



DISCIPLINE ACADEMIC SHEET
ACADEMIC YEAR 2025 – 2026

1. PROGRAMME DATA

1.1. Higher Education Institution	UNIVERSITY OF CRAIOVA
1.2. Faculty	Automation, Computers and Electronics
1.3. Department	Computers and Information Technology
1.4. Field of Study	Computers and Information Technology
1.5. Study level	L(License / Undergraduate)
1.6. Organizational form	IF
1.7. Study Program (name/code) /Qualification	Computers / L2060101010

2. Discipline data

2.1 Discipline Name	Software Project Management						
2.2 Course Activities Holder	Ș.l. dr. Cătălina-Felicia Mancaș						
2.3. Practical Activities Holder	Asist. dr. Didi-Liliana Popa						
2.4. Study Year	4	2.5. Semester	I	2.6. Evaluation type	E	2.7. Discipline regime	DOB

3. Estimated total time (hours per semester of teaching activities)

3.1. Number of hours per week	4	in which: 3.2 course	2	3.3. sem./lab./pr.	0/2/0
3.4. Total hours of curriculum	56	in which: 3.5 course	28	3.6. sem./lab./pr.	0/28/0
Time distribution - hours/week					hrs
Study after manual, course support, bibliography and notes					28
Additional documentation in library, on specialized electronic platforms and field					10
Training seminars / labs, homework, portfolios and essays					10
Tutorial					2
Examinations					6
Other activities.....					13
3.7. Total hours per individual activities					69
3.8. Total hours per semester					125
3.9. Number of credits					5

4. Preconditions (where appropriate)

4.1. of curriculum	● Software Engineering
4.2. of competence	●

5. Conditions (where appropriate)

5.1. of the course	● Face to face (Week 1 – Week 14)
5.2. of seminar/ laboratory/project	● Face to face (Week 1 – Week 14)

6. COURSE OBJECTIVES – expected learning outcomes that are supported by completing and passing the course

Knowledge	Student/Graduate: 1. Describe the fundamental concepts, principles, processes, and performance domains of software project management within the broader context of software engineering. 2. Explain project and software development life cycles, project initiation and planning techniques, scheduling, cost estimation, resource allocation, monitoring and control, and project closure. 3. Identify and explain the main project management principles, processes, and performance domains reflected in current PMI standards and the PMBOK® Guide, as well as relevant software project management concepts defined by the Software Engineering Body of Knowledge (SWEBOK). 4. Explain predictive, iterative, incremental, agile, and hybrid project management approaches and evaluate their applicability to different software development contexts. 5. Describe the principles and practices of Agile, Scrum, and Kanban, including iterative planning, backlog management, prioritization, estimation, sprint management, and continuous improvement. 6. Explain fundamental concepts related to project scope, schedule, cost, quality, resources, communication, risk, procurement, stakeholders, governance, and value delivery. 7. Explain the role of Artificial Intelligence and Generative AI in project management, including their potential applications in planning, estimation, scheduling, risk analysis, monitoring, reporting, documentation, and decision support. 8. Recognize the opportunities, limitations, and risks associated with AI-generated project information, including issues related to accuracy, bias, data quality, privacy, security, transparency, ethics, accountability, and human oversight. 9. Demonstrate awareness of current professional standards, ethical principles, quality assurance practices, and emerging technologies relevant to software project management.
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Skills (Abilities)	Student/Graduate: 10. Integrate technical, managerial, organizational, and business perspectives in decision-making and problem-solving for software projects. 11. Select and adapt project management approaches and strategies according to organizational context, project characteristics, technological constraints, risks, and team dynamics. 12. Plan and structure software projects by defining objectives, scope, deliverables, milestones, activities, dependencies, resources, costs, and constraints. 13. Apply project planning, scheduling, resource allocation, monitoring, and reporting techniques using tools such as Microsoft Project / Microsoft Planner and Jira. 14. Develop and maintain relevant project documentation, including project charters, scope statements, Work Breakdown Structures (WBS), schedules, budgets, risk registers, and project status reports. 15. Analyze and manage project risks, assumptions, dependencies, constraints, changes, and stakeholder expectations. 16. Evaluate project performance using appropriate indicators and project data and propose corrective and preventive actions to address deviations and support project objectives and value delivery. 17. Apply Agile methods, including Scrum and Kanban, to organize iterative development, manage backlogs and workflows, coordinate sprints, and support continuous delivery and improvement. 18. Employ effective communication, collaboration, negotiation, and leadership skills to coordinate multidisciplinary and distributed software project teams. 19. Use AI and Generative AI tools to support selected project management activities, including project planning, task decomposition, estimation, risk identification, documentation, monitoring, reporting, and decision support. 20. Critically evaluate and validate AI-generated outputs before incorporating them into project plans or decisions, identifying potential inaccuracies, bias, inappropriate assumptions, and project-specific limitations. 21. Demonstrate critical thinking, adaptability, and evidence-based decision-making when managing complex and evolving software development environments.
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Responsibility and autonomy	Student/Graduate: 1. Assume responsibility for planning, coordinating, monitoring, and evaluating software project activities within established scope, schedule, cost, quality, resource, and organizational constraints. 2. Exercise professional and ethical judgment in decisions involving people, resources, technology, project data, stakeholders, and AI-assisted systems. 3. Operate autonomously in project planning and coordination activities while collaborating effectively within interdisciplinary, multidisciplinary, and distributed teams. 4. Take responsibility for the appropriate and responsible use of AI-assisted tools, ensuring that AI-generated recommendations and outputs are critically reviewed and that final project decisions remain subject to appropriate human judgment and accountability. 5. Recognize and address ethical, privacy, security, transparency, data-quality, and governance considerations when using digital and AI-enabled project management tools. 6. Demonstrate accountability, adaptability, and continuous improvement in response to project changes, technological developments, stakeholder feedback, and lessons learned. 7. Pursue continuous professional development and lifelong learning in accordance with evolving professional standards, project management practices, software engineering methodologies, and emerging technologies, including Artificial Intelligence.
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7. Content

7.1. Course	The method of implementation	Teaching methods	Allocated time (hours)
1. Fundamentals of Project Management	face to face (week 1&2)	Google Classroom Zoom Power Point Prezi	4
2. The initiation phase	face to face (week 3)	Google Classroom Zoom Power Point Prezi Udemy	2
3. The planning phase	face to face (week 4&5)	Google Classroom Power Point Prezi Udemy Microsoft Project	4
4. The execution phase	face to face (week 6&7)	Google Classroom Power Point Prezi Udemy Microsoft Project	4

5. The monitoring and control phase. The closing phase.	face to face (week 8&9)	Google Classroom Power Point Prezi Udemy Microsoft Project	4
6. Project Management Knowledge Areas.	face to face (week 10)	Google Classroom Power Point Prezi	2
7. Agile and Scrum.	face to face (week 11&12)	Google Classroom Power Point Prezi Udemy	4
8. AI and Project Management	face to face (week 13)	Google Classroom Power Point Prezi	2
9. Exam preparation.	face to face (week 14)	Google Forms Power Point Prezi	2

Bibliography:

1. Project Management Institute (PMI). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) and The Standard for Project Management*. 8th ed., Project Management Institute, 2025.
2. O'Regan, Gerard. *Guide to Software Project Management*. Springer, 2025.
3. Radaideh, Moh'd A. *Software Project Management: With PMI, IEEE-CS, and Agile-SCRUM*. De Gruyter, 2024.
4. Schwalbe, Kathy. *Information Technology Project Management*. 10th ed., Cengage Learning, 2023.
5. Mulcahy, Rita, and Margo Kirwin. *PMP Exam Prep: Accelerated Learning to Pass the Project Management Professional (PMP) Exam*. 11th ed., RMC Publications, 2023.
6. Cobb, Charles G. *The Project Manager's Guide to Mastering Agile: Principles and Practices for an Adaptive Approach*. 2nd ed., Wiley, 2023.
7. Project Management Institute (PMI). *Process Groups: A Practice Guide*. Project Management Institute, 2022.
8. Project Management Institute (PMI). *Agile Practice Guide*. 2nd ed., Project Management Institute and Agile Alliance, 2026.
9. Boudreau, Paul. *Applying Artificial Intelligence to Project Management*. De Gruyter, 2024.
10. Grzeszczyk, Tadeusz A. *Artificial Intelligence and Project Management: An Integrated Approach to Knowledge-Based Evaluation*. Routledge, 2024.
11. Hazır, Öncü, and Maria Elena Bruni, editors. *Tomorrow's Data Empowered Project Management: Agile Decision Making, Sustainability and AI*. Springer, 2025.

12. Nenni, Maria Elena, Fabio De Felice, Claudia De Luca, et al. "How Artificial Intelligence Will Transform Project Management in the Age of Digitization: A Systematic Literature Review." *Management Review Quarterly*, vol. 75, 2025, pp. 1669–1716.

7.2. Seminar/laboratory/project	The method of implementation	Teaching methods	Allocated time (hours)
1. Introduction. Pico Project	synchronous online (week 1)	Google Education Microsoft Project Microsoft Office	2
2. The Project Charter. 3. The Project Scope Statement.	synchronous online (week 2)	Google Education Microsoft Project Microsoft Office	2
4. The Work Breakdown Structure	synchronous online (week 3&4)	Google Education Microsoft Project Microsoft Office	4
5. Project Management Planning Tools	face-to-face (week 5)	Google Education Microsoft Project/Jira/Other Microsoft Office	2
6. Project Planning	face-to-face (week 5&6)	Google Education Microsoft Project/Jira/Other Microsoft Office	2
7. Resource Management	face-to-face (week 7&8)	Google Education Microsoft Project/Jira/Other Microsoft Office	4
8. Cost Management	face-to-face (week 9)	Google Education Microsoft Project/Jira/Other Microsoft Office	2
9. Reports	face-to-face (week 10)	Google Education Microsoft Project/Jira/Other Microsoft Office	2
10. Agile and SCRUM	face-to-face (week 11&12)	Google Education Microsoft Project/Jira/Other Microsoft Office	4
11. AI and Project Management	face-to-face (week 13)	Google Education Chat GPT, Claude, Gemini, Other	2
12. Final lab	face-to-face (week 14)	Google Education Microsoft Project/Jira/Other Microsoft Office	2

Bibliography:

1. Microsoft. *Project Help & Learning*. Microsoft Support, 2026.
2. Microsoft. *Projects and Tasks – Microsoft Project*. Microsoft Support, 2026.
3. Microsoft Learn. *Plan and Manage Projects with Microsoft Project*. Microsoft, 2024. <https://learn.microsoft.com/en-us/training/paths/plan-manage-projects-project-for-the-web/>
4. Atlassian. *Jira Tutorials: Learn Agile with Jira*. Atlassian, 2026.
5. Atlassian. *Learn Scrum with Jira*. Atlassian, 2026.
6. Atlassian Agile Coach. *Agile and Scrum Tutorials*. Atlassian, 2024. <https://www.atlassian.com/agile>
7. Project Management Institute (PMI). *The Standard for Artificial Intelligence in Portfolio, Program and Project Management*. Project Management Institute, 2026.

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| 8. Project Management Institute (PMI). <i>Leading & Managing AI Projects Digital Guide</i> . Project Management Institute, 2025. |
| 9. Atlassian. <i>Rovo AI Features in Jira</i> . Atlassian Support, 2026. |

8. Correlating the content of the discipline with the expectations of representatives from the epistemic community, professional associations and representative employers in the field related to the program

The Software Project Management discipline is aligned with the current standards, competencies, and expectations established by the academic and research community in software engineering and project management, as well as by leading professional organizations such as the Project Management Institute (PMI), the Association for Computing Machinery (ACM), and the IEEE Computer Society.

From the perspective of the academic and research community, the course integrates contemporary developments in software engineering, predictive, agile and hybrid project management, DevOps, risk and quality management, team dynamics, and AI-enabled project management. The curriculum addresses established and evolving software development life-cycle models, including Waterfall, Incremental and Iterative Development, Agile, and DevOps, while emphasizing evidence-based decision-making, value delivery, adaptability, and continuous performance evaluation.

Particular attention is given to the growing role of Artificial Intelligence (AI) and Generative AI in software project management. Students are introduced to the use of AI-assisted tools and techniques for project planning and scheduling, effort and cost estimation, risk identification and analysis, resource optimization, project monitoring and reporting, requirements and task analysis, and decision support. The discipline also emphasizes the critical evaluation of AI-generated outputs and the importance of human oversight, data quality, transparency, privacy, security, ethical use, and responsible AI governance.

In alignment with current professional standards and bodies of knowledge developed by PMI, IEEE Computer Society, and ACM, the course emphasizes competencies required for effective project leadership, delivery, and governance, including:

- Project integration, governance, and scope management;
- Planning, scheduling, budgeting, and resource optimization;
- Quality assurance, performance measurement, and risk management;
- Stakeholder engagement, communication, collaboration, and ethical leadership;
- Predictive, agile, and hybrid project management approaches;
- Scrum, Kanban, and iterative software delivery practices;
- Value-oriented and evidence-based project decision-making;
- AI-assisted project planning, monitoring, analysis, and decision support;
- Responsible use and governance of Artificial Intelligence in project environments.

These topics are aligned with the PMBOK® Guide – Eighth Edition (2025) and the current Guide to the Software Engineering Body of Knowledge (SWEBOK Guide, Version 4.0a, 2025). The integration of AI-related competencies is further supported by PMI's The Standard for Artificial Intelligence in Portfolio, Program and Project Management (2026), which provides a framework for responsible AI adoption, human-in-the-loop decision-making, governance, risk management, ethics, data quality, and AI-enabled project delivery.

The discipline also supports the development of knowledge and competencies relevant to professional certification pathways, particularly PMP®, while introducing students to contemporary agile and AI-related professional practices.

From the employers' and ICT industry's perspective, the course develops practical competencies in:

- Using industry-standard project management and collaboration platforms, such as Microsoft Project / Microsoft Planner and Jira, for project planning, scheduling, tracking, monitoring, and reporting;
- Developing project artifacts such as project charters, scope statements, Work Breakdown Structures (WBS), schedules, budgets, risk registers, and status reports;

- Applying predictive, agile, lean, and hybrid approaches to coordinate software development teams in dynamic environments;
- Using AI and Generative AI tools to support project planning, risk analysis, estimation, reporting, documentation, and decision-making, while critically validating AI-generated results;
- Monitoring project performance, identifying deviations, and proposing corrective and preventive actions;
- Enhancing communication, collaboration, negotiation, and leadership within multidisciplinary and distributed software teams;
- Managing technological, organizational, ethical, and stakeholder-related constraints;
- Demonstrating adaptability, critical thinking, accountability, digital proficiency, responsible AI use, and continuous learning, which are increasingly important competencies in AI-enabled software development environments.

Practical activities complement theoretical knowledge by requiring students to plan, organize, monitor, and evaluate software projects using contemporary project management tools. Where appropriate, students use AI-assisted functionality and Generative AI to support selected project management activities and critically assess the quality, reliability, limitations, and risks of AI-generated recommendations.

Thus, the Software Project Management discipline combines theoretical foundations with applied project management practice and emerging AI-enabled approaches. It develops the managerial, technical, analytical, digital, and interpersonal competencies required to manage contemporary software projects and prepares students to operate responsibly and effectively in increasingly complex, agile, data-driven, and AI-enabled ICT environments.

9. Evaluation

Activity Type	9.1. Evaluation criteria	9.2. Evaluation methods	9.3. Final mark weight
9.4. Course	Final written exam	Quiz (30points) + Open Questions (60points) + 10points	70%
9.5. Seminar/laboratory/project	Labs assignemnts	Labs assignments evaluation	30%
9.6. Minimum standard of performance			
• Minimum exam grade: 5 • Minimum lab grade: 5 (in order to be able to write the final exam) • Final Grade (FG) is calculated based on the formula: $FG = 0,7 \times EG + 0,3 \times LG$, where EG is the final exam grade and LG is the final lab grade.			

Date of Completion	Signature of the Course Activities Holder,	Signature of the Practical Activities Holder,
	Cătălina-Felicia MANCAȘ	

Date of Approval in the Department	Signature of the Department Director,
	Ș.l.dr.ing. Nicolae ENESCU

Date of Approval in the Faculty	Signature of the Dean,
	Prof.dr.ing. Dorin ȘENDRESCU