

## 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	Professional Internship	Code	ES.206.ZO
2.2. Course coordinator	Prof. Arpad GELLERT, PhD		
2.3. Seminar/laboratory coordinator			
2.4. Year of study	1	2.5. Semester	2
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
-	-	-	-	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
-	-	-	-	168	168
<b>Time Distribution for Individual Study</b>					<b>Hours</b>
Learning by using course materials, references and personal notes					16
Additional learning by using library facilities, electronic databases and on-site information					7
Preparing seminars / laboratories, homework, portfolios and essays					0
Tutorial activities					7
Exams					2
<b>3.3. Total Individual Study Hours (<math>NOSI_{sem}</math>)</b>					<b>32</b>
<b>3.4. Total Hours in the Curriculum (<math>NOAD_{sem}</math>)</b>					<b>168</b>
<b>3.5. Total Hours per Semester (<math>NOAD_{sem} + NOSI_{sem}</math>)</b>					<b>200</b>
<b>3.6. No. of Hours / ECTS</b>					<b>25</b>
<b>3.7. Number of credits</b>					<b>8</b>

#### 4. Prerequisites (if needed)

4.1. Courses that must be successfully completed first (from the curriculum)	Basic knowledge of programming plus domain knowledge
4.2. Competencies	Bibliographic research skills and of software application development

#### 5. Conditions (where applicable)

5.1. For course/lectures	-
5.2. For practical activities (lab/sem/pr/app)	Developing and supporting the planned work. Laboratory with computers usually at the company where the internship is organized.

#### 6. Specific competencies acquired

Number of credits assigned to the discipline			8	Credits distribution by competencies
<b>6.1. Professional competencies</b>	PC1	Approve engineering design		1
	PC2	Perform project management		1
	PC5	Perform scientific research		1
	PC6	Evaluate research activities		1
	PC7	Interact professionally in research and professional environments		1
	PC12	Promote the transfer of knowledge		1
<b>6.2. Transversal competencies</b>	TC1	Apply knowledge of science, technology and engineering		1
	TC2	Show initiative		0,5
	TC3	Assume responsibility		0,5

#### 7. Course objectives (resulted from developed competencies)

7.1. Main course objective	<ul style="list-style-type: none"> <li>Research and development of hardware and software technologies in the field of embedded systems</li> <li>Identify the main sources of information.</li> <li>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.</li> <li>Forming habits of concepts, methods. Developing skills to use various computing systems to address a variety of problems for specific topic.</li> </ul>
7.2. Specific course objectives	<ul style="list-style-type: none"> <li>Identify roles and responsibilities in a large specialized team and applying effective relationship and work techniques within the team.</li> </ul>

#### 8. Content

8.2.c. Project		Teaching methods	Hours
Project 1	The choice of topic / area of development. Contacting the teacher coordinator. Design research and development plan for the work. Linking the topic with the student's training program, with the supervisor's competence area and with master specific studies.	Development, Experiment	17
Project 2	Project Planning. Presentation and discussion of the project plan.	Development, Experiment	24
Project 3	Methodology: Research question, Background, Formulate hypothesis, Design experiment, Test hypothesis by collecting data, Analyze results, validation and dissemination.	Development, Experiment	31





Project 4	Analysis and documentation of project requirements. Documentation stages about state of the art. Finding the right tools and deployment platform.	Development, Experiment	24
Project 5	Making "use-case" and development analysis documents. Implementation.	Development, Experiment	31
Project 6	Collecting data, testing and debugging.	Development, Experiment	24
Project 7	Complete documentation (report) emphasizing the implementation. Brief presentation of theoretical concepts. Each student will deliver a technical report (TR), code and PowerPoint presentation (PPT) in which will present the solution proposed. Validation of the TR by professor supervisor.	Development, Experiment	17
Total project 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

Curricula are continuously updated based on the most prestigious international text-books and also based on the most relevant progresses in the field.

### 11. Evaluation

Activity Type	11.1 Evaluation Criteria	11.2 Evaluation Methods		11.3 Percentage in the Final Grade	Obs.
11.4a Exam / Colloquy	Practical knowledge acquired	Tests during the semester:	15%	100%	CPE
		Homework:	15%		
		Other activities:	0%		
		Final evaluation:	70%		
11.5 Minimum performance standard					50%

*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: 13.09.2024

Department Acceptance Date: 16.09.2024

	Academic Rank, Title, First Name, Last Name	Signature
Course Teacher	Prof. Arpad GELLERT, PhD	



**UNIVERSITATEA**  
**LUCIAN BLAGA**  
**DIN SIBIU**

**Ministry of Education**  
**Lucian Blaga University of Sibiu**  
**Faculty of Engineering**

<b>Study Program Coordinator</b>	Prof. Arpad GELLERT, PhD	
<b>Head of Department</b>	Assoc. Prof. Radu George CREȚULESCU, PhD	
<b>Dean</b>	Prof. Maria VINȚAN, PhD	