SYLLABUS [1]

1. Information about the program

1.1 Higher education institution	Politehnica University of Timisoara
1.2 Faculty[2] / Department [3]	Faculty of Automation and Computing / Department of Computer and Information Technology
1.3 Chair	▬
1.4 Field of study (name/code[4])	Computer and Information Technology
1.5 Study cycle	Master
1.6 Study program (name/code/qualification)	Master of Information Technology

2. Information about discipline

2.1 Name of discipline	Research Topics in IT						
2.2 Coordinator (holder) of course activities	Prof. Dr. habil. Eng. Mihai V. Micea						
2.3 Coordinator (holder) of applied activities [5]	N/A						
2.4 Year of study [6]	1	**2.5** Semester	1	**2.6** Type of evaluation	E	**2.7** Type of discipline	Di

3. Total estimated time (direct activities (fully assisted), partially assisted activities and unassisted activities [7])

3.1 Number of hours fully assisted/week	2 ,of which:	**3.2** course	2	**3.3** seminar/laboratory/project	
3.1* Total number of hours fully assisted/sem.	28 ,of which:	**3.2*** course	28	**3.3*** seminar/laboratory/project	
3.4 Number of hours partially assisted/week	12 ,of which:	**3.5** project, research	12	**3.6** training	**3.7** hours designing M.A. dizertation
3.4* Number of hours partially assisted/ semester	168 ,of which:	**3.5*** project, research	168	**3.6*** training	**3.7*** hours designing M.A. dizertation
3.8 Number of hours of unassisted activities/ week	2.5 ,of which:	Additional documentation in the library, on specialized electronic platforms, and on the field			0.5
		Study using a manual, course materials, bibliography and lecture notes			1
		Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays			1
3.8* Total number of hours of unasssited activities/ semester	35 ,of which:	Additional documentation in the library, on specialized electronic platforms, and on the field			7
		Study using a manual, course materials, bibliography and lecture notes			14
		Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays			14
3.9 Total hrs./week [8]	16.5				
3.9* Total hrs./semester	231				
3.10 No. of credits	6				

4. Prerequisites (where applicable)

4.1 Curriculum	●
4.2 Competencies	●

5. Conditions (where applicable)

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[1] The form corresponds to the Syllabus promoted by OMECTS 5703/18.12.2011 (Annex 3), updated based on the Specific Standards ARACIS of December 2016.
[2] The name of the faculty which manages the educational curriculum to which the discipline belongs
[3] The name of the department entrusted with the discipline, and to which the course coordinator/holder belongs.
[4] Fill in the code provided in HG no. 376/18.05.2016 or in HG similars annually updated.
[5] The applied activities refer to: seminar (S) / laboratory (L) / project (P) / practice/training (Pr).
[6] The year of study to which the discipline is provided in the curriculum .
[7] Within UPT, the number of hours from 3.1*, 3.2*,…,3.9* are obtained by multipling by 14 (weeks) the number of hours from 3.1, 3.2,…, 3.9. The information from 3.1, 3.4 și 3.8 are keys of verification used by ARACIS under the form: (3.1)+(3.4) ≥ 28 hrs./week and (3.9) ≤ 40 hrs./week.
[8] The total number of hours/week is obtained by summing up the number of hours from 3.1, 3.4 şi 3.8.

5.1 of the course	• Medium size lecture room; • Lecture support: laptop, video projector, screen and whiteboard; • Internet connection.
5.2 to conduct practical activities	•

6. **Specific competencies** acquired through this discipline

Specific competencies	• General competencies and skills needed to research and study specialized documentation and scientific papers in the field of information technology; • Learn the main types of scientific publications, as well as the requirements and the procedures of publishing scientific papers; • Learn the main topics and issues regarding intellectual property, professional ethics and scientific paper review process.
Professional competencies ascribed to the specific competencies	• Advanced knowledge of the main topics and problems in the field of information technology; • Knowledge of the current technologies and abilities to select and apply them in the development of information technology projects; • Skills to critically analyze, innovate and research; • Advanced abilities of communication, interdisciplinary cooperation and team project management.
Transversal competencies ascribed to the specific competencies	• Behaving honorably, responsibly and ethical, according to the law, to ensure problem solving; • Identifying, describing and executing the processes of project management, by fulfilling various roles within the team, and describing the results in the field of activity, in a clear and concise manner, verbal and in writing, using the Romanian language and an international language; • Proving action and initiative spirit to get current with the knowledge at professional, economic and management levels.

7. **Objectives of the discipline** (based on the grid of specific competemcies acquired)

7.1 The general objective of the discipline	• To provide detailed knowledge on scientific research in the field of advanced information technologies.
7.2 Specific objectives	• Students will gain general competencies and skills needed to research and study specialized documentation and scientific papers in the field of information technology; • Students will learn the main types of scientific publications, as well as the requirements and the procedures of publishing scientific papers; • Students will also learn the main topics and issues regarding intellectual property, professional ethics and scientific paper review process.

8. **Content**

8.1 Course	Number of hours	Teaching methods
Research and study of specialized documentation and scientific papers in the field of advanced information technologies. Main types of scientific publications, the requirements and the procedures of publishing scientific papers. Main topics and issues regarding intellectual property, professional ethics and scientific paper review process.	28	Interactive lectures supported by PowerPoint presentations and video-projections, discussions, explanations and examples

Bibliography [9]

• State of the art journal and conference papers published recently in the field of advanced information technologies. IEEE and ACM online digital libraries, available online.
• P. Perry, "Research Tips of How to Get a PHd", Dublin City University, Ireland, 1995, available online.
• J.W. Chinneck, "How to Organize your Thesis", Carleton University, Ottawa, Canada, 1999, available online.
• M.V. Micea, "Ghid de redactare a lucrarii de diploma", Politehnica University of Timisoara, 2009, available online.
• M.V. Micea, "Ghid de redactare a prezentarii proiectului de diploma", Politehnica University of Timisoara, 2012, available online.
• M.V. Micea, "Intellectual Property: Course Support", Politehnica University of Timisoara, 2012, available online.
• A.J. Smith, "The Task of the Referee", IEEE, 1990, available online.

8.2 Applied activities [10]	Number of hours	Teaching methods

Bibliography [11]

9. **Coroboration of the content of the discipline with the expectations of the main representatives of the epistemic community, professional associations and employers in the field afferent to the program**

- This course provides fundamental knowledge and skills, needed for scientific research and publishing in the fields of information technology. The content of the course has been developed based on similar courses at high profile universities in the world (Harvard University, Berkeley University, University of Conneticut, etc.), as well as on the partnership, common projects and direct discussions with the research departments of important companies in the automotive, telecommunication and multimedia fields in Timisoara (Nokia, Continental, Hella, Movidius/Intel, etc.).

10. Evaluation

Type of activity	10.1 Evaluation criteria [12]	10.2 Evaluation methods	10.3 Share of the final grade
10.4 Course	• A review report submitted by each student on a selected scientific manuscript in the field of advanced information technologies; • Attendance at course lectures and participation at discussions on the research topics in the field.	• Evaluation of the review report submitted by each student; • Attendance at course lectures is counted on as a bonus.	100%
10.5 Applied activities	S:		
	L:		
	P:		

	Pr:		
	Tc-R[13]:		

10.6 Minimum performance standard (minimum amount of knowledge necessary to pass the discipline and the way in which this knowledge is verified [14]

- Knowledge of the main types of scientific publication, of the requirements and the main steps involved in the research and publication of scientific papers;
- Knowledge of the main topics and issues regarding intellectual property, professional ethics and scientific paper review process.

Date of completion	Course coordinator (signature)	Coordinator of applied activities (signature)
	…………………….………	…………………….………

Head of Department (signature)	Date of approval in the Faculty Council [15]	Dean (signature)
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[13] Tc-R= Homework-Reports
[14] For this point turn to "Ghidului de completare a Fişei disciplinei" found at: http://univagora.ro/m/filer_public/2012/10/21/ghid_de_completare_fisa_disciplinei.pdf
[15] The approval is preceeded by discussing the study program's board's point of view with redgards to the syllabus.