



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				Project III Tools for Program Development			
2.2 Course Activities Holder				Not applicable (project-based discipline).			
2.3. Practical Activities Holder				Lect. PhD. Constantin-Renato IVANESCU			
2.4. Study Year	4	2.5. Semester	7	2.6. Evaluation type	V	2.7. Discipline regime	DOP

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

3.1. Number of hours per week	2	in which: 3.2 course	0	3.3. sem./lab./pr.	0/0/2
3.4. Total hours of curriculum	28	in which: 3.5 course	0	3.6. sem./lab./pr.	0/0/28
Time distribution - hours/week					
Study after manual, course support, bibliography and notes					-
Additional documentation in library, on specialized electronic platforms and field					10
Training seminars / labs, homework, portfolios and essays					10
Tutorial					-
Examinations					2
Other activities					-
3.7. Total hours per individual activities					22
3.8. Total hours per semester					50
3.9. Number of credits					2

4. Preconditions (where appropriate)

4.1. of curriculum	Algorithms Design, Algorithms and Data Structures, Software Engineering, Computer Graphics
4.2. of competence	Software Project Management, Object-Oriented Applications Design

5. Conditions (where appropriate)

5.1. of the course	-
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5.2. of seminar/ laboratory/project	Computing equipment that allows the development of medium complexity projects.
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6. COURSE OBJECTIVES – expected learning outcomes that are supported by completing and passing the course

Knowledge	Student/Graduate: 1. Understands the role and functionality of integrated development environments (IDEs) and associated tools used in software project development. 2. Describes the main stages of software development — requirements analysis, design, implementation, testing, and documentation — within a project-based workflow. 3. Identifies best practices and methodologies for managing medium-complexity software projects
Skills (Abilities)	Student/Graduate: 1. Applies theoretical and practical knowledge to design, implement, and document software applications using appropriate development tools and frameworks. 2. Uses integrated development environments (e.g., Visual Studio, Eclipse, IntelliJ, or others) to organize, build, and test software systems. 3. Analyzes and improves existing software projects by identifying design or implementation issues. 4. Prepares technical documentation and effectively presents project results, demonstrating clarity of logical structure.
Responsibility and autonomy	Student/Graduate: 1. Works independently or collaboratively in teams to plan, implement, and present software projects. 2. Demonstrates responsibility in meeting project milestones, maintaining code quality, and adhering to ethical and professional standards. 3. Takes initiative in selecting appropriate tools and technologies to achieve project objectives. 4. Reflects critically on one's own work and adopts strategies for continuous learning and professional development.

7. Content

7.1. Course	Teaching methods	Allocated time (hours)
Not applicable (project-based discipline).	-	-
Bibliography:		
Not applicable; see the project bibliography below.		

7.2. Project	Teaching methods	Allocated time (hours)
Presenting the project requirements. Guidance for preparing the preliminary report (“Best Tools for Program Development”).	Guided discussions and continuous feedback on project progress;	2
Assignment of project themes. Discussions on the preliminary report.		2
Requirements analysis.		2
Discussions on minimal specifications of the project. Choosing development tools.		2
Tracking progress.		2
The presentation of the first intermediate report: project specifications and development tools.		4
Tracking progress in project development.		2

The presentation of the second intermediate report: minimal design and implementation.		4
Tracking progress in project development		2
Tracking progress in project development		2
Project evaluation: final report (system documentation, presentation)		4
Bibliography:		
1. Pressman, R. S., and Maxim, B. R. Software Engineering: A Practitioner's Approach, 9th ed., McGraw-Hill, 2020.		
2. Sommerville, I. Software Engineering, 10th ed., Pearson, 2016.		
3. Chacon, S., and Straub, B. Pro Git, 2nd ed., Apress, 2014; updated online edition: https://git-scm.com/book/en/v2 .		
4. Humble, J., and Farley, D. Continuous Delivery, Addison-Wesley, 2010.		
5. Official documentation for the IDE, version-control, testing and continuous-integration tools selected for each project (accessed 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 discipline content is in accordance with the recommendation of scientific community representatives, international research institutes, national and international professional associations.

9. Evaluation

Activity Type	9.1. Evaluation criteria	9.2. Evaluation methods	9.3. Final mark weight
9.4. Course - Not applicable			
9.5. Project	- Level of project implementation - Level of project understanding by the student	1. Presentation of the preliminary report and answering questions. 2. Presentation of the first intermediate report and answering questions. 3. Presentation of the second intermediate report and answering questions 4. Presentation of the final report and answering questions.	1. 20% 2. 20% 3. 20% 4. 40% The first three assessments represent 60% of the final grade; the final report and presentation represent 40%.
9.6. Minimum standard of performance - The project must satisfy the mandatory requirements, run correctly, include technical documentation, and be presented by the student. The minimum passing grade is 5.			

Date of Completion	Signature of the Course Activities Holder,	Signature of the Practical Activities Holder,
01.10.2025	Lect. PhD. Constantin-Renato IVANESCU	

Date of Approval in the Department	Signature of the Department Director,
03.10.2025	Ș.I.dr.ing. Nicolae ENESCU

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