

SYLLABUS / FIȘA DISCIPLINEI
1. Information on the study programme / Date despre programul de studii

1.1. Institution / Instituția de învățământ superior	Universitatea de Vest din Timișoara
1.2. Faculty / Facultatea	Matematică și Informatică
1.3. Department / Departamentul	Computer Science (Informatică)
1.4. Study program field	Computer Science (Informatică)
1.5. Study cycle/ Ciclul de studii	Bachelor / licență
1.6. Study programme / Programul de studii / calificarea*	Computer Science : <i>Database administration / Administrator baze de date - 252101; Computer network administration / Administrator de rețea de calculatoare - 252301; Analyst / Analist - 251201; Research assistant in computer science / Asistent de cercetare în informatică - 214918; Teacher in secondary schools / Profesor în învățământul gimnazial - 233002; Programmer / Programator - 251202; Software systems designers / Proiectant sisteme informatice - 251101</i>

2. Information on the course / Date despre disciplină

2.1. Title of the course / Denumirea disciplinei	Methods and Practices in Informatics						
2.2. Teacher in charge of the course / Titularul activităților de curs	Conf. Dr. Adrian Crăciun						
2.3. Teacher in charge of the seminar / Titularul activităților de seminar	Conf. Dr. Adrian Crăciun						
2.4. Study year / Anul de studii	1	2.5. Semester / Semestrul	2	2.6. Examination type / Tipul de evaluare: E(xam)/C(olloquim)	C	2.7. Course type / Regimul disciplinei: M(andatory)/ E(lective)/ F(acultative)	E

3. Estimated study time (number of hours per semester) /Timpul total estimat (ore pe semestru al activităților didactice)

3.1. Attendance hours per week / Număr de ore pe săptămână	3	out of which din care: 3.2 lecture/ curs	2	3.3. seminar/laborator	1
3.4. Attendance hours per semester / Total ore din planul de învățământ	42	out of which: 3.5 lecture / curs	28	3.6. seminar/laborator	14
Distribution of the allocated amount of time / Distribuția fondului de timp*					hours/ ore
Individual study /Studiu după manual, suport de curs, bibliografie și notițe					15
Supplementary documentation at library or using electronic repositories / Documentare suplimentară în bibliotecă, pe platformele electronice de specialitate					10
Preparing for laboratories, homework, reports etc. /Pregătire seminarii/laboratoare, teme, referate, portofolii și eseuri					15
Exams / Examinări					2
Tutoring / Tutorat					11

3.7. Total number of hours of individual study / Total ore studiu individual	53
3.8. Total number of hours per semester / Total ore pe semestru	95
3.9. Number of credits (ECTS) / Număr de credite	4

4. Prerequisites (if it is the case) / Preconțiții (acolo unde e cazul)

4.1. curriculum / de curriculum	- Programming I, Algorithms I.
4.2. skills / de competențe	- basic programming skills, algorithmic thinking.

5. Requirements (if it is the case) / Condiții (acolo unde e cazul)

5.1. for the lecture / de desfășurare a cursului	Online/Whiteboard, projector. (to be determined)
5.2. for the seminar, laboratory / de desfășurare a seminarului/laboratorului	Online / Whiteboard, projector, computers: internet access, LaTeX, advanced LaTeX editors. (to be determined)

6. Acquired skills / Competențe specifice acumulate

Professional skills / Competențe profesionale	<p>Cognitive: An overview of the field of computer science.</p> <p>Technical: How to find information (working with literature). How to write a scientific paper. Standards for typesetting: TeX, LaTeX. How to make a presentation. Slides with Beamer. Posters.</p> <p>Affective-cognitive: Understand the role of standard methods and activities in organizing scientific work efficiently, apply said standards in everyday activities as students.</p>
Transversal skills / Competențe transversale	Communicate, gather information, identify problems, engage efficiently in different scientific and technical domains.

7. Objectives of the course / Obiectivele disciplinei (reieșind din grila competențelor specifice acumulate)

7.1. General objective / Obiectivul general al disciplinei	Give an overview of the field of computer science, with a description of the various subdomains focused on the main activities: theory, modelling, design. Then present how information can be extracted from literature, what are the valid sources of such information. How to write a scientific paper to transmit efficiently the results of work. How to present the results of work.
7.2. Specific objectives / Obiectivele specifice	<p>Knowledge: Identify, access, organize scientific knowledge. Write efficient, standard scientific papers in which own work is presented, using standard typesetting tools.</p>

	<p>Abilities: Use standard tools to find, organize scientific information. Use standard typesetting tools (LaTeX, BibTeX), to write and present scientific and technical information.</p> <p>Aptitudes: Learn how to communicate effectively in writing and spoken form.</p>
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8. Content / Conținuturi*

8.1. Lecture / Curs	Teaching strategies / Metode de predare	Remarks, details / Observații
L1. Organization. How to be a student (@uvt, @math.uvt). Computer science (theory-modelling-design). Activities în computer science.	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L2. Computer science, overview (I):(1) Algorithms and data structures (2) Programming languages (3) Architecture (4) Symbolic and numeric computation (5) Operating systems	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L3. Computer science, overview (II): (6) Software engineering and methodologies (7) Database systems and information retrieval (8) Artificial intelligence (9) Human-computer interaction	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L4. Working in computer science. Listening, reading, thinking, speaking, writing. Peer review.	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L5. Reading (I). Resources in computer science	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/

L6. Writing (I). Papers in computer science	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L7. Writing(II). Tools.	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L8. Reading (II). Reviewing.	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L9. Presentations (I). Structure.	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L10. Presentations (II). Tools.	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L11. Presentations (III) Posters	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L12. Experiments in computer science.	Q&A/Lecture/Dialogue	Lecture materials available at https://staff.fmi.uvt.ro/~adrian.craciun/
L13. Examination: presentations (I).	Q&A/Lecture/Dialogue	Student's presentations.
L14. Examination: presentations (II).	Q&A/Lecture/Dialogue	Student's presentations.
Recommended bibliography / Bibliografie <ul style="list-style-type: none"> • Bruno Buchberger. Thinking, Speaking, Writing. Manuscript. 1999 • Peter J. Denning, Douglas E. Comer, David Gries, Michael C. Mulder, Allen Tucker, A. Joe Turner, Paul R. Young. <i>Computing as a Discipline</i>. Communications of the ACM, Vol. 32, No 1, pp. 9-23, January 1989. • Peter J. Denning, <i>Computer Science: The Discipline</i>, in <i>Encyclopedia of Computer Science</i> (A. Ralston, D. Hemmendinger, eds.), Wiley, 2000. • Allen B. Tucker, <i>Handbook of Computer Science</i>, Chapman&Hall/CRC in cooperation with ACM, 2004. 		
8.2. Seminar, lab / Seminar, laborator	Teaching/learning strategies / Metode de predare/ învățare	Remarks, details / Observații
S01-S07. Practical work based on	Summary of lecture materials.	

the topics discussed in the lectures.	Presentation (by students). Dialogue.	
Recommended bibliography / Bibliografie Frank Mittelbach, Michel Goossens, Johannes Braams, David Carlisle, Chris Rowley. <i>The LaTeX Companion (Tools and Techniques for Computer Typesetting)</i>, Addison-Wesley Professional; 2nd edition (May 2, 2004)		

9. Correlations between the content of the course and the requirements of the IT field / Coroborarea conținuturilor disciplinei cu așteptările reprezentanților comunității epistemice, asociațiilor profesionale și angajatorilor reprezentativi din domeniul aferent programului

This lecture will provide the necessary information to work in computer science (solve problems, present results in written and oral form) that are standard in the scientific and industrial community.
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10. Evaluation / Evaluare*

Activity / Tip de activitate	10.1. Evaluation criteria / Criterii de evaluare**	10.2. Evaluation methods / Metode de evaluare***	10.3. Weight in the averaged mark / Pondere din nota finală
10.4. Lecture / Curs	10: excellent (outstanding performance with only minor errors), 8-9: very good (above the average standard but with some errors), 6-7: satisfactory (fair, but with significant shortcomings), 5: sufficient (performance meets minimum criteria), 0-4: fail (significant work has to be done)	Evaluation consists of: - writing a paper, then submit through Easychair - evaluating 3 papers through Easychair - giving a presentation on the subject of the paper.	40% 30% 40%
10.5. Seminar/ lab			
10.6. Minimal knowledge for passing / Standard minim de performanță			
Basic knowledge of the concepts presented in the lecture: explain and apply. Minimal knowledge is measured by reaching the grade for passing the exam (5).			

Date/ Data completării
Sept 2020

Signature (lecture) /
Semnătura titularului de curs

Signature (seminar)
Semnătura titularului de seminar

Signature (director of the department)
Semnătura directorului de departament