WSB University							
Field of study: Computer Science							
Module / course: Physics							
Educational profile: practical							
Education cycle: I cycle studies							
Number of hours per semester	1		2		3		4
	I	II	III	IV	V	VI	VII
Full time studies (L/C/lab/pr/e)		50					
Part-time studies (L/C/lab/pr/e)							
LANGUAGE OF CLASSES	**English**						
LECTURER	Aleksander Dawid prof. of WSB University						
FORM OF CLASSES	**Lecture**						
COURSE OBJECTIVES	Obtaining basic knowledge of physics to understand the operation of devices used in computer science.						

References to course objectives:		**Description of educational results**	**Verification of educational results**
Field of study	**PRK**		
Knowledge			
INF_W01	**P6S_WG**	The student has the knowledge in mathematics and physics necessary to formulate and solve typical tasks in the field of computer science.	Exam in the form of a test with open questions in the form of tasks.
Abilities			
INF_U09	**P6S_UW**	The student is able to use analytical, simulation and experimental methods to formulate and solve practical engineering tasks using the experience of the environment of IT engineers.	Solving physical problems in computer science.
INF_U01	**P6S_UW**	The student is able to obtain information from literature, databases and other sources; is able to integrate the information obtained, critically evaluate it, analyze it, interpret it, as well as draw conclusions and formulate and justify opinions using appropriate methods and tools, including advanced information and communication techniques.	Improving knowledge of physics
Social competences			
INF_K01	**P6S_KK**	The student is ready to critically assess his knowledge and received content on the achievements of computer science, recognize the importance of knowledge in solving cognitive and practical problems, and consult experts in the event of difficulties with independent solution of the problem.	Competence test
Students' workload (in didactic hours 1h did.=45 minutes)**			

Full- time Participation in lectures = 24 Participation in classes = 16 Preparation to classes = 6 Preparation to lectures = Preparation to an examination = Project tasks = e-learning =2 Credit/examination =2 others (indicate which) = **TOTAL: 50** **ECTS points: 2** **Including practical classes:**	**Part-time** Participation in lectures = Participation in classes = Preparation to classes = Preparation to lectures = Preparation to an examination = Project tasks = e-learning = Credit/examination = others (indicate which) = **TOTAL:** **ECTS points:** **Including practical classes:**

PREREQUISITES	Mathematics
COURSE CONTENT (Division to contact classes and e-learning)	**Online classes:** 1. Measurement (1h) 2. Classical mechanics (5h) 3. Thermodynamics. (1h) 4. Electromagnetism. (5h) 5. Electromagnetic waves. (2h) 6. Light and quantum physics. (2h) Supplementary materials in the form of presentations and video lectures.
LITERATURE (compulsory reading)	1. Richard P. Feynman, Matthew Sands, Robert B. Leighton, The Feynman Lectures on Physics, INGRAM PUBLISHER SERVICES US 2010. 2. D. Halliday, R. Resnick, J. Walker, Fundamentals of Physics 10th edition, Wiley, USA 2011
OPTIONAL LITERATURE	1. Clifford A. Pickover, The Physics Book, Sterling Publishing Co Inc, 2011 2. R. Shankar, Fundamentals of Physics II : Electromagnetism, Optics, and Quantum Mechanics, Yale University Press 2011
Publications related to the theme of the module	[1] Aleksander Dawid, GPU implementation of atomic fluid MD simulation, T*ask Quarterly,* 1(26) (2022) p. 25-37 [2] Aleksander Dawid, GPU-based parallel algorithm of interaction induced light scattering simulations in fluids, T*ask Quarterly,* 1(23) (2019) p. 5-17 [3] Aleksander Dawid, PSR-based research of feature extraction from one-second EEG signals: a neural network study, *SN Applied Sciences, 1(12) (2019) p. 1536*
TEACHING METHODS (Division to contact classes and e-learning)	**Online classes:** Encouraging lecture material analysis. Self-solving problems posed by the teacher at the laboratories. **E-learning:** Knowledge checking test.
TEACHING AIDS	Teams, whiteboard
PROJECT (if implemented in the framework of a classes module)	
FORM AND CONDITIONS OF ASSESSMENT	The condition of obtaining a credit is to obtain a positive grade in all forms of credit provided for in the curriculum, taking into account the quantitative criteria of grading specified in the Framework Student Evaluation System at the WSB University.

** L-lecture, C- classes lab- laboratory, pro- project, e- e-learning*