COURSE OUTLINE

1. Data about the study programme

1.1 Higher education institution	Transilvania University of Braşov
1.2 Faculty	Mathematics and Computer Science
1.3 Department	Mathematics and Computer Science
1.4 Field of study[1)]	Informatics
1.5 Study level[2)]	MA
1.6 Study programme/ Qualification	Internet Technologies

2. Data about the course

2.1 Name of course			MULTIMEDIA INTERACTION TECHNOLOGIES					
2.2 Course convenor			Conf.dr.Livia Sângeorzan					
2.3 Seminar/ laboratory/ project convenor			Asistent drd Dragoş Tohănean					
2.4 Study year	I	2.5 Semester	1	2.6 Evaluation type	E	2.7 Course status	Content[3)]	DCA
							Attendance type[4)]	DI

3. Total estimated time (hours of teaching activities per semester)

3.1 Number of hours per week	**4**	out of which: 3.2 lecture	**2**	3.3 seminar/ laboratory/ project	**0/2/0**
3.4 Total number of hours in the curriculum	56	out of which: 3.5 lecture	28	3.6 seminar/ laboratory/ project	0/28/0

Time allocation	hours
Study of textbooks, course support, bibliography and notes	48
Additional documentation in libraries, specialized electronic platforms, and field research	24
Preparation of seminars/ laboratories/ projects, homework, papers, portfolios, and essays	40
Tutorial	4
Examinations	3
Other activities.....	

3.7 Total number of hours of student activity	119
3.8 Total number per semester	175
3.9 Number of credits[5)]	7

4. Prerequisites (if applicable)

4.1 curriculum-related	•
4.2 competences-related	•

5. Conditions (if applicable)

5.1 for course development	• Computers with multiple browsers installed (Chrome, Firefox). Video projector
5.2 for seminar/ laboratory/ project development	• Computers with multiple browsers installed (Chrome, Firefox). Video projector

6. Specific competences and learning outcomes

Professional competences	P.C. 3. **Deepening the latest methodologies and technologies used in the software industry or with clear prospects of being used soon**. L.O. 3.1. The graduate can present the historical evolution of the computer concepts and theories in which he specialized. L.O. 3.2. The graduate can convey well-organized computer knowledge to an auditory public. L.O. 3.3. The graduate can make interconnections between different computers fields. P.C. 2. **Analyzes network configuration and performance, uses specific application interfaces, database management systems, manages system security**. L.O. 2.1. The graduate analyzes critical network data, network traffic capacity. L.O. 2.2. The graduate understands and uses interfaces specific to an application or use case.
Transversal competences	**T.C. 1. Communication and cooperation in professional contexts** L.O. 1.1. The graduate uses a specific repertoire of communication with interlocutors belonging to different cultures, promoting intercultural communication. L.O. 1.2. The graduate uses communication and relationship techniques in the virtual environment. L.O. 1.3. The graduate can cooperate and integrate in professional work teams in the educational field and in interdisciplinary teams. **T.C. 2. Career development and management** L.O. 2.1. The graduate documents himself and identifies opportunities for continuing professional training. L.O. 2.2. The graduate formulates career development objectives and identifies action strategies in this regard. L.O. 2.3. The graduate self-evaluates and reflects on his own career, identifying strategies for regulating and overcoming professional difficulties

7. Course objectives (resulting from the specific competences to be acquired)

7.1 General course objective	• Presentation of the three programs: GREENFOOT, PROCESSING, GIMP
7.2 Specific objectives	• Creating three applications using the three programs and utilizing HTML5

8. Content

8.1 Course	Teaching methods	Number of hours	Remarks
1. Basic Principles in WEB-Design	Interactive course, exposure, projector. Learning through problems / projects Conversation, debate, dialogue for fixing and reinforcing the presented concepts	4	
2. Framework GREENFOOT		6	
3. PROCESSING		4	
4. GIMP		5	
5. HTML 5 and Bootstrap & W3.CSS		5	
6. JavaScript		4	

Bibliography

1. L. Sângeorzan, G.-A. Stelea, N. Enache-David, *Web Development Techniques for Applications and Websites,* Ed. Univ. Transilvania din Braşov, pg.117, 2016, ISBN 978-606-19-0782-3
2. Casey Reas, Ben Fry, *Processing A Programming Handbook for Visual Designers and Artists*, 2014, MIT, ISBN: 978-0-262-02828-8
3. Michael Kolling, *Introduction to Programming with Greenfoot,* Prentice Hall, 2010, ISBN-13: 978-0-13-603753-8
4. L. Sângeorzan, *Tehnologii web şi WebDesign*, Ed. Univ. Transilvania din Braşov, pg.215, 2009, ISBN 978-973-598-523-3

8.2 Seminar/ laboratory/ project	Teaching-learning methods	Number of hours	Remarks
1. Presentation of the four basic principles in design. Color. Important steps to follow in creating a web page	Problem/Project-Based Learning	3	
2. Animation witg GREENFOOT		7	

3. Applications with PROCESSING		5	
4 Applications with GIMP		4	
5. HTML5& Bootstrap&W3.CSS		5	
6. Applications with JavaScript		4	

Bibliography

1. L. Sângeorzan, G.-A. Stelea, N. Enache-David, *Web Development Techniques for Applications and Websites,* Ed. Univ. Transilvania din Braşov, pg.117, 2016, ISBN 978-606-19-0782-3
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9. Correlation of course content with the demands of the labour market (epistemic communities, professional associations, potential employers in the field of study)

The content is in line with the issues addressed in the monographs published in recent years in the specialized literature.

10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Percentage of the final grade
10.4 Course	Mastering and applying the concepts taught in the course.	Solving exercises and problems	10%
	Multiple-choice exam		20%
10.5 Seminar/ laboratory/ project	Mastering the laboratory work	Creating applications similar to those made during laboratory hours	20%
	Project	Verification of project completion	50%
10.6 Minimal performance standard			
• Obtaining a grade of 6 in all types of assessments			

This course outline was certified in the Department Board meeting on 26/09/2024... and approved in the Faculty Board meeting on 26/09/2024.

Conf.dr. Ion-Gabriel STAN, ---------- Dean	Conf.dr. Nicusor MINCULETE, ... Head of Department
Conf.dr.Livia SÂNGEORZAN , ... Course holder	Asistent.drd.Dragoș TOHĂNEAN , ... Holder of seminar/ laboratory/ project

Note:

1) Field of study – select one of the following options: Bachelor / Master / Doctorat (to be filled in according to the forceful classification list for study programmes);

[2] Study level – choose from among: Bachelor / Master / Doctorat;

[3] Course status (content) – for the Bachelor level, select one of the following options: FC (fundamental course) / DC (course in the study domain)/ SC (speciality course)/ CC (complementary course); for the Master level, select one of the following options: PC (proficiency course)/ SC (synthesis course)/ AC (advanced course);

[4] Course status (attendance type) – select one of the following options: CPC (compulsory course)/ EC (elective course)/ NCPC (non-compulsory course);

[5] One credit is the equivalent of 25 study hours (teaching activities and individual study).