



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 I Computers						
2.2 Course Activities Holder	N/A						
2.3. Practical Activities Holder	Bărbulescu Lucian-Florentin						
2.4. Study Year	3	2.5. Semester	1	2.6. Evaluation type	V	2.7. Discipline regime	DOB

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					22 hours
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: consultations, student meetings					-
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	• Computer Programming and Programming Languages, • Computer Architecture, • Logical Design I, • Logical Design II, • Computer Structure and Organization
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4.2. of competence	- Digital Design using combinational logic schemes; - VHDL modeling and synthesis, knowledge of boolean algebra
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5. CONDITIONS (where appropriate)

5.1. of the course	• N/A
5.2. of seminar/ laboratory/project	• Computer systems which allows the execution of VHDL IDE

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

Knowledge	Student/Graduate: - Describes, identifies, summarizes basic concepts and methods related to the logic design of digital systems and their application in concrete problems. - Identifies classical and modern methods for logic design of digital systems.
Skills (Abilities)	Student/Graduate: - Describes, identifies, summarizes elementary concepts and methods regarding the modeling, analysis, design and testing of computing systems, with processors. - Develops models for different components of computing systems, hardware and software and evaluates functional and non-functional characteristics. - Uses specific methods and tools for the analysis, design and implementation of central processing units.
Responsibility and autonomy	Student/Graduate: - Carries out processes in computer hardware design, taking on different roles in the team and clearly and concisely describing the results, verbally and in writing. - Selects and analyzes bibliographic sources specific to the field. - Demonstrates autonomy in learning and addressing issues specific to the domain.

7. CONTENT

<i>7.1. Course</i>	The method of implementation	Teaching methods	Allocated time (hours)
1. N/A			
Bibliography:			
1. N/A			

<i>7.2. Seminar/laboratory/project</i>	The method of implementation	Teaching methods	Allocated time (hours)
1. Description of the project requirements. Assignment of projects	synchronous online	Presentations using the projector (for face-to-face activities) and the instruments offered by Google Education. Direct mentoring of the work formations	2
2. Definition of CPU blocks	synchronous online		2
3. Implementation of PC block	synchronous online		2
4. Implementation of ROM block	synchronous online		2
5. Implementation of REG block	synchronous online		2
6. Implementation of MEM block	synchronous online		2

7. Implementation of ALU block	face to face		4
8. Design and implementation of the CU block	face to face		4
9. Simulation of the CPU	face to face		4
10. Implementation on Spartan3 board	face to face		2
11. Evaluation of projects	face to face		2

Bibliography:

1. Bărbulescu Lucian – project implementation notes (2025)
2. Patterson David, Hennessy John – Computer Organization and Design, Morgan Kaufmann Publishers, 2004
3. Ionescu Augustin-Iulian – Notiuni de aritmetica a calculatoarelor, note de curs
4. Ionescu Augustin-Iulian – Structura si organizarea calculatoarelor, note de curs
5. Cernian Oleg – Computer Architecture, Editura Sitech, Craiova, 2005
6. Cernian Oleg – Computer Organization – Course support, Editura Sitech, Craiova, 2005

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 project presents the basic concepts and create the fundament for specific activities which are corelated to the labour market.

9. EVALUATION

Activity Type	9.1 Evaluation criteria	9.2 Evaluation methods	9.3 Final mark weight
9.4 Course	-	-	-
9.5 Practical activities	S: -		
	L: -	-	
	Pr: Degree of understanding and implementation of the project requirements by the student	Presentation of the project	100%

9.6 Minimum standard of performance (the minimum knowledge necessary to promote discipline and how to check the knowledge acquiring)

- basic knowledge of CPU architecture
- The grade of the project must be at least 5

Date of Completion	Signature of the Course Activities Holder,	Signature of the Practical Activities Holder,
23.08.2025	N/A	Conf. Dr. Ing. Lucian-Florentin BĂRBULESCU

Date of Approval in the Department	Signature of the Department Director,
25.08.2025	Ș.l.dr.ing. Nicolae ENESCU

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