

SYLLABUS

1. Information regarding the programme

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| 1.1 Higher education institution | Babes-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 | Bachelor |
| 1.6 Study programme / Qualification | Computer Science |

2. Information regarding the discipline

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|-----------------------------------------|-----------------------------------------------|--------------|----------|-------------------------|----------|------------------------|-------------------|
| 2.1 Name of the discipline (en) (ro) | Preparation of Bachelor Thesis | | | | | | |
| 2.2 Course coordinator | PhD Associate Professor Vescan Andreea | | | | | | |
| 2.3 Seminar coordinator | PhD Associate Professor Vescan Andreea | | | | | | |
| 2.4. Year of study | 3 | 2.5 Semester | 6 | 2.6. Type of evaluation | E | 2.7 Type of discipline | compulsory |
| 2.8 Code of the discipline | MLE2001 | | | | | | |

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 |
| Time allotment: | | | | | hours |
| Learning using manual, course support, bibliography, course notes | | | | | 2 |
| Additional documentation (in libraries, on electronic platforms, field documentation) | | | | | 12 |
| Preparation for seminars/labs, homework, papers, portfolios and essays | | | | | 24 |
| Tutorship | | | | | 0 |
| Evaluations | | | | | 0 |
| Other activities: | | | | | 0 |
| 3.7 Total individual study hours | 38 | | | | |
| 3.8 Total hours per semester | 50 | | | | |
| 3.9 Number of ECTS credits | 2 | | | | |

4. Prerequisites (if necessary)

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| 4.1. curriculum | • |
| 4.2. competencies | • |

5. Conditions (if necessary)

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| 5.1. for the course | • |
| 5.2. for the seminar /lab activities | • None |

6. Specific competencies acquired

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| Professional competencies | <ul style="list-style-type: none"> • Analysis, design, and implementation of software systems • Proficient use of methodologies and tools specific to programming languages and software systems |
| Transversal competencies | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • The course represents the individual work the student performs with the purpose to prepare the Bachelor's Degree thesis on a given topic. |
| 7.2 Specific objective of the discipline | <ul style="list-style-type: none"> • At the completion of this course, the student should: <ul style="list-style-type: none"> ○ have documentation abilities on an established topic ○ be able to design the table of contents of a thesis ○ know how to write a technical document (research paper) in many iterations ○ know how to conduct a small size research project, use research methodologies |

8. Content

| 8.1 Course | Teaching methods | Remarks |
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| 8.2 Seminar / laboratory | Teaching methods | Remarks |
| Seminar 1 Assignment Received: <ul style="list-style-type: none"> • Assignment 1: Establishing the theme with the scientific coordinator. Assignment Delivery: <ul style="list-style-type: none"> • Assignment Delivery: Seminar 2 • Turn in: chosen theme, name of the scientific coordinator, domain of the theme, 3 bibliographic resources (books, articles, etc.) | Conversation, debate, case studies | |
| Seminar 2 Assignment Received: <ul style="list-style-type: none"> • Assignment 2: Creating the content of the paper + Develop a chapter from the theoretical part. Assignment Delivery: <ul style="list-style-type: none"> • Assignment Delivery: Seminar 3 | Conversation, debate, case studies | |

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| <ul style="list-style-type: none"> Turn in: content of the thesis (chapters for the theoretical part + chapters for the practical part) + Chapter Theoretical 1 | | |
| Seminar 3 Assignment Received: <ul style="list-style-type: none"> Assignment 3: Develop another chapter from the theoretical part. Develop the chapter for the application Assignment Delivery: <ul style="list-style-type: none"> Assignment Delivery: Seminar 4 Turn in: Chapter (of your choice) from the theoretical part (theoretical content + references + tables + images). Chapter from the practical part (theoretical content + references + tables + images). This chapter should contain at this time the application requirements and their specification. | Conversation, debate, case studies | |
| Seminar 4 Assignment Received: <ul style="list-style-type: none"> Assignment 4: Develop another chapter for the application. One functionality F1 of the application must be shown/executed. Assignment Delivery: <ul style="list-style-type: none"> Assignment Delivery: Seminar 5 Turn in: Another chapter from the theoretical part (theoretical content + references + tables + images). - Chapter from the practical part should contain design/implementation/testing for Functionality F1. | Conversation, debate, case studies | |
| Seminar 5 Assignment Received: <ul style="list-style-type: none"> Assignment 5: Presentation slides, Abstract+Introduction, Functionality F2 - execution Assignment Delivery: <ul style="list-style-type: none"> Assignment Delivery: Seminar 6 Turn in: Presentation (only slides) + Abstract and Introduction + Functionality F2 – to be shown. | Conversation, debate, case studies | |
| Seminar 6 <ul style="list-style-type: none"> Grading by the Tutor | Conversation, debate, case studies | |
| Bibliography - to be decided by student based on his/her research topic - 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 Software Engineering studies;
- The course exists at the major universities in Romania offering similar study programs;

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 | <ul style="list-style-type: none"> Final Grade = 0.5 * Grade given by Tutor + 0.5* Grade given by Scientific Coordinator | Portofolio, research report | <ul style="list-style-type: none"> 50% Grade given by Tutor (arithmetic average of the |

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|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------|
| | <ul style="list-style-type: none"> • Grade given by Tutor = arithmetic average of the grades from the 5 laboratory assignments (awarded at the end of the laboratory 6) • Grade given by Scientific Coordinator = given in the session | | grades from the 5 laboratory assignments (awarded at the end of the laboratory 6)) 50% Grade given by Scientific Coordinator |
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Remarks.

- Presence on this subject is mandatory, and minimum 4 attendances will be required.
- Students will have 5 lab assignments; each assignment will receive a grade.
- Penalties
 - The assignments delivered after the scheduled delivery are marked with 2 points/laboratory delay.
 - Example: Assignment 3 with a delivery schedule in Lab 4 but delivered in Lab 6, gets the maximum mark of 6.
- Grade given by Tutor = arithmetic average of the grades from the 5 laboratory assignments (awarded at the end of the laboratory 6)
- Grade given by Scientific Coordinator = given in the session
- Final Grade = $0.5 * \text{Grade given by Tutor} + 0.5 * \text{Grade given by Scientific Coordinator}$
- Pass the subject: Final grade ≥ 5 . Grade given by Tutor or Grade given by Scientific Coordinator may be less than 5, but the Final Grade must be greater than 5.
- In the retake session, the student can also deliver assignments that were undelivered during the didactic activity only if she/he has at least 4 attendances. The grade given by tutor will be at most 6 if during the semester the student did not delivered any assignment. If the student delivered parts of the assignments during the semester, and in the retake session she/he delivered some other assignments, the grade on each assignment is computed as if it were delivered in Lab 6 (with appropriate penalties), but the final grade will be at most 6.
- Students who do not have a minimum of 4 attendances may deliver them only in the liquidation session, and the tutor's grade will be maximum 6.

10.6 Minimum performance standards

- At least grade 5 (from a scale of 1 to 10)

Date

23 April 2021

Signature of course coordinator

Assoc. Prof. PhD. Andreea Vescan,

Signature of seminar coordinator

Assoc. Prof. PhD. Andreea Vescan

Date of approval

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Signature of the head of department

Prof. PhD. Anca Andreica