

COURSE OUTLINE

1. Data about the study programme

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|------------------------------------|-----------------------------------|
| 1.1 Higher education institution | Transilvania University of Braşov |
| 1.2 Faculty | Mathematics and Computer Science |
| 1.3 Department | Mathematics and Computer Science |
| 1.4 Field of study ¹⁾ | MA |
| 1.5 Study level ²⁾ | MA |
| 1.6 Study programme/ Qualification | Internet Technologies |

2. Data about the course

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|-------------------------------------------|--------------------------------------------|--------------|---|---------------------|---|-------------------|-------------------------------|----|
| 2.1 Name of course | Dissertation writing techniques (Capstone) | | | | | | | |
| 2.2 Course convenor | Lecturer Adela Sasu, Ph.D. | | | | | | | |
| 2.3 Seminar/ laboratory/ project convenor | Lecturer Adela Sasu, Ph.D. | | | | | | | |
| 2.4 Study year | 2 | 2.5 Semester | 2 | 2.6 Evaluation type | E | 2.7 Course status | Content ³⁾ | AC |
| | | | | | | | Attendance type ⁴⁾ | EC |

3. Total estimated time (hours of teaching activities per semester)

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|---------------------------------------------------------------------------------------------|----|---------------------------|----|----------------------------------|--------|
| 3.1 Number of hours per week | 3 | out of which: 3.2 lecture | 2 | 3.3 seminar/ laboratory/ project | 0/1/0 |
| 3.4 Total number of hours in the curriculum | 36 | out of which: 3.5 lecture | 24 | 3.6 seminar/ laboratory/ project | 0/12/0 |
| Time allocation | | | | | hours |
| Study of textbooks, course support, bibliography and notes | | | | | 90 |
| Additional documentation in libraries, specialized electronic platforms, and field research | | | | | 10 |
| Preparation of seminars/ laboratories/ projects, homework, papers, portfolios, and essays | | | | | 24 |
| Tutorial | | | | | 5 |
| Examinations | | | | | 5 |
| Other activities..... | | | | | 5 |
| 3.7 Total number of hours of student activity | | 139 | | | |
| 3.8 Total number per semester | | 175 | | | |
| 3.9 Number of credits ⁵⁾ | | 7 | | | |

4. Prerequisites (if applicable)

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| 4.1 curriculum-related | • Not necessary |
| 4.2 competences-related | • Not necessary |

5. Conditions (if applicable)

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| 5.1 for course development | • Video projector, laptop |
| 5.2 for seminar/ laboratory/ project development | • Computers |

6. Specific competences

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| Professional competences | <p>C1. Specification, design, and development of software systems using procedural languages, object-oriented languages, declarative languages, databases, methodologies, and development platforms.</p> <p>R.Î. 1.1. The graduate can use procedural and object-oriented languages, and declarative languages to deal with theoretical and applied IT problems.</p> <p>R.Î. 1.2. The graduate can frame a problem in a studied theoretical framework.</p> <p>R.Î. 1.3. The graduate can apply modern programming methods and techniques to solve a large variety of problems.</p> <p>C2. Analyzes network configuration and performance, uses application-specific interfaces, and systems of database management, manages system security</p> <p>R.Î. 2.1. The graduate analyzes critical network data and network traffic capacity.</p> <p>R.Î. 2.2. The graduate understands and uses interfaces specific to an application or use case.</p> <p>R.Î. 2.3. The graduate can apply modern programming languages to manage databases;</p> |
| Transversal competences | <p>CT. 1. Communication and cooperation in professional contexts:</p> <p>R.Î. 1.1. The graduate uses a specific repertoire of communication with interlocutors promoting intercultural communication.</p> <p>R.Î. 1.2. The graduate uses communication and relationship techniques in the virtual environment.</p> <p>R.Î. 1.3. The graduate can cooperate and integrate into professional work teams in the field of education and interdisciplinary teams.</p> <p>R.Î. 1.4. The graduate adapts his language and communication repertoire to the particularities of the interlocutors.</p> <p>R.Î. 1.5. The graduate can give presentations and public communications to promote knowledge and professional values.</p> <p>CT. 2. Career development and management</p> <p>R.Î. 2.1. The graduate documents himself/herself and identifies opportunities for continuing professional training.</p> <p>R.Î. 2.2. The graduate formulates career development objectives and identifies action strategies in this sense.</p> <p>R.Î. 2.3. The graduate self-evaluates and reflects on his/her career, identifying adjustment strategies and overcoming professional difficulties.</p> <p>R.Î. 2.4. The graduate possesses strategies to regulate and control professional and personal stress.</p> <p>R.Î. 2.5. The graduate knows and applies professional and personal time management techniques.</p> <p>R.Î. 2.6. The graduate fulfills the duties of the teaching profession with responsibility, respecting ethics and professional ethics.</p> |

7. Course objectives (resulting from the specific competencies to be acquired)

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| 7.1 General course objective | <ul style="list-style-type: none"> Students will get accustomed to academic writing of scientific texts in the field of exact sciences |
| 7.2 Specific objectives | <ul style="list-style-type: none"> knowledge of the main types of scientific texts understanding the process of writing a scientific text techniques and methods of working both individually and in groups for writing scientific texts |

8. Content

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|------------|------------------|-----------------|---------|
| 8.1 Course | Teaching methods | Number of hours | Remarks |
|------------|------------------|-----------------|---------|

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|---------|
| 1. Overview | Video projector presentation and Interactive discussions | 2 | |
| 2. The logical organization of a Latex document | Video projector presentation and Interactive discussions | 2 | |
| 3. Latex writing of mathematical text and formulas | Video projector presentation and Interactive discussions | 2 | |
| 4. Other Latex formatting | Video projector presentation and Interactive discussions | 2 | |
| 5. Graphics and writing algorithms in Latex | Video projector presentation and Interactive discussions | 2 | |
| 6. Latex Package | Video projector presentation and Interactive discussions | 2 | |
| 7. Use of colors and graphic processing | Video projector presentation and Interactive discussions | 2 | |
| 8. Beamer document class | Video projector presentation and Interactive discussions | 4 | |
| 9. Other Latex 2 ϵ facilities | Video projector presentation and Interactive discussions | 2 | |
| 10. Writing a scientific paper in Latex | Video projector presentation and Interactive discussions | 4 | |
| Bibliography | | | |
| 1. LATEX- Ghid de utilizare, A. Pusztai, Gh. Ardelean, Editura Tehnica,1994 2. LATEX2 ϵ , Paul A. Blaga, Horia F. Pop, Editura Tehnica, 1999 3. The Not So Short Introduction to LATEX2 ϵ , Tobias Oetiker, Hubert Partl, Irene Hyna and Elisabeth Schlegl, 4. LATEX - WIKIMANUALE | | | |
| 8.2 Seminar/ laboratory/ project | Teaching-learning methods | Number of hours | Remarks |
| 1. Starting a LaTeX document | | 2 | |
| 2. Writing texts with mathematical formulas | | 2 | |
| 3. Making simple and professional tables in LaTeX | | 2 | |
| 4. Writing algorithms in different work environments | | 2 | |
| 5. Inserting, processing and making images in LaTeX | | 2 | |
| 6. Beamer presentations | | 2 | |
| Bibliography | | | |
| 1. LATEX- Ghid de utilizare, A. Pusztai, Gh. Ardelean, Editura Tehnica,1994 2. LATEX2 ϵ , Paul A. Blaga, Horia F. Pop, Editura Tehnica, 1999 3. The Not So Short Introduction to LATEX2 ϵ , Tobias Oetiker, Hubert Partl, Irene Hyna and Elisabeth Schlegl, 4. LATEX - WIKIMANUALE | | | |

9. Correlation of course content with the demands of the labour market (epistemic communities, professional associations, potential employers in the field of study)

The course sheet has been developed in accordance with the needs of students from the Master's program and with the relevant bibliography for the field.

10. Evaluation

| Activity type | 10.1 Evaluation criteria | 10.2 Evaluation methods | 10.3 Percentage of the final grade |
|---------------------------------------------------------------------------------------|--------------------------|-------------------------|------------------------------------|
| 10.4 Course | Reference | Presentation | 50% |
| 10.5 Seminar/ laboratory/ project | Exam | Computer writing | 50% |
| 10.6 Minimal performance standard | | | |
| <ul style="list-style-type: none"> Presentation on the topic of choice | | | |

This course outline was certified in the Department Board meeting on 26/09/2024 and approved in the Faculty Board meeting on 26/09/2024.

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| Assoc.Prof. Gabriel STAN, Ph.D. Dean | Assoc. Prof. Nicușor MINCULETE, Ph.D. Head of Department |
| Lecturer Adela SASU, Ph.D. Course holder | Lecturer Adela Sasu, Ph.D. Holder of seminar/ laboratory/ project |

Note:

- 1) Field of study – select one of the following options: BA/MA/PhD. (to be filled in according to the forceful classification list for study programmes);
- 2) Study level – choose from among: BA/MA/PhD;
- 3) Course status (content) – for the BA level, select one of the following options: **FC** (fundamental course) / **DC** (course in the study domain)/ **SC** (speciality course)/ **CC** (complementary course); for the MA level, select one of the following options: **PC** (proficiency course)/ **SC** (synthesis course)/ **AC** (advanced course);
- 4) Course status (attendance type) – select one of the following options: **CPC** (compulsory course)/ **EC** (elective course)/ **NCPC** (non-compulsory course);
- 5) One credit is the equivalent of 25 – 30 study hours (teaching activities and individual study).