

Документ подписан простой электронной подписью
 Информация о владельце:
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 Должность: и.о. директора Института цифрового развития
 Дата подписания: 03.07.2023 10:22:36
 Уникальный программный ключ:
 b47f96eea65a16e179f94dbf7fb0b10000e7ad4d

Discipline annotation

Discipline name	Физика / Physics
Summary	Elements of kinematics. Dynamics of a material point. Work and energy. Energy, work, power. Fundamentals of molecular physics and thermodynamics. Electrostatics: DC electric current: Magnetic field. Electromagnetic induction: Electromagnetic oscillations and waves: Wave properties of light. Elements of quantum optics: Elements of the physics of the atom and the atomic nucleus:
Learning outcomes of the discipline	- highlights the basic concepts, laws and models of mechanics, electricity and magnetism, the theory of oscillations and waves, optics, quantum physics, solid state, statistical physics and thermodynamics - applies the basic laws of physics in solving problems of professional activity; able to conduct a physical experiment and process its results - able to analyze the physical essence of the phenomena and processes underlying the functioning of microelectronic equipment, apply basic physical laws and models to solve problems of professional activity
Workload, c. u.	4c. u.
Reporting Forms	Graded test- 1st semester
List of essential and supplementary literature necessary for mastering the discipline	
Essential literature	1. Sivukhin, D. V. General course of physics: [study guide]: in 5 volumes / D. V. Sivukhin, Vol. 1, Mechanics. - 5th ed., reprint. - M.: FIZMATLIT, 2006. - 560 p.: ill. – Stamp: recommended by the Methodological Association. - ISBN 5-9221-0715-1, copies 5 2. Sivukhin, D. V. General course of physics: [study guide]: in 5 volumes / D. V. Sivukhin, Vol. 2, Thermodynamics and molecular physics. - 5th ed., Rev. - M.: FIZMATLIT, 2006. - 544 p.: ill. - Stamp: recommended by the Methodological Association. - ISBN 5-9221-0601-5, copies 5 3. Sivukhin, D. V. General course of physics: [study guide]: in 5 volumes / D. V. Sivukhin, Vol. 3, Electricity. - 5th ed., reprint. - M.: FIZMATLIT, 2006. - 656 p.: ill. - Stamp: recommended by the Methodological Association. - ISBN 5-9221-0673-2, copies 5 4. Sivukhin, D. V. General course of physics: [study guide]: in 5 volumes / D. V. Sivukhin, Vol. 4, Optics. - 3rd ed., reprint. - M.: FIZMATLIT, 2006. - 792 p.: ill. - Stamp: recommended by the Methodological Association. - ISBN 5-9221-0763-1, copies 5
Supplementary literature	1. Nikerov, V. A. Physics: modern course: textbook / V. A. Nikerov. - 2nd ed. - Moscow: Publishing and Trade Corporation "Dashkov and Co", 2016. - 452 p.: ill. - http://biblioclub.ru/. - ISBN 978-5-394-02349-1 2. Savelyev, I. V. Course of general physics: [study guide]: in 4 volumes / I. V. Savelyev; endorsed by I. V. Savelyev, Vol. 1, Mechanics. Molecular physics and thermodynamics. - M.: Knorus,

	2009. - 528 p.: ill. - Stamp: approved by the Academic Methodological Association. - App.: p. 505-515. - ISBN 978-5-85971-899-3 3. Savelyev, I. V. Course of general physics: [study guide]: in 4 volumes / I. V. Saveliev; endorsed by I. V. Savelyev, Vol. 2, Electricity and Magnetism. Waves. Optics. - M.: Knorus, 2009. - 576 p. - Stamp: approved by the Academic Methodological Association. - App.: p. 553-560. - Bibliography in subline note - ISBN 978-5-85971-898-6 4. Savelyev, I. V. Course of general physics: in 4 volumes: [study guide] / I. V. Saveliev; endorsed by I. V. Savelyeva, Vol. 3, Quantum Optics. Atomic physics. Solid state physics. Physics of the atomic nucleus and elementary particles. - M.: KNORUS, 2009. - 368 p.: ill. - Stamp: approved by the Academic Methodological Association. - Bibliography in subline note - ISBN 978-5-85971-900-6 5. Trofimova, T. I. Course of physics: study guide / T. I. Trofimov. - 20th ed., reprint. - M.: Academia, 2014. - 560 p. - Stamp: approved by the Academic Methodological Association. - ISBN 978-5-4468-0627-0
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