UNIVERSITATEA
LUCIAN BLAGA
—DIN SIBIU—

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	Master
1.6. Programme of study/qualification	Embedded Systems

2. Course Information

2.1. Name of course	Practical Activities for Preparing the Disertation Thesis	Code	ES.402.ZO
2.2. Course coordinator			
2.3. Seminar/laboratory coordinator	Prof. Arpad GELLERT, PhD		

2.4. Year of study	2	2.5. Semester	4	2.6. Evaluation form	A/R
2.7. Course type	O	2.8. The formative category of the course			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
				6	**6**

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
				84	**84**

Time Distribution for Individual Study	Hours
Learning by using course materials, references and personal notes	14
Additional learning by using library facilities, electronic databases and on-site information	14
Preparing seminars / laboratories, homework, portfolios and essays	28
Tutorial activities	6
Exams	4

3.3. Total Individual Study Hours (*NOSI*$_{sem}$)	**66**
3.4. Total Hours in the Curriculum (*NOAD*$_{sem}$)	**84**
3.5. Total Hours per Semester (*NOAD*$_{sem}$ + *NOSI*$_{sem}$)	**150**
3.6. No. of Hours / ECTS	**25**
3.7. Number of credits	**6**

4, Emil Cioran Street
550025, Sibiu, România
inginerie.ulbsibiu.ro

Tel.: +40 269 21.79.28
Fax: +40 269 21.27.16
E-mail: inginerie@ulbsibiu.ro

4. Prerequisites (if needed)

4.1. Courses that must be successfully completed first (from the curriculum)	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.

5. Conditions (where applicable)

5.1. For course/lectures	Board, video projector, flipchart, specific teaching materials, online platforms
5.2. For practical activities (lab/sem/pr/app)	Computing technology, software packages, online platforms

6. Specific competencies acquired

		Number of credits assigned to the discipline	6	Credits distribution by competencies
6.1. Professional competencies	PC1	Approve engineering design		0,5
	PC2	Perform project management		1
	PC3	Operate open source software		1
	PC8	Model hardware		1
	PC5	Perform scientific research		0,5
	PC4	Disseminate results to the scientific community		0,5
6.2. Transversal competencies	TC1	Apply knowledge of science, technology and engineering		0,5
	TC2	Show initiative		0,5
	TC3	Assume responsibility		0,5

7. Course objectives (resulted from developed competencies)

7.1. Main course objective	• Research and development of hardware and software technologies in the field of advanced computing systems • 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

8.2.d. Other practical activities		Teaching methods	Hours
Act.1	The choice of topic / area of research. Contacting the teacher coordinator. Design research and development plan for the dissertation work. Linking dissertation topic with the student's training program, with the competence area of the supervisor and with master specific studies.	Exposition, Discussion	6
Act.2	Project Planning. Presentation and discussion of research plan: Introduction. Ideas. Planning. Literature Searching. Research/ Analysis. Writing Up. Presentation. Conclusion	Exposition, Discussion	20
Act.3	Stages of (methodology in) Research: Research question, Background, Formulate hypothesis, Design experiment, Test	Exposition, Discussion	22

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Ministry of Education
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Faculty of Engineering

	hypothesis by collecting data, Analyze results, Publish the research work and Dissemination.		
Act.4	Analysis and documentation of project requirements. Documentation stages about state of the art. Finding the research niche.	Exposition, Discussion	10
Act.5	Making "use-case" and development analysis documents. Implementation.	Exposition, Discussion	24
Act.6	Collecting data, testing and debugging.	Exposition, Discussion	15
Act.7	Complete documentation (report) research emphasizing the practical side of research work undertaken. Brief presentation of theoretical concepts practice devoted exclusively to research carried out. Each student will deliver a technical report (TR), code and PowerPoint presentation (PPT) in which will present the solution proposed. Validation of TR by professor supervisor. Based on the TR it will be developed a scientific paper.	Exposition, Discussion	15
Total other practical activity hours			112

9. Bibliography

9.1. Recommended Bibliography	1. 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

Students will acquire research skills and synthesis abilities preparing them for the transition to a new stage of doctoral admission.
It is carried out through regular discussions 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.
11.4a Exam / Colloquy	• Theoretical and practical knowledge acquired (quantity, correctness, accuracy)	Tests during the semester:	15%	100%	CPE
		Homework:	15%		
		Other activities:	0%		
		Final evaluation:	70%		
11.5 Minimum performance standard					CPE
The final assessment will include written work consisting of (partial) grid tests and problems.					
• Knowledge, understanding and explaining the basics of evolutionary computing.					
• Constant interest to acquire discipline.					
• Partial fulfilment (50%) of homework, essays and tests given during the semester.					

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: 11.09.2024
Department Acceptance Date: 16.09.2024

	Academic Rank, Title, First Name, Last Name	Signature
Course Teacher	Prof. Arpad GELLERT, PhD	
Study Program Coordinator	Prof. Arpad GELLERT, PhD	
Head of Department	Assoc. Prof. Radu George CREȚULESCU, PhD	
Dean	Prof. Maria VINȚAN, PhD	

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