SYLLABUS

1. Information regarding the programme

1.1 Higher education institution	**Babeş-Bolyai University of Cluj-Napoca**
1.2 Faculty	**Faculty of Mathematics and Computer Science**
1.3 Department	**Doctoral School in Mathematics and Computer Science**
1.4 Field of study	**Computer Science**
1.5 Study cycle	**Doctoral studies**
1.6 Study programme	**TRAINING PROGRAM BASED ON ADVANCED ACADEMIC STUDIES**

2. Information regarding the discipline

2.1 Name of the discipline			**Academic ethics and integrity. General methods of research and methodology of writing scientific papers**				
2.2 Course coordinator			**Prof. dr. Bazil Pârv**				
2.3 Seminar coordinator			**Prof. dr. Bazil Pârv**				
2.4. Year of study	**1**	2.5 Semester	**1**	2.6. Type of evaluation	**C**	2.7 Type of discipline	**Compulsory**

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

3.1 Hours per week	**3**	Of which: 3.2 course	**2**	3.3 seminar/laboratory	**1 sem**
3.4 Total hours in the curriculum	**36**	Of which: 3.5 course	**24**	3.6 seminar/laboratory	**12**
Time allotment:					hours
Learning using manual, course support, bibliography, course notes					**61**
Additional documentation (in libraries, on electronic platforms, field documentation)					**67**
Preparation for seminars/labs, homework, papers, portfolios and essays					**55**
Tutorship					**21**
Evaluations					**10**
Other activities:					**-**

3.7 Total individual study hours	**214**
3.8 Total hours per semester	**250**
3.9 Number of ECTS credits	**10**

4. Prerequisites (if necessary)

4.1. curriculum	
4.2. competencies	

5. Conditions (if necessary)

5.1. for the course	Videoprojector, Internet access	
5.2. for the seminar /lab activities	Videoprojector, Internet access	Laboratory with computers; high level programming language environment

6. Specific competencies acquired

Professional competencies	● gaining knowledge on academic ethics and integrity ● understanding of concepts, methods, and models used in research activities ● understanding of principles governing the design and realization of research activities ● gaining knowledge on how to write, publish, review, and communicate scientific results
Transversal competencies	● compliance with principles of academic ethics and integrity ● ability to review a scientific work ● ability to perform effective and rigorous research work ● proactive and ethical conduct in all research activities

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

7.1 General objective of the discipline	Acquiring knowledge on how to perform research work in accordance with the principles of academic ethics and integrity
7.2 Specific objective of the discipline	● Producing a summary of main results pertaining to a chosen computer science research domain/area ● Writing reports on a given topic ● Gaining of research skills, including writing of a research paper complying all principles of academic ethics and integrity

8. Content

8.1 **Course**	**Teaching methods**	**Remarks**
1. Definitions. Computer science subjects. ACM classification system	Interactive exposure Explanation Conversation Didactical proof	
2. Research in computer science: theoretical, experimental, applied	Interactive exposure Explanation Conversation Didactical proof	
3. Dissemination of research. Journals and conferences. Organization of research activity	Interactive exposure Explanation Conversation Didactical proof	
4. Writing a research paper. Rewiewing a research paper. Acceptance criteria. Presenting papers at scientific conferences	Interactive exposure Explanation Conversation Didactical proof	
5. Assessing scientific research: journals, proceedings, researchers. National and international standards	Interactive exposure Explanation Conversation Didactical proof	
6. Rankings: subjects, journals, conferences, publishers, academic institutions	Interactive exposure Explanation Conversation	

	Didactical proof	
7. Research funding	Interactive exposure Explanation Conversation Didactical proof	
8. Academic ethics and integrity (1): definitions, general ethical issues of scientific research	Interactive exposure Explanation Conversation Didactical proof	
9. Academic ethics and integrity (2): General Ethical Code in Scientific Research. The legal framework	Interactive exposure Explanation Conversation Didactical proof	
10. Academic ethics and integrity (3): General and specific objectives of the National Strategy of Research, Development and Innovation 2014-2020	Interactive exposure Explanation Conversation Didactical proof	
11. Academic ethics and integrity (4): Ethical issues in fundamental and interdisciplinary research	Interactive exposure Explanation Conversation Didactical proof	
12. Academic ethics and integrity (5): European Union. Documents of European Commission	Interactive exposure Explanation Conversation Didactical proof	
13. Computer science in Romania	Interactive exposure Explanation Conversation Didactical proof	

References
1. The 2012 ACM Computing Classification System https://www.acm.org/publications/class-2012
2. ACM Council, Code of Ethics, http://www.acm.org/about/code-of-ethics
3. B. Buchberger, Thinking, Speaking, Writing, http://www.risc.jku.at/people/buchberger/thinking_course.html
4. P.Edwards: How to give an academic talk, http://pne.people.si.umich.edu/PDF/howtotalk.pdf
5. M. Frenţiu, I.A.Rus, Metodologia Cercetării Ştiinţifice în Informatică, Ed. Presa Universitară Clujeană, 2014.
6. Hirsch, An index to quantify an individual's scientific research output, http://www.pnas.org/content/102/46/16569.full
7. The Clarivate Analytics Impact Factor, https://clarivate.com/essays/impact-factor/
8. R.Kitchin,& D. Fuller, The Academic' Guide to Publishing, SAGE Publications, London, 2005.
9. H.F. Moed, Citation Analysis in Research Evaluation, Springer, 2005.
10. M.A.Nielsen, Principles of Effective Research, http://michaelnielsen.org/blog/principles-of-effective-research/
11. University ranking, http://www.topuniversities.com/university-ranking-articles/
12. J.Radel, Oral Presentations, http://people.eku.edu/ritchisong/oralpres.html
13. V.Rus, Fondarea informaticii clujene, Editura Albastră, Cluj-Napoca, 1997.
14. I.A.Rus, E.Muntean, Matematica şi Informatica, trecut, prezent şi viitor, Ed.Promedia-Plus, Cluj-Napoca,1998.
15. B. Spillman, I. Parberry, How to Present a Paper: A Speaker's Guide, http://www.sfu.ca/~jeffpell/Ling480/ParberryMembrane.pdf
16. Codul etic al UBB, http://www.ubbcluj.ro/ro/despre/organizare/files/etica/Codul_Etic_al_UBB.pdf
17. IEEE Citation Reference https://ieee-dataport.org/sites/default/files/analysis/27/IEEE%20Citation%20Guidelines.pdf

18. Istoria online a informaticii romanesti https://ro.wikipedia.org/wiki/Istoria_informaticii_%C3%AEn_Rom%C3%A2nia		
8.2 **Seminar**	**Teaching methods**	**Remarks**
Document writing guide	Conversation	
Research proposal writing guide. Ethical issues	Conversation	
Choice of individual research topic RT	Analysis, conversation	Due date week 4
Writing of research reports (R1-R3) referring to		
R1. Presentation of a researcher in the field of RT		Due date week 5
R2. Review of a research paper in the field of RT		Due date week 8
R3. Writing a research paper in the field of RT		Due date week 12

Bibliografie
1. M. Berndtsson, J. Hansson, B. Olsson, B. Lundell, *Thesis Projects. A Guide for Students in Computer Science and Information Systems*, 2nd ed., Springer, 2008 http://www.inf.unibz.it/~calvanese/teaching/2017-02-PhD-RM/material/Berndtsson etal - Thesis Projects. A Guide for Students in CS and IS - 2008.pdf
2. M. Derntl, *Basics of research paper writing and publishing*, Int. J. Technology Enhanced Learning, Vol. 6, No. 2, 2014, http://dbis.rwth-aachen.de/~derntl/papers/misc/paperwriting.pdf
3. M. Frenţiu, I.A.Rus, *Metodologia cercetării ştiinţifice în informatică*, Ed. Presa Universitară Clujeană, 2014.

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

- Courses with similar content are taught in the major universities in Romania and abroad offering similar study programs
- This course follows the IEEE and ACM Curriculla Recommendations for Computer Science studies

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the grade (%)
10.4 Course	Course content	How the course knowledge is used to prepare the reports R1-R3	20%
10.5 Seminar	Seminar work	Active attendance	10%
	Grades for	RT choice	10%
		R1	10%
		R2	10%
		R3	40%

10.6 Minimum performance standards
- All reports should be sent to the instructor in order to pass the exam
- The minimum grade for passing the exam is 5 (on a scale from 1 to 10)
- The student must prove that she/he is able to review and to write a research paper

Date	Signature of course coordinator	Signature of seminar coordinator
30.06.2021	Prof. dr. Bazil Pârv	Prof. dr. Bazil Pârv

Date of approval	Signature of the head of doctoral school
07.07.2021	Prof. dr. Gabriela Czibula