# COURSE SYLLABUS

*Academic year 2025 - 2026*

## 1. Programme Information

| | |
|---|---|
| 1.1. Higher education institution | Lucian Blaga University of Sibiu |
| 1.2. Faculty | Faculty of Science |
| 1.3. Department | Mathematics and Informatics |
| 1.4. Field of study | Informatics |
| 1.5. Level of study[1] | Master |
| 1.6. Programme of study/qualification | Cybersecurity |

## 2. Course Information

| | | | |
|---|---|---|---|
| 2.1. Name of course | Disertation preparation | Code | FSTI.MAI.CS.M.SO.4.P.C-3.6 |
| 2.2. Course coordinator | Lecturer PhD. Ionela Maniu | | |
| 2.3. Seminar/laboratory coordinator | Lecturer PhD. Ionela Maniu | | |

| | | | | | |
|---|---|---|---|---|---|
| 2.4. Year of study[2] | 2 | 2.5. Semester[3] | 2 | 2.6. Evaluation form[4] | C |
| 2.7. Course type[5] | | R | 2.8. The formative category of the course[6] | | S |

## 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 | Total |
| - | - | - | - | **0** |

| 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 | Total[7] |
| - | - | - | - | **0** |

| Time Distribution for Individual Study[8] | Hours |
|---|---|
| Learning by using course materials, references and personal notes | 5 |
| Additional learning by using library facilities, electronic databases and on-site information | 10 |
| Preparing seminars / laboratories, homework, portfolios and essays | 49 |
| Tutorial activities[9] | 7 |
| Exams[10] | 4 |

| | | |
|---|---|---|
| **3.3. Total Individual Study Hours[11] (*NOSI_{sem}* )** | **75** | |
| **3.4. Total Hours in the Curriculum (*NOAD_{sem}*)** | **0** | |
| **3.5. Total Hours per Semester[12] (*NOAD_{sem} + NOSI_{sem}* )** | **75** | |
| **3.6. No. of Hours / ECTS** | **25** | |
| **3.7. Number of credits[13]** | **3** | |

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### 4. Prerequisites (if needed)

| | |
|---|---|
| 4.1. Courses that must be successfully completed first (from the curriculum)[14] | - |
| 4.2. Competencies | - |

### 5. Conditions (where applicable)

| | |
|---|---|
| 5.1. For course/lectures[15] | There are no course activities, only individual activity, supervised by the master's coordinator |
| 5.2. For practical activities (lab/sem/pr/app)[16] | There are no course activities, only individual activity, supervised by the master's coordinator |

### 6. Learning Outcomes[17]

| Number of credits assigned to the discipline: 3 | | | | |
|---|---|---|---|---|
| Learning outcomes | | | | Credit distribution by learning outcomes |
| Nr. crt. | Knowledge | Skills | Responsibility and autonomy | |
| LO 1 | The student explains the academic and ethical requirements for preparing a dissertation thesis. | The student applies documentation and writing methods according to scientific standards. | The student demonstrates responsibility in complying with citation rules and avoiding plagiarism. | 1 |
| LO 2 | The student describes research methods and techniques relevant to the field of study. | The student selects and uses appropriate tools for data analysis and interpretation. | The student assumes responsibility for the methodological accuracy of the research. | 1 |
| LO 3 | The student understands the structure and stages of the dissertation preparation process. | The student develops a work plan and prepares partial content of the thesis. | The student shows autonomy in organizing research activities and meeting deadlines. | 1 |

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

| | |
|---|---|
| 7.1. Main course objective | • The ability to complete a dissertation;<br>• Knowing the stages followed in the design, writing and editing of a dissertation work;<br>• Approaching and solving new cognitive and professional problems;<br>• Comparing new knowledge with traditional ones and the ability to establish relationships between them, in order to identify new directions for approaching a topic of research and development of software products |
| 7.2. Specific course objectives | • Ability to develop and implement IT projects.<br>• Ability to work individually.<br>• The ability to carry out scientific research<br>• The ability to respect the principles of ethics in scientific research in informatics |

### 8. Content

| 8.1. Lectures[18] | Teaching methods[19] | Hours |
|---|---|---|
| | **Total lecture hours:** | **0** |

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| 8.2. Practical activities (8.2.a. Seminar[20]/ 8.2.b. Laboratory[21]/ 8.2.c. Project[22]) | Teaching methods | Hours |
|---|---|---|
| **Total seminar/laboratory hours:** | | 0 |

## 9. Bibliography

| 9.1. Recommended Bibliography | 1. Formatting and evaluation guides for bachelor's/dissertation papers http://stiinte.ulbsibiu.ro/info/info/info_studenti/licenta_disertatie/2021/ |
|---|---|
| 9.2. Additional Bibliography | 2. The bibliography specific to each individual work, established following discussions with the coordinator of the dissertation work |

## 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]

The dissertation is the one that certifies the acquisition by a graduate of the skills and abilities necessary to engage in the field at the level of a master's graduate. Dissertation topics are set taking into account the needs of the IT market, or even together with IT companies (dual supervision).

## 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]: | % | 50% (minimum 5) | CEF |
| | | Homework: | % | | |
| | | Other activities[26]: | % | | |
| | | Final evaluation: | 50% | | |
| 11.4b Seminar | • Frequency/relevance of participation or responses | Evidence of participation, portfolio of papers (reports, scientific summaries) | | 5% (minimum 5) | nCPE |
| 11.4c Laboratory | • Knowledge of the equipment, how to use specific tools; evaluation of tools, processing and interpretation of results | • Written questionnaire<br>• Oral response<br>• Laboratory notebook, experimental works, reports, etc.<br>• Practical demonstration | | 5% (minimum 5) | nCPE |
| 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<br>• Critical evaluation of a project | | 40% (minimum 5) | nCPE |
| 11.5 Minimum performance standard[27]<br>Implementing the application with at least 30% of the functionalities, writing at least the first chapter (motivation, state of the art, specification of the paper's theme) and the second chapter (application design, choice of technologies and motivation of their choice) | | | | | |

*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.*

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Filling Date:  |_1_|_5_| / |_0_|_9_| / |_2_|_0_|_2_|_5_|

Department Acceptance Date:  |_3_|_0_| / |_0_|_9_| / |_2_|_0_|_2_|_5_|

|  | **Academic Rank, Title, First Name, Last Name** | **Signature** |
|---|---|---|
| **Course Teacher** | Lecturer PhD. Ionela Maniu | |
| **Study Program Coordinator** | Associated Professor PhD. Nicolae Constantinescu | |
| **Department Head** | Professor PhD. Mugur Acu | |

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[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] *Chapter and paragraph titles*

[19] *Exposition, lecture, board presentation of the studied topic, use of video projector, discussions with students (for each chapter, if applicable)*

[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*

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