**SYLLABUS**

**1. Information regarding the programme**

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| 1.1 Higher education institution | Babeş Bolyai University |
| 1.2 Faculty | Faculty of Mathematics and Computer Science |
| 1.3 Department | Department of Computer Science |
| 1.4 Field of study | Computer Science |
| 1.5 Study cycle | Master |
| 1.6 Study programme / Qualification | Data Science for Industry and Society |

**2. Information regarding the discipline**

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|---|---|---|---|---|---|---|---|
| 2.1 Name of the discipline (en) (ro) | | | Project in Data Science | | | | |
| 2.2 Course coordinator | | | Prof. PhD. Dioșan Laura | | | | |
| 2.3 Seminar coordinator | | | Prof. PhD. Dioșan Laura | | | | |
| 2.4. Year of study | **2** | 2.5 Semester | **4** | 2.6. Type of evaluation | **C** | 2.7 Type of discipline | **Compulsory** |
| 2.8 Code of the discipline | | MME8188 | | | | | |

**3. Total estimated time** (hours/semester of didactic activities)

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|---|---|---|---|---|---|
| 3.1 Hours per week | 1 | Of which: 3.2 course | 0 | 3.3 seminar/laboratory | 1 |
| 3.4 Total hours in the curriculum | 12 | Of which: 3.5 course | 0 | 3.6 seminar/laboratory | 12 |

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| Time allotment: | hours |
| Learning using manual, course support, bibliography, course notes | 24 |
| Additional documentation (in libraries, on electronic platforms, field documentation) | 24 |
| Preparation for seminars/labs, homework, papers, portfolios and essays | 60 |
| Tutorship | 24 |
| Evaluations | 6 |
| Other activities: ..... | - |

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| 3.7 Total individual study hours | 138 |
| 3.8 Total hours per semester | 150 |
| 3.9 Number of ECTS credits | 6 |

**4. Prerequisites** (if necessary)

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| 4.1. curriculum | Computer Science Research Methodology |
| 4.2. competencies | |

**5. Conditions** (if necessary)

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| 5.1. for the course | - |
| 5.2. for the seminar /lab activities | - |

**6. Specific competencies acquired**

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|---|---|
| **Professional competencies** | Analysis and formalization of problems requiring intelligent methods and models<br>Use of computational intelligence methods in problems solving<br>Analysis, design, and implementation of software systems for computational intelligence<br>Proficient use of methodologies and tools specific to programming languages and software systems |
| **Transversal competencies** | Professional communication skills; concise and precise description, both oral and written, of professional results |

**7. Objectives of the discipline** (outcome of the acquired competencies)

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| 7.1 General objective of the discipline | This project represents the individual work the student performs with the purpose to realize a scientific report on a given research topic.<br>This project is associated to the internship project: the research project is the scientific and experimental documentation |
| 7.2 Specific objective of the discipline | At the completion of this course, the student should:<br>- have documentation abilities on an established topic<br>- be able to design the table of contents of the research report<br>- know how to write a technical document (research report) in many iterations |

**8. Content**

| **8.1 Course** | Teaching methods | Remarks |
|---|---|---|
| **8.2 Seminar / laboratory** | Teaching methods | Remarks |
| 1. Establishing the research title/topic<br>2. Bibliographical documentation<br>3. Table of contents: version 1.0<br>4. Relevance of the bibliographical sources and their assignment to the designed structure<br>5. Detecting possible original contribution; discussion and decision on experimental modelling | Conversation, debate, case studies | |

| | | |
|---|---|---|
| 6. Processing of selected documents and writing the paper – first draft of the report | | |
| 7. Final form of the research report | Evaluation | |
| Bibliography<br>- to be decided by student based on his/her research topic<br>- Internet resources on software projects and on the particular topics of the projects | | |

**9. Corroborating the content of the discipline with the expectations of the epistemic community, professional associations and representative employers within the field of the program**

- The course respects the IEEE and ACM Curricula Recommendations for Computer Science studies;
- The course exists at the major universities in Romania offering similar study programs;
- Graduating a master program assumes experience in developing a research project

**10. Evaluation**

| Type of activity | 10.1 Evaluation criteria | 10.2 Evaluation methods | 10.3 Share in the grade (%) |
|---|---|---|---|
| 10.4 Course | | | |
| 10.5 Seminar/lab activities | Project evaluation | The institution tutor assesses the performance of the interns.<br>The faculty mentor assesses the activities (based on Activity Report) | 80%<br><br>20% |
| 10.6 Minimum performance standards | | | |
| At least grade 5 (from a scale of 1 to 10) | | | |

| Date | Signature of course coordinator | Signature of seminar coordinator |
|---|---|---|
| 23 April 2023 | Prof. PhD. Dioșan Laura | Prof. PhD. Dioșan Laura |

| Date of approval | Signature of the head of department |
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| ..... | Prof. PhD. Dioșan Laura |