COURSE SYLLABUS

Academic year 2024-2025

1. Programme Information

1.1. Higher education institution	**Lucian Blaga University of Sibiu**
1.2. Faculty	Faculty of Engineering
1.3. Department	Department of Computer Science and Electrical and Electronics Engineering
1.4. Field of study	Computer Science and Information Technology
1.5. Level of study[1]	MASTER
1.6. Programme of study/qualification	ADVANCED COMPUTING SYSTEMS

2. Course Information

2.1. Name of course	Professional Internship			Code	ACS.105.ZO
2.2. Course coordinator	Assoc. Prof. Ionel Daniel MORARIU, PhD				
2.3. Seminar/laboratory coordinator	associate professor Eng. Daniel Morariu, PhD				
2.4. Year of study[2]	1	2.5. Semester[3]	1	2.6. Evaluation form[4]	A/R
2.7. Course type[5]	O	2.8. The formative category of the course[6]			Z

3. Estimated Total Time

3.1. Course Extension within the Curriculum – Number of Hours per Week					
3.1.a. Lecture	3.1.b. Seminar	3.1.c. Laboratory	3.1.d. Project	3.1.e. Other	Total
0	0	0	0	12	**12**
3.2. Course Extension within the Curriculum – Total Number of Hours within the Curriculum					
3.2.a. Lecture	3.2.b. Seminar	3.2.c. Laboratory	3.2.d. Project	3.2.e. Other	Total[7]
0	0	0	0	168	**168**

Time Distribution for Individual Study[8]	**Hours**
Learning by using course materials, references and personal notes	10
Additional learning by using library facilities, electronic databases and on-site information	0
Preparing seminars / laboratories, homework, portfolios and essays	0
Tutorial activities[9]	20
Exams[10]	2

3.3. Total Individual Study Hours[11] *(NOSI$_{sem}$)*	**32**
3.4. Total Hours in the Curriculum *(NOAD$_{sem}$)*	**168**
3.5. Total Hours per Semester[12] *(NOAD$_{sem}$ + NOSI$_{sem}$)*	**200**
3.6. No. of Hours / ECTS	**25**
3.7. Number of credits[13]	**8**

4. Prerequisites (if needed)

4.1. Courses that must be successfully completed first (from the curriculum)[14]	Basic knowledge of programming plus domain knowledge to enable the development of a dissertation.
4.2. Competencies	Bibliographic research skills and of software application development. knowledge in some programing languages Knowledge of statistical techniques for data analysis, data mining, artificial intelligence and machine learning

5. Conditions (where applicable)

5.1. For course/lectures[15]	
5.2. For practical activities (lab/sem/pr/app)[16]	Developing and supporting the planned work. Laboratory with computers usually of the company where is carrying the internship.

6. Specific competencies acquired[17]

		Number of credits assigned to the discipline[18] 8	Credits distribution by competencies[19]
6.1. Professional competencies	PC14	disseminates results to the scientific community	2
	PC15	conducts scientific research	1
	PC27	publishes academic research papers	1
	PC29	write scientific publications	2
6.2. Transversal competencies	TC1	demonstrates commitment	1
	TC2	manages personal development	1

7. Course objectives (resulted from developed competencies)

7.1. Main course objective	Identify the main sources of information. To accommodate master students with the practical requirements of the field of computer science. Preparing them to deal with the real challenges of the day-to-day work of their employees. Forming habits of concepts, methods and developing skills to use computer algorithms to address a variety of problems for specific topic;
7.2. Specific course objectives	Identify roles and responsibilities in a large specialized team and applying effective relationship and work techniques within the team.

8. Content

8.1. Practical activities (8.2.a. Seminar[20]/ 8.2.b. Laboratory[21]/ 8.2.c. Project[22])		**Teaching methods**	**Hours**
Act.1	Analysis and documentation of project requirements	*Exercise*	30
Act.2	Project Planning	*Practical demonstration*	20
Act.3	Making "use-case" and development analysis documents	*Exercise*	30

Act.4	Implementation of the project requirements	*Practical demonstration*	48
Act.5	Testing and debugging	*Exercise*	20
Act.6	Developing the usage documentation.	*Practical demonstration*	10
Act.7	Developing the technical documentation	*Exercise*	10
		Total seminar/laboratory hours:	168

9. Bibliography

9.1. Recommended Bibliography	The bibliography is based on the chosen theme and approach.
9.2. Additional Bibliography	

10. Conjunction of the discipline's content with the expectations of the epistemic community, professional associations and significant employers of the specific study program[23]

Regular discussions are held in a formal and informal setting with the representatives of the profile companies.

11. Evaluation

Activity Type	11.1 Evaluation Criteria	11.2 Evaluation Methods		11.3 Percentage in the Final Grade	Obs.[24]
11.4a Exam / Colloquy	• Theoretical and practical knowledge acquired (quantity, correctness, accuracy)	Tests during the semester[25]:	0%	0%	
		Homework:	0%		
		Other activities[26]:	0%		
		Final evaluation:	0%		
11.4b Seminar	• Frequency/relevance of participation or responses	Evidence of participation, portfolio of papers (reports, scientific summaries)		0%	
11.4c Laboratory	• Knowledge of the equipment, how to use specific tools; evaluation of tools, processing and interpretation of results	• Written questionnaire • Oral response • Laboratory notebook, experimental works, reports, etc. • Practical demonstration		0%	
11.4d Project	• The quality of the project, the correctness of the project documentation, the appropriate justification of the chosen solutions	• Self-evaluation, project presentation • Critical evaluation of a project		100%	RFE
11.5 Minimum performance standard[27]					5

The Course Syllabus will encompass components adapted to persons with special educational needs (SEN – people with disabilities and people with high potential), depending on their type and degree, at the level of all curricular elements (skills, objectives, contents, teaching methods, alternative assessment), in order to ensure fair opportunities in the academic training of all students, paying close attention to individual learning needs.

Filling Date: 09.09.2024

Department Acceptance Date: 16.09.2024

	Academic Rank, Title, First Name, Last Name	Signature
Course Teacher	Assoc. Prof. Ionel Daniel MORARIU, PhD	
Study Program Coordinator	Prof. Adrian FLOREA, PhD	
Head of Department	Assoc. Prof. Radu George CREȚULESCU, PhD	
Dean	Prof. Maria VINȚAN, PhD	

[1] *Bachelor / Master*
[2] *1-4 for bachelor, 1-2 for master*
[3] *1-8 for bachelor, 1-3 for master*
[4] *Exam, colloquium or VP A/R - from the curriculum*
[5] *Course type: R = Compulsory course; E = Elective course; O = Optional course*
[6] *Formative category: S = Specialty; F = Fundamental; C = Complementary; I = Fully assisted; P = Partially assisted; N = Unassisted*
[7] *Equal to 14 weeks x number of hours from point 3.1 (similar to 3.2.a.b.c.)*
[8] *The following lines refer to individual study; the total is completed at point 3.37.*
[9] *Between 7 and 14 hours*
[10] *Between 2 and 6 hours*
[11] *The sum of the values from the previous lines, which refer to individual study.*
[12] *The sum (3.5.) between the number of hours of direct teaching activity (NOAD) and the number of hours of individual study (NOSI) must be equal to the number of credits assigned to the discipline (point 3.7) x no. hours per credit (3.6.)*
[13] *The credit number is computed according to the following formula, being rounded to whole neighbouring values (either by subtraction or addition*

$$No.credits = \frac{NOCpSpD \times C_C + NOApSpD \times C_A}{TOCpSdP \times C_C + TOApSdP \times C_A} \times 30\ credits$$

Where:

- NOCpSpD = Number of lecture hours / week / discipline for which the credits are calculated
- NOApSpD = Number of application hours (sem./lab./pro.) / week / discipline for which the credits are calculated
- TOCpSdP = Total number of course hours / week in the Curriculum
- TOApSdP = Total number of application hours (sem./lab./pro.) / week in the Curriculum
- C_C/C_A = Course coefficients / applications calculated according to the table

Coefficients	Course	Applications (S/L/P)
Bachelor	2	1
Master	2,5	1,5
Bachelor - foreign language	2,5	1,25

[14] *The courses that should have been previously completed or equivalent will be mentioned*
[15] *Board, video projector, flipchart, specific teaching materials, online platforms, etc.*
[16] *Computing technology, software packages, experimental stands, online platforms, etc.*
[17] *Competences from the Grids related to the description of the study program, adapted to the specifics of the discipline*
[18] *From the curriculum*
[19] *The credits allocated to the course are distributed across professional and transversal competences according to the specifics of the discipline*
[20] *Discussions, debates, presentations and/or analyses of papers, solving exercises and problems*
[21] *Practical demonstration, exercise, experiment*

[22] *Case study, demonstration, exercise, error analysis, etc.*
[23] *The relationship with other disciplines, the usefulness of the discipline on the labour market*
[24] *CPE – Conditions Exam Participation; nCPE – Does Not Condition Exam Participation; CEF - Conditions Final Evaluation; N/A – not applicable*
[25] *The number of tests and the weeks in which they will be taken will be specified*
[26] *Scientific circles, professional competitions, etc.*
[27] *The minimum performance standard in the competence grid of the study program is customized to the specifics of the discipline, if applicable*