SYLLABUS

1. Information about the study programme

1.1 Institution of higher education	West University of Timisoara
1.2 Faculty	PHYSICS
1.3 Department of	PHYSICS
1.4 Field of study	PHYSICS
1.5 Study cycle	MASTER
1.6 Study programme	METODE AVANSATE DE CERCETARE IN FIZICA/ ADVANCED RESEARCH METHODS IN PHYSICS

2. Information about the subject/discipline

2.1 Name	Scientific research internship ARMP 2402						
2.2 Course coordinator							
2.3 Seminar coordinator	Conf. dr. Marius Stef						
2.4 Year of study	2	**2.5 Semester**	2	**2.6 Type of assessment**	E[1]	**2.7 Type of discipline**	DS DO

3. Total estimated time (hours of teaching per semester)[2]

3.1 Number of hours per week	**4**	**3.2 course**	**0**	**3.3 seminar/laboratory**	**4**
3.4 Total hours in the curriculum	**48**	**3.5 course**	**0**	**3.6 seminar/laboratory**	**48**

Distribution of time:	hours
Study based on Instructions, course materials, bibliography and notes	20
Additional documentation library, specialized electronic platforms / field	50
Training seminars / laboratories, homework, essays, portfolios and essays	30
Tutoring	50
Examinations[3]	2
Other activities	

3.7 Total hours of individual study	150
3.8 Total hours per semester[4]	200
3.9 Number of credits	8

4. Prerequisites (where applicable)

---

[1] According to article 37, paragraph (1) of the Higher Education Law no. 199/2023, with subsequent amendments and additions, "the academic success of a student during a study program is determined by verifying the acquisition of the expected learning outcomes through exam-type evaluations and evaluation throughout the semester".

[2] The total number of contact hours and individual study hours will be aligned with the number of credits allocated to the course. One credit corresponds to a total between 25 and 30 hours of teaching activities and individual study. At the level of academic departments may establish, by discipline categories, the exact equivalence between one credit and the number of hours.

[3] The hours corresponding to examinations are added only to the point 3.8 – The total hours per semester, not to be added to the point 3.7 – Total hours of individual study.

[4] Total hours per semester = total hours in the curriculum + total hours of individual study + hours allocated to examinations.

Adresă poștală: Bd. Vasile Pârvan nr. 4, cod poștal 300223, Timișoara, jud. Timiș, România
Număr de telefon: +40-(0)256-592.300 (310)
Adresă de e-mail: secretariat@e-uvt.ro
Website: www.uvt.ro

4.1 of curriculum	
4.2 of skills	

5. Conditions (where applicable)

5.1 for the course	
5.2 for the seminar	

6. Discipline objectives - expected learning outcomes which contribute to the completion and passing the discipline

Knowledge	• to know the advanced notions in the field of Physics, which involves a critical understanding of theories and principles • to know the language specific to the field • to know physical phenomena and interpret them by formulating hypotheses and operationalizing key concepts and the appropriate use of laboratory equipment
Skills	• to compare the theoretical results provided by the specialized literature with those of an experiment carried out within a professional project • To describe physical systems using specific theories and tools (experimental and theoretical models, algorithms, schemes, etc.) • to use the computer and calculation programs for the numerical simulation of the physical processes. • to apply the principles and laws of physics in solving theoretical or practical problems, under conditions of qualified assistance • to characterize the specific properties of some materials taking into account the field in which they are used
Responsibility and autonomy	• to critically analyze a specialized report, scientific communication with a medium degree of difficulty in the field of physics • to be autonomous in the context of handling laboratory equipment, including in situations requiring an interdisciplinary approach • to autonomously use information sources and resources for communication and assisted professional training (Internet portals, specialized software applications, databases, online courses, etc.) both in Romanian and in a language of international circulation

7. Contents

The platform through which the course materials in electronic format and other learning/bibliographic resources can be accessed: e-learning.uvt.ro

7.1 Course	Teaching methods	Comments
Bibliography:		
7.2. Seminar	Teaching methods	Comments
Bibliography:		

8. Corroboration of the course contents with the epistemic expectations of the community representative, professional associations and representative employers of the programme itself

Adresă poștală: Bd. Vasile Pârvan nr. 4, cod poștal 300223, Timișoara, jud. Timiș, România
Număr de telefon: +40-(0)256-592.300 (310)
Adresă de e-mail: secretariat@e-uvt.ro
Website: www.uvt.ro

9. Use of tools based on generative artificial intelligence

To complete the tasks defined in the assessment section the use of generative AII tools is permitted for generating ideas/slogans/designs/images/text rewriting, editing/reviewing
The most well-known examples of generative AII tools include, but are not limited to: ChatGPT, Google Gemini, Copilot for text, or MidJourney for images.
Each student will specify, in a statement written separately for each assignment, according to the model in Annex 3 of the Regulation on the use of generative artificial intelligence in the educational process at UVT, the tool they used, how it was used, and the part of the assignment in which it was used. The statement will be included by the student at the beginning of the submitted assignment.

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Percentage of the final mark
10.4 Course			
10.5 Practical activities	Knowledge for grade 10 Attendance: 100% Carrying out the work, theoretical presentation, working method, data processing.	*Formative assessment:* The laboratory activity ends with an evaluation in which the student explains a random laboratory work from those carried out during the semester.	**100%**
10.6 Minimum performance standards			
Minimum knowledge for grade 5: Attendance: minimum 80% of the works; The summary approach of a laboratory work from those carried out.			

Date of submission: **Titular of the course**:

Signature:

Date of approval in department: **Seminary titular**:

Signature:

HEAD OF THE DEPARTMENT:

Associate Professor Dr. Nicoleta STEFU

Adresă poștală: Bd. Vasile Pârvan nr. 4, cod poștal 300223, Timișoara, jud. Timiș, România
Număr de telefon: +40-(0)256-592.300 (310)
Adresă de e-mail: secretariat@e-uvt.ro
Website: www.uvt.ro