SYLLABUS in the discipline "Physics" for students of the first (bachelor's) level of higher education specialty 171 Electronics educational and professional program Systems, technologies and computer means of multimedia.

1.	Name of the faculty	Faculty of Information Radio Technologies and Technical Information Security
2.	Level of higher education	bachelor
3.	Code and name of the specialty	171 Electronics
4.	Type and name of educational program	educational and professional program: Systems, technologies and computer means of multimedia.
5.	Code and name of the discipline	Physics
6.	Number of ECTS credits	6
7.	Discipline structure (distribution by types and hours of study)	1st semester 90 hours, of which: lectures 20, practical 10, laboratory 12, consultations 6, independent work 42 2nd semester 90 hours, of which: lectures 20 hours, practical 8 hours,
		laboratory 8 hours, consultations 6 hours, independent work 48 hours.
8.	The schedule of studying the discipline	1 course, 1,2 semesters
9.	Prerequisites for studying the discipline	Knowledge of the main sections of higher mathematics, including mathematical analysis (differential and integral calculus), analytical geometry and linear algebra (actions with vectors), chemistry (atomic- molecular theory, structure of atoms and molecules)
10.	Discipline abstract	Content module 1. Physical foundations of mechanics. Theme 1. Kinematics. Theme 2. Dynamics of translational and rotational motion. Theme 3. Work and energy. Conservation laws. Theme 4. Mechanical oscillations. Content module 2. Electrostatics. Theme 5. Electric field in vacuum. Theme 6. Electric field in dielectrics. Theme 7. Conductors in an electric field. Theme 8. Direct current Content module 3. Magnetic field. Theme 9. Magnetic field in vacuum. Theme 10. Magnetic field in matter. Content module 4. Oscillations and waves. Theme 11. The phenomenon of electromagnetic induction. Theme 12. Electromagnetic field. Maxwell's equation. Theme 13. Electromagnetic oscillations. Laws of alternating current. Theme 14. Wave processes. Electromagnetic waves. Content module 5. Optics. Elements of quantum mechanics. Theme 15. Wave optics. Theme 16. Thermal radiation. Theme 17. Quantum optics.
11.	Competences, knowledge, skills, understanding, which is acquired by the applicant in higher education in the learning process	Competences that provide the study of the discipline: Ability to abstract thinking, analysis, the ability to navigate in the flow of scientific and technical information. Ability to apply knowledge in practical situations Ability to model physical phenomena, perform theoretical and experimental studies. Ability to learn independently, to master new knowledge

Process and analyze the results of scientific research, solve applied engineering problems in their specialty. 12. Learning outcomes of higher education The study of this discipline gives the student the opportunity to: Imove fastice of classical and modern physical sound to their application. The essence of physical phenomena, areas of their practical use, physical principles of modern technological equipment and apparatus in the field of professional activity; purpose and possibilities of application of the experimental equipment for carrying our physical research. Be able to: analyze the relationship of physical phenomena of their practical use, physical principles of modern technological equipment and approxement and process the results of these experiments highlight specific physical content nature; apply knowledge of physical laws to solve practical problems that arise during the development and operation of modern technology; plan and conduct the simplest physical experiments by physical experiment and process the results of the sec experiments, highlight specific physical content in the applied problems of the future specialty have: modern enthods experimental physical research and modular testing. 13. Assessment system according to each task for passing the errors of experiments. 14. Assessment system according to each task for passing the errors of experiments. 15. Assessment system according to each task for passing the errors of experiments. 16. To evaluate the student's work during the semester, the final rating O _{sci} activates which include practical classes, laboratory work and modular testing. 18. Assessment system according to evaluate the student's work during the semoster, the final rating O _{sci} activates which include			r					
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