

Документ подписан простой электронной подписью  
 Информация о владельце:  
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 Дата подписания: 28.03.2024 14:33:29  
 Уникальный программный ключ:  
 b47f96eeab5a16e179f94dbf7b50b10000e/ad4d

## Practice annotation

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| Kind of practice                  | Educational                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Type of practice                  | исследовательская практика / research practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Summary                           | introductory lecture, safety briefing, collection, processing and systematization of factual and literary material, observations, measurements, performance of an individual task, analysis, processing and systematization of the material, preparation of a report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Learning outcomes of the Practice | <p>knows the basic concepts and tasks of cryptography, mathematical models of cryptographic systems, the main types of Cryptographic Information Protection Facilities (CIPF), public key cryptographic systems, cryptographic hash functions and cryptographic protocols, national standards of the Russian Federation in the field of cryptographic information protection and their scope; knows classification and quantitative characteristics of technical channels of information leakage; is able to apply means of protecting information from leakage through technical channels and monitoring the efficiency of information protection; knows the content and procedure for the formation of an information security policy; is able to choose the necessary set of organizational and technical measures to ensure information security; uses information technology for the development, implementation and management of a set of measures to ensure information security at the informatization object; knows the basic provisions for ensuring the unity and accuracy of measurements in the Russian Federation; processes measurement results with an assessment of errors; knows the basic methods of statistical processing of experimental data; is able to make informed decisions based on the results of experiments; is able to determine the information infrastructure and information resources of the organization to be protected, analyze quality indicators and criteria for evaluating systems and individual methods and means of information protection; knows how to form requirements and develop external specifications for the software being developed, assess information risks in automated systems, develop the main indicators of the feasibility study of the relevant design solutions; knows the key events in the history of Russia and the world, prominent figures of Russia; knows how to take into account historical facts in the formation of a life position; knows how to reasonably defend one's point of view on various historical events from the position of patriotism; knows the criteria for evaluating the efficiency and reliability of automated systems software protection tools; has the skills to calculate the efficiency of protecting information processed in automated systems; knows the main threats to information security and violator models; has the skills to analyze the vulnerability of software and hardware of the information security system; knows the organizational measures to protect information and applies information security management methods; has the skills to develop recommendations for making decisions on upgrading the information security system; knows national, interstate and international standards and regulations in the field of information security, operating principles and operating rules for</p> |

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|                                                                                  | software and hardware information security tools; knows how to organize activities of personnel for the operation of secure automated systems, taking into account the requirements of the governing and methodological documents of the authorized federal executive authorities in the field of implementation and operation of information security tools; knows the criteria for assessing the security of an informatization object and knows how to use them in professional activities; knows the technical means of monitoring the efficiency of information protection measures; carries out measurements, control and technical calculations of the characteristics of software and hardware information security |
| Workload, c. u.                                                                  | 3 c. u.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Reporting Forms                                                                  | Graded credit - 6th semester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>List of essential and supplementary literature necessary for the Practice</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Essential literature                                                             | <p>1 Zubkova Yu. O. Educational and work practices: teaching aid / comp. by Yu. O. Zubkova; O. G. Ivashkevich / Electronic source: Kazan National Research Technological University; Kazan, 2020. - 52 p. - The book is in the basic version of IPRbooks ELS, unlimited copies.</p> <p>2. Educational practice / V. A. Alyaev / G. V. Kargin / A. V. Burmistrov / S. A. Bulaev: study guide; ed. by L. G. Shevchuk / Electronic source: Kazan National Research Technological University; Kazan, 2020. - 88 p. - The book is in the basic version of IPRbooks ELS. - ISBN 978-5-7882-1445-0, unlimited copies</p>                                                                                                           |
| Supplementary literature                                                         | Educational practice / V. A. Alyaev. - Kazan: KNRTU Publishing House, 2021. - 90 p. - ISBN 978-5-7882-1445-0, unlimited copies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |