

Документ подписан простой электронной подписью
Информация о владельце:
ФИО: Петренко Вячеслав Иванович
Должность: и.о. директора Института цифрового развития
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Discipline annotation

Discipline name	Электротехника / Electrical Engineering
Summary	Basic concepts of the discipline. DC electrical circuits. Fundamentals of linear electrical circuits of sinusoidal current. Analysis of linear electrical circuits of alternating current. Magnetic circuits and inductively coupled electrical circuits. Transient processes in linear electrical circuits. Electrical circuits of non-sinusoidal current and non-linear electrical circuits. Fundamentals of the theory of quadripoles. Frequency characteristics of quadripoles. Electrical circuits with distributed parameters.
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.	4 c. u.
Reporting Forms	Graded test- 3rd semester
List of essential and supplementary literature necessary for mastering the discipline	
Essential literature	1. Blokhin, A. V. Electrical engineering / Electronic source: textbook / A. V. Blokhin. - Electrical engineering, 2022-08-31. - Yekaterinburg: Ural Federal University, ASV ELS, 2014. - 184 p. - The book is in the basic version of IPRbooks ELS. - ISBN 978-5-7996-1090-6 2. Burkova, E. Electrical engineering: textbook / E. Burkova, E. Ryapolova; Ministry of Education and Science of the Russian Federation; Federal State Budgetary Educational Institution of Higher Professional Education "Orenburg State University". - Orenburg: OSU, 2012. - 124 p. - http://biblioclub.ru/
Supplementary literature	1. Zemlyakov, V. L. Electrical engineering and electronics: textbook / V. L. Zemlyakov; Federal Agency for Education of the Russian Federation; Federal State Educational Institution of Higher Professional Education "Southern Federal University"; Faculty of High Technologies. - Rostov-on-Don: Southern Federal University Publishing House, 2008. - 304 p. - http://biblioclub.ru/. - Bibliography in the book. - ISBN 978-5-9275-0454-1 2. Sukhanova, N.V. Electrical engineering: textbook / N. V. Sukhanov. - Voronezh: Voronezh State University of Engineering Technologies, 2010. - 128 p. - http://biblioclub.ru/. - ISBN 978-5-89448-753-3