

FISA DISCIPLINEI Syllabus

1. Information about the program

1.1. University	West University of Timisoara
1.2. Faculty	PHYSICS
1.3. Department	PHYSICS
1.4. Study direction	PHYSICS
1.5. Study cycle	MASTER
1.6. Study program / qualification	PHYSICS AND TECHNOLOGY OF ADVANCED MATERIALS / according to COR: Analyst - 251201; Research assistant in physics - 211103; Physicist - 211101; Teacher - 233002;

2. Subject matter information

2.1. Subject matter	Specialization Practice PTAM 2401						
2.2. Subject teacher							
2.3. Subject applications teacher (seminar / laboratory)	Associate Professor Dr. Nicoleta Stefu						
2.4. Study year	2	2.5. Semester	2	2.6. Assessment type	V	2.7. Subject type	

3. Study time distribution

3.1. Nr. of hours/week	8	In which: 3.2 course	0	3.3. seminar/laboratory	8
3.4. Total hours in educational plan	112	In which: 3.5 course	0	3.6. seminar/laboratory	112
Time distribution:					hours
Study after lecture notes, bibliography or notes					30
Additional documentation in the library, electronic specialty platforms/ field					100
Seminar / laboratory preparations, homework, portfolio and essays					20
Tutoring					20
Exams					10
Other activities...					58
3.7. Total number of personal study hour		238			
3.8. Total number of hours in semester		350			
3.9. Number of credits		14			

4. Preconditions (where appropriate)

4.1. curriculum	•
4.2. Competences	• General competencies: the ability of analysis and synthesis; accumulation of basic general knowledge; proper use of terminology in physics and computer science in written and oral

	communication in English; Basic Skills PC operating; ability to work independently and in teams.
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5. Conditions (where appropriate)

5.3 for course	
5.4 for seminar/lab	

6. Specific skills gained

Professional competences	<p>C1. Learning of a coherent and functional fundamental knowledge system in material science;</p> <p>C2. Capacity to characterize specific materials properties in relation with their applications;</p> <p>C3. Use of methods for investigation of the structure of materials;</p> <p>C4. Comparison of experimental results with theoretical models.</p>
Transversal competences	<p>T1. Ability to obtain and analyse information through ICT</p> <p>T2. Team work</p> <p>T3. Capacity for communication</p> <p>T4. Reflective thinking</p>
Key competences	<p>K1. Literacy competences</p> <p>K2. Mathematical competences</p> <p>K3. Digital competences</p> <p>K4. Efficient use of informational and communication resources in English language.</p> <p>K5. Learning competences</p>

7. Course Objectives

7.1 Main Objective	<ul style="list-style-type: none"> OG: To develop practical abilities to apply fundamental knowledge related to material science gained in previous courses.
7.2 Specific objectives	<p>O1: to learn and get familiarized to specific language for the description of physical phenomena in the field of material science, as well as the laws governing physical phenomena</p> <p>O2: to learn how to solve problems</p> <p>O3: to acquire the skills needed to perform laboratory measurements, data acquisition and computer data processing,</p> <p>O4: to learn how to carry out scientific reports.</p>

8. Table of content

8.1 Course –	Teaching methods	Observations
8.2 Seminar / labs	Teaching methods	Observations/Bibliography
Current investigation techniques in the field of materials science	Presentation, interactive discussions, analysis, summaries and reports	56 hours
Current research results in the applications of smart materials	Presentation, interactive discussions, analysis, summaries and reports	56 hours
Bibliography		

9. Relation between subject content and the expectations of employers

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10. Assesment

Activity type	10.1 Assesment criteria	10.2 Assesment method	10.3 Percent in final mark
10.4 Course			
10.5. Seminar/labs	-the clarity, logic and scientific level of the presentation will be evaluated; -his/her work in the group will be assessed - the problems that occurred and the way they were solved during the activity will be evaluated	- Presentation of a final report, in English - continuous evaluation of reports and homework	30% 70%
10.6 Minimum performance standards			
<ul style="list-style-type: none"> To be familiarized with the specific language for the description of physical phenomena in the field of material science, as well as with the laws governing physical phenomena. 			

- Presentation of the scientific report at the end of the semester.

Completion date: 16.02.2022

Subject teacher's signature:
Associate Professor Dr. Nicol



Subject applications teacher's signature:
Associate Professor Dr. Nicoleta S



Department Director' Signature:

