability Considerations	25%	Ethical implications and sustainability trade-offs explored in depth	Ethical and sustainability issues considered with some depth	Basic mention of ethics and sustainability	No meaningful ethical or sustainability analysis
Reflective Insight & Learning Transfer	25%	Highly insightful self-assessment; clear link to future professional practice	Good self-assessment; some link to future application	Basic reflection; minimal link to application	Weak or missing reflection
Structure, Clarity, and Writing Quality	10%	Well-structured, concise, error-free writing	Mostly clear and structured; few errors	Adequate structure; several language issues	Poorly structured; frequent errors



Rubric 4 – Participation & Peer Evaluation rubric evaluates the learner’s engagement, collaborative skills, professionalism, and contribution to a positive learning environment. Peer evaluations are integrated to promote accountability and self-awareness.

Table 11. Rubric 4 – Participation & Peer Evaluation (25% of final grade)

Criterion	Weight within Component	5 – Excellent	4 – Good	3 – Satisfactory	2–1 – Needs Improvement
Engagement in Class & Group Work	40%	Actively contributes in all sessions; consistently prepared	Usually active; mostly prepared	Sometimes active; occasionally unprepared	Rarely active; unprepared
Collaboration & Support to Peers	30%	Consistently supports team members; constructive feedback given	Usually supportive; feedback mostly constructive	Occasionally supports peers; feedback limited	Rarely supports peers; feedback absent or unhelpful
Professionalism	20%	Always meets deadlines; respectful communication	Meets most deadlines; respectful interactions	Some missed deadlines; minor issues in communication	Frequent missed deadlines; poor communication
Peer Evaluation Feedback	10%	Receives consistently high peer evaluation scores	Mostly high peer scores	Mixed peer feedback	Low peer scores indicating collaboration issues



10. TEACHING AND LEARNING MATERIALS

Purpose

This section defines the required set of instructional materials to be developed and used consistently across all 10 modules of the course. Materials are co-created by module authors and institutional teams to ensure **full alignment with the SPM² Guide**, coverage of the defined **Learning Outcomes (LOs)**, and integration of the course's **pedagogical approaches** and **assessment strategy**.

All materials must:

- Embed sustainability integration across the PM² lifecycle.
- Support active, competency-based learning.
- Be structured for **digital delivery, modular integration, and accessibility** (meeting at least WCAG 2.1 AA standards).
- Include **student-facing** and **instructor-facing** versions where applicable.
- Be released under an **open license (Creative Commons BY-SA or equivalent)** to maximize reuse and adaptation across higher education institutions.



Table 12. Required Materials by Module

Material Type	Description & Requirements	Coverage	Format / Notes
SPM² Guide – Referenced Content	Each module is thematically anchored in specific sections of the SPM ² Guide. Materials must explicitly reference relevant artefacts, concepts, governance roles, and process steps.	M1–M10	Cross-referenced via bookmarks or page numbers; integrated into slides, tasks, and scenarios.
Authorized Lecture Slides	Harmonized slide decks referencing PM ² /SPM ² models, sustainability logic, and decision-making tools. Must be directly linked to intended LOs and assessment criteria.	M1–M10	PPTX with speaker notes; visual identity template; 15–20 slides/module minimum.
Microlearning Content	Compact visual tools for quick reference (e.g., artefact flowcharts, stakeholder map templates, governance models). Designed for independent study and in-class reinforcement.	M1–M10	XLSX, PDF, PNG; 1–2 pages each; printable and LMS-ready.
AI-Generated Intro Video	Short (2–3 min) video per module summarizing key points, activating curiosity, and previewing learning tasks.	M1–M10	MP4 format; script prepared by module author; production by WP team; editorial approval required.
Case Study / Simulation	Realistic project scenarios embedded in selected modules to develop decision-making, trade-off analysis, and stakeholder engagement skills. Includes separate student and instructor guides.	M3, M5, M6, M9	DOCX/PDF; includes roles, dilemmas, reflective prompts, and debrief structure.
Task Templates & Worksheets	Practical tools for applying knowledge (e.g., project canvas, artefact adaptation forms, planning grids, sustainability checklists).	M2–M10	DOCX/XLSX; editable with usage instructions; aligned with project phases and competencies.
Clustered Knowledge Check Tests (8)	Eight digital tests (M2–M9) targeting conceptual understanding of SPM ² artefacts, ESG integration, and sustainability frameworks.	M2–M9	SCORM/LMS-ready; H5P or equivalent; auto-feedback; mix of MCQs and scenario-based items.
Supplementary Reading	Curated open-access articles, EU policy documents (e.g., CSRD, SDG indicators), and real-world project reports to deepen understanding and connect theory with practice.	M1–M10	Annotated reading list (DOCX); APA style; hyperlinks to quality open sources.

11. DIGITAL TOOLS AND PLATFORMS

Purpose

This section documents the digital tools and platforms used in the delivery of the *Sustainable Project Management with PM²* course developed within the SPM² project. The selected tools support blended and active learning, collaborative project work, and digital literacy development in line with the course's pedagogical model. They enable effective delivery of content, real-time and asynchronous interaction, formative and summative assessment, and professional-level communication and artefact development. Selection criteria include:

- Alignment with **EQF Digital Competence Area**.
- Compliance with **GDPR** and institutional IT policies.
- Accessibility in line with **WCAG 2.1 AA** standards.
- Sustainability through institutional licensing or open-source availability.
- Interoperability with the Learning Management System (LMS) and other course platforms.



Table 13. Digital Tools and Platform Table

Tool / Platform Name	Type / Function	Purpose in the Course	Access / Licensing
Moodle / LMS	Learning Management System	Central hub for hosting course materials, assignments, quizzes, and asynchronous activities.	Institutional license; GDPR-compliant
MS Teams / Zoom	Synchronous Communication	Live workshops, project coaching, team presentations, and expert lectures.	Institutional license; GDPR-compliant
Miro	Collaborative Visual Workspace	Interactive workshops (e.g., stakeholder mapping, role assignments, planning).	Freemium / Institutional license
Canva	Visual Communication Tool	Student-created visuals for project reports, presentations, or dashboards.	Freemium / Institutional license
Google Workspace	Document Collaboration Suite	Real-time co-authoring of project packages, peer reviews, and structured teamwork.	Institutional license; GDPR-compliant
H5P / Edpuzzle	Interactive Learning Tools	Embedding quizzes and reflection tasks into videos/slides for flipped learning.	Open-source / Freemium
Padlet / Jamboard	Digital Board for Reflection	Collecting reflections, peer input, and feedback during simulations/wrap-up.	Freemium
Lucidchart / Draw.io	Process Mapping Tool	Mapping workflows, stakeholder relations, or logic models (optional use).	Freemium / Open-source
Mentimeter	Live Polling & Engagement Tool	Icebreakers, ethical dilemmas, quick polls during live sessions.	Freemium / Institutional license



12. INSTRUCTOR TAILORING NOTES

Purpose

This table supports adaptation of the Sustainable Project Management with PM² course to various academic levels while preserving its 10-module architecture and competency-based logic. It ensures differentiated instructional strategies, learner autonomy, assessment complexity, and real-world application aligned with EQF levels.



Table 14. Academic Level Tailoring Table

Academic Level	Cognitive Depth	Learner Autonomy & Instructor Role	Assessment Expectations	Application Context	Use of Digital Tools
Bachelor (EQF 6)	Focus on foundational knowledge of project management and sustainability integration. Emphasis on understanding PM ² artefacts, terminology, and sequential process logic.	Learners require structured guidance. Instructors act as trainers, providing step-by-step instructions and scaffolding for structured tasks.	Assessments include predefined tasks, short reflective pieces, and structured quizzes. Teamwork is based on adapting templates with clear evaluation criteria.	Basic project cases with limited complexity-e.g., student-led initiatives, campus sustainability campaigns, or local NGO projects.	Predefined templates (Excel, Word) are provided. Instructors guide tool use and supervise correct application.
Master (EQF 7)	Emphasis on analytical reasoning, comparison of project models, evaluation of sustainability trade-offs, and synthesis across PM ² phases.	Learners operate with moderate autonomy. Instructors act as facilitators, enabling peer dialogue, feedback exchange, and iterative improvement.	Assessments include stakeholder simulations, analytical essays, and project synthesis reports. Students must justify decisions and critically adapt artefacts.	Cross-sectoral cases involving multiple stakeholders and sustainability considerations-e.g., smart city planning, renewable energy transitions, sustainable supply chain integration.	Learners select tools (e.g., Miro, Canva, Trello, Excel) based on project needs. Evaluation includes creativity, adaptability, and alignment of tool use with project objectives.
MBA / Executive	Emphasis on systems thinking, strategic leadership, sustainability value creation, and decision-making under uncertainty. Projects are grounded	Learners take full initiative. Instructors act as strategic coaches, stimulating critical reflection and peer learning. Learners mentor each other and drive discussions.	Assessments include real-time simulations, strategic impact reports, oral defenses, and performance-based evaluations. Projects must address complex, real-world	Complex, high-impact cases-e.g., large-scale green transition portfolios, decarbonization programs, or sustainability strategy implementation within corporations or public institutions. Often	Advanced tools (e.g., Power BI, sustainability dashboards, stakeholder mapping platforms) are integrated. Evaluation focuses on strategic communication, tool



	in real business or policy challenges.		sustainability dilemmas.	drawn from learners' professional contexts.	integration, and actionable insights.
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