



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	Multimedia Technologies in e-Learning						
2.2 Course Activities Holder	Gabriel Badea						
2.3. Practical Activities Holder	Gabriel Badea						
2.4. Study Year	4	2.5. Semester	1	2.6. Evaluation type	E	2.7. Discipline regime	DFA

3. ESTIMATED TOTAL TIME (hours per semester of teaching activities)

3.1. Number of hours per week	3	in which: 3.2 course	2	3.3. sem./lab./pr.	1
3.4. Total hours of curriculum	42	in which: 3.5 course	28	3.6. sem./lab./pr.	14
3.7. Time distribution - hours/week					hours
Study after manual, course support, bibliography and notes					10
Additional documentation in library, on specialized electronic platforms and field					10
Training seminars / labs, homework, portfolios and essays					10
Tutorial					-
Examinations					3
Other activities.....					-
Total hours per individual activities					33
3.8. Total hours per semester					75
3.9. Number of credits					3

4. PRECONDITIONS (where appropriate)

4.1. of curriculum	The student must possess specialized knowledge acquired in the following disciplines: Computer Programming and Programming Languages, Object-Oriented Programming, Databases, Computer Aided Graphics, 3D Graphics and Animation, Software for Multimedia Systems
4.2. of competence	Not applicable.

5. CONDITIONS (where appropriate)

5.1. of the course	The course is taught using the video projector. Course support in electronic format and access to up-to-date documentation are provided. The teaching process has the following structure: ▪ 70% theoretical presentation, based on the course support (slides) ▪ 30% interactive activity (discussions with the students)
5.2. of seminar/ laboratory/project	The application activities are carried out using tutorials and practical demonstrations; up-to-date materials are made available to students and feedback is provided for the developed application.

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

Knowledge	The student/graduate describes, identifies and summarizes elementary concepts and methods regarding programming languages, programming environments, programming techniques, databases, artificial intelligence and software engineering and the way they are applied to concrete problems.
Skills (Abilities)	The student/graduate selects and explains concepts specific to algorithm design, object-oriented programming, logic and functional programming. The student/graduate specifies requirements, analyzes, elaborates, develops and tests software systems in general-purpose or object-oriented programming languages, applying the elements specific to software engineering. The student/graduate designs, implements, develops or manages applications that include various types of databases. The student understands the main concepts underlying translation systems and source code compilation. Contributes to the development and improvement of tools specific to programming languages.
Responsibility and autonomy	The student/graduate behaves honorably, responsibly and ethically, in the spirit of the law, to ensure the reputation of the profession.

7. CONTENT

7.1. Course	The method of implementation	Teaching methods	Allocated time (hours)
1. Introductory notions of e-learning and interactive multimedia		The course is taught using the video projector (70% theoretical presentation, based on the course support; 30% interactive activity, discussions with the students)	2
2. The use of multimedia technologies in education			2
3. E-Learning and instruction technology			2
4. Classification of computer-assisted instruction programs			2
5. Educational games, simulations and virtual experiments			4
6. E-learning platforms (Learning Management Systems)			6

7. Adaptive hypermedia systems for e-learning			2
8. E-learning 2.0. Virtual communities			2
9. Mobile multimedia and e-learning			2
10. Technologies for developing e-learning applications			4
Bibliography:			
1. A. Adăscăliței: "Instruire asistată de calculator", Polirom, 2007. 2. M. Brut: "Instrumente pentru e-learning". Polirom, 2006. 3. J. Jovanovic, R. Chiong: "Technological and Social Environments for Interactive Learning", Informing Science Press, 2013. 4. R. Mayer: "Multimedia Learning" (3rd ed.), Cambridge University Press, 2020. 5. T. A. Mikropoulos: "Research on e-Learning and ICT in Education. Technological, Pedagogical and Instructional Perspectives", Springer, 2018. 6. E. Popescu: "Social learning environments", Sitech Press, Craiova, 2013			

7.2. Seminar/laboratory/project	The method of implementation	Teaching methods	Allocated time (hours)
1. Introduction. Information about the topics and conduct of the laboratory.		The laboratory works are carried out using tutorials, practical demonstrations and code writing.	2
2. Markup languages. Standards for formatting the elements of an HTML document. Responsive web design (HTML5, CSS3, Bootstrap 4).			2
3. Client-side programming languages. Fundamental notions about JavaScript.			4
4. JavaScript applications: algorithms, client-side validation, animations.			2
5. Web development platforms. jQuery.			2
6. Integration of external libraries: maps, charts, multimedia elements. The JSON data format.			2
Bibliography:			
1. -			
2.			

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 content of the course and of the applications is in line with similar disciplines at universities in the country and abroad. Also, the acquired competences are in accordance with the requirements of representative employers in the field (discussions having been held with representatives of local companies such as Netrom or QuEST Global).

9. EVALUATION

Activity Type	9.1. Evaluation criteria	9.2. Evaluation methods	9.3. Final mark weight
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9.4. Course	- Understanding the theoretical fundamentals of multimedia technologies in e-learning - The ability to make connections between the taught notions - The capacity for analysis and synthesis in a concrete situation	Exam	60%
9.5. Seminar/laboratory/project	- The ability to apply theoretical notions and tutorials in practice - Skills in solving the problems encountered - The ability to design, implement and test multimedia applications	Ongoing assessment of the laboratory activity	40%
9.6. Minimum standard of performance			
- Obtaining at least 50% of the score of the laboratory assignments during the semester, as well as in the exam. - The final grade is calculated by rounding the final score to a whole grade.			

Date of Completion	Signature of the Course Activities Holder,	Signature of the Practical Activities Holder,
23.08.2025	Gabriel Badea	Gabriel Badea

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

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

