SYLLABUS

1. Information on the study programme

1.1. Higher education institution	West University of Timisoara
1.2. Faculty	Mathematics and Computer Science
1.3. Department	Computer Science
1.4. Study program field	Computer Science
1.5. Study cycle	postgraduate
1.6. Study programme	Artificial Intelligence and Distributed Computing

2. Information on the course

2.1. Course title			Methodology of Research activity				
2.2. Lecture instructor			-				
2.3. Seminar / laboratory instructor			Prof. Dr. Daniela Zaharie, Mircea Marin; Darian Onchis				
2.4. Study year	1	2.5. Semester	1	2.6. Examination type	C	2.7. Course type	M

3. Estimated study time (number of hours per semester)

3.1. Attendance hours per week	0	out of which: 3.2 lecture	-	3.3. seminar / laboratory	2
3.4. Attendance hours per semester	0	out of which: 3.5 lecture	-	3.6. seminar / laboratory	28

Distribution of the allocated amount of time*	**hours**
Study of literature, course handbook and personal notes	28
Supplementary documentation at library or using electronic repositories	20
Preparing for laboratories, homework, reports etc.	12
Exams	6
Tutoring	6
Other activities…	0

3.7. Total number of hours of individual study	72
3.8. Total number of hours per semester	100
3.9. Number of credits (ECTS)	4

4. Prerequisites (if it is the case)

4.1. curriculum	-
4.2. competences	-

5. Requirements (if it is the case)

5.1. for the lecture	-
5.2. for the seminar / laboratory	Laboratory with video projector and PCs

6. Specific acquired competences

Professional competences	• Ability to prepare and conduct a research plan • Ability to collect and prepare a synthesis of relevant bibliographical resources
Transversal competences	• Ability to prepare a report • Ability to prepare a presentation

7. Course objectives

7.1. General objective	• Acquire the knowledge necessary to handle a research activity
7.2. Specific objectives	• Apply the knowledge about research activities to the master dissertation thesis

8. Content

8.1. Lecture		**Teaching methods**	**Remarks, details**
Recommended literature			
8.2. Seminar / laboratory		**Teaching methods**	**Remarks, details**
Seminars 1 and 2: General presentation of this study programme; research directions of our department members		Presentation, Conversation	
Seminar 3 and 4: What is research? Towards innovative thinking. From existing result to new results. Documentation.		Presentation, Conversation, Examples	Materials of the web site https://staff.fmi.uvt.ro/~dana.petcu/seminar.htm
Seminar 5: How to write a scientific paper		Presentation, Conversation, Examples	Materials of the web site https://staff.fmi.uvt.ro/~dana.petcu/seminar.htm
Seminar 6 and 7: Use of editors for scientific texts		Presentation, Conversation, Examples	Materials of the web site https://staff.fmi.uvt.ro/~dana.petcu/seminar.htm
Seminar 8: Skeleton of a report of state-of-		Presentation, Conversation, Examples	

art in a specific domain			
Seminar 9: Validation and reproducibility of results in experimental research.		Presentation, Conversation, Examples	[14]
Seminar 10: Preparing an oral presentation		Presentation, Conversation, Examples	Materials of the web site https://staff.fmi.uvt.ro/~dana.petcu/seminar.htm
Seminar 11-12: Critical analysis. Peer-reviewing.		Presentation, Conversation, Examples	Materials of the web site https://staff.fmi.uvt.ro/~dana.petcu/seminar.htm
Seminar 13-14: Presentation of the state-of-the-art report		Presentation, Conversation, Examples	Materials of the web site https://staff.fmi.uvt.ro/~dana.petcu/seminar.htm

Recommended literature

1. C.C. Gaither, Alma E Cavazos-Gaither, Scientifically Speaking: A Dictionary of Quotations, 2nd Edition, Taylor & Francis, 2000
2. Sinclair Goodlad, c - A Handbook for Scientists, Engineers and Physicians on How to Improve Technical Presentations, Imperial College Press, 1996
3. Martha Davis, Scientific Papers and Presentations, Second Edition, Elsevier, 2004
4. Michael J. Katz, From Research to Manuscript: A Guide to Scientific Writing, Springer, 2006
5. Jennifer Peat, Elizabeth Elliott, Louise Baur, Victoria Keena, Scientific Writing: Easy When You Know How, BMJ Books, 2002
6. Jean-Luc Lebrun, Scientific Writing: A Reader and Writer's Guide, World Scientific Publishing Company, 2007
7. Michael Alley, The Craft of Scientific Presentations : Critical Steps to Succeed and Critical Errors to Avoid, Springer, 2007
8. Ann M. Koerner, Guide to Publishing a Scientific Paper, Bioscript Press, 2004
9. Philip Rubens, Science and Technical Writing: A Manual of Style, Second Edition, Routledge, 2000
10. Robert A. Day , Barbara Gastel, How to Write & Publish a Scientific Paper, 6th Edition, Greenwood Press, 2006
11. Rita S. Brause, Writing Your Doctoral Dissertation: Invisible Rules for Success, Routledge, 2005
12. Justin Zobel, Writing for Computer Science, Springer, 2004
13. William E. Russey, Hans Friedrich Ebel, Claus Bliefert, How to Write a Successful Science Thesis: The Concise Guide for Students, Wiley, 2006

14. National Academies of Sciences, Engineering, and Medicine 2019. Reproducibility and Replicability in Science. Washington, DC: The National Academies Press. https://doi.org/10.17226/25303.

9. Correlations between the content of the course and the requirements of the professional field and relevant employers.

10. Evaluation

Activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Weight in the final mark
10.4. Lecture			
10.5. Seminar / laboratory	The students should prepare during the semester: 1. A research plan 2. A report containing a state of the art in the research field they choose 3. A relevant and up to date bibliography	Oral examination	50%
	Oral presentation of the state-of-the-art report		50%
10.6. Minimum needed performance for passing			
General understanding of a research activity			

Date of completion

15.09.2023

Signature (seminar instructor)

Date of approval

Signature (director of the department)