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ФИО: Верисокин Александр Евгеньевич
Должность: И.о. директора института наук о земле
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Discipline abstract

Namediscipline s	**Введение в информационные технологии / Introduction to information technology**
Summary	**Introduction to digital technologies.**State policy in the field of digitalization. State programs. Modern digital space. Fundamentals of the digital society. Digital literacy and digital competencies. Review of modern digital technologies and the possibilities of their application to solve the tasks. Government digital services and portals. **Remote work technologies.**File sharing. webinar platforms. Distance technologies and possibilities of distance learning. Work in on-line mode. Digital educational environment of the university. Acquaintance with the portal el.ncfu.ru and Ecampus. Electronic library systems. **Systematization and storage of information on a PC.**Overview and classification of OS. Basics of work in OS Windows/Astra Linux. Acquaintance with the national operating Astra Linux. Stages of preparing a computer for work. User interface. Task bar. Working with windows. File manager/Explorer. Search. File naming, systematization and cataloging. File types. Conversion. Features of data recovery on USB-carriers. **Electronic mail services.**Overview of the possibilities of modern mail services. The role of e-mail in information exchange. Registration, configuration, organization of work with mail messages. Systematization of messages. Security and use of temporary mailboxes and anonymizers. **Network etiquette.**Rules for business correspondence and communication in social networks, electronic mail services and instant messengers. Features of business correspondence in WhatsApp, Telegram, Viber, etc. **Internet technologies.**Fundamentals of search, critical analysis and synthesis of information in the global Internet. Working with browsers (favorites, bookmarks, history, etc.). Storage of large amounts of data. Network services and their possibilities. Organization and security of work in cloud storages (MailCloud, YandexDisk, Google Drive, etc.). Organization of joint work with information. Work in cloud applications **Personal computer hardware.**Basic hardware configuration. Motherboard. Devices included in the motherboard. Processor, purpose and main characteristics (clock frequency, bit depth, processor bus, cache memory, performance). Memory, purpose and types of memory (operational, permanent, external), main characteristics. I/O devices. I/O ports. Classification of peripheral devices (data carriers, keyboard, mouse, monitors, printers, scanners). Keyboard of a personal computer. Types of keyboards. Key assignment. Hot and function keys. Keyboard trainers. **Personal computer software.**The composition of the software (software) of a personal computer. Software levels (basic, system, service, applied). Classification

	Software (by appointment). Classification of applied software. Classification of service software. Review comparative analysis of software OS Windows / Astra Linux. **Processing of text information.**Technologies for working with text information in office and network applications (LibreOffice, MSOffice, OpenOffice, GoogleDoc). Rules for the design of text documents in accordance with GOST. Professional document editing and formatting Creation of tables and graphic objects. Calculations in tables. Construction of diagrams. Creation of graphic schemes. Creating a document of complex structure. Working with styles Automatic creation of a table of contents. Electronic review of documents. Working in fix mode. Creation of templates and forms. Automatic placement of footnotes on sources. Postal mailings. Create merge documents. **Organization of work with tabular data by means of spreadsheets.**Technologies for working with tabular data in office and network applications (LibreOffice, MSOffice, OpenOffice, GoogleDoc). Data types. Setting up a window for work. Data Entry Automation: Autocomplete and AutoComplete features. Data rows. Creation of progressions. Working with lists of data and creating your own lists of enums. Conditional formatting. Working with formulas and functions. Use of absolute and relative references in data processing. Commands for working with files and preparing a document for printing. Commands for working with a spreadsheet as a database. Data analysis of large tables. Sorting data. Enter conditions for sorting data. Data filtering. Entering criteria (conditions) for data selection. Commands for creating and working with diagrams. Interface elements for working with diagrams. Ways to create diagrams. Create mixed charts. Sparklines. Summarizing subtotals and creating structured tables. Consolidation of data. Preparing tables for data consolidation. stages of consolidation. Working with pivot tables and charts. PivotTable Wizard. Work in a pivot table. Pivot table data filtering. Create a pivot chart. Using the Data Analysis package. Import data. Data protection. **Preparation of demonstration materials.**Infographics and data visualization, presentation culture. Overview of software products for creating presentations. Technologies for working with visual information in office and network applications (LibreOffice, MSOffice, OpenOffice, GoogleDoc). Presentation templates and structure. Creation of presentation elements. Creation of network presentations in the Prezi.com web service. Using mind mapping (metal maps) to create presentations. Collaborative creation of presentations. **Digital technologies for processing graphic images.**Graphic means of data presentation. Digitization and image analysis. Computer (technical) vision. Technologies for processing multimedia data. Vector and raster graphics. Image processing software (GIMP, EasyPaint, Inkscape, Corel Draw; Adobe Photoshop; Adobe

	illustrator; InDesign). Construction of diagrams and flowcharts (Microsoft Visio). Work with office and network applications. Organization of sharing. **Information security and its components.**The main types of security threats to users (viruses, spam, phishing, technical failures, etc.). Computer crimes. Classification. Prevention methods. Legislative and other legal acts of the Russian Federation regulating legal relations in the field of information security and protection of state secrets. **digital instruments**. Fundamentals of website building. Mind maps, etc. **Information technologies in professional activity.**Specialized software (by area of knowledge), Legal reference systems (SPS), Specialized databases. Database. Introduction to databases. Working with basic database objects. Create tables, queries, forms and reports
resultsdevelopment disciplines (module)	Applies the basics of search and critical analysis of information; uses the methods of a systematic approach to solve the tasks set using digital and information technologies; organizes personal digital space; Owns information retrieval and data processing technologies, methods of a systematic approach to solving tasks using digital and information technologies Has an understanding of the legislative and other legal acts of the Russian Federation that regulate legal relations in the field of information security and the protection of state secrets; Applies digital technologies to solve assigned tasks, choosing the best way to solve them, based on current legal norms and available resources and restrictions; Owns the technology of organizing a secure personal digital space; Understands the principles of modern informationtechnologies, PC software and knows its capabilities;Applies information technology to solve tasksprofessional activity; works with text and numeric data, conduct simple analytics of text and numericdata using special software security;processes graphic images; Uses Internet resources and its services, including cloud storage and other tools for organizing project work, including collaboration; He has the skills to use information technologies to solve professional problems, the basics of information security and ways to protect it.
labor input, cu	5
Form reporting	Test (credit) Graded (grading)
List of basic and additional literature necessary for mastering disciplines	
Main literature	1. Bashmakova, E.I. Informatics informationaltechnologies. Technology of work in MS WORD 2016: tutorial / E. I. Bashmakova. - Informatics and information technologies.

	Technology of work in MS WORD 2016, All term of copyright protection. - Electron. Dan. (1 file). - Moscow: IP Ar Media, 2020. - 90 p. - electronic. - The book is in the premium version of EBS IPR BOOKS. - ISBN 978-5-4497-0515-0, unlimited copies 2. Bashmakova,, E. I. Informatics and information technologies. Smart Excel 2016: library of functions: tutorial / E. I. Bashmakova. - Informatics and information technologies. Smart Excel 2016 Functions Library, Lifetime copyright. - Electron. Dan. (1 file). - Moscow: IP Ar Media, 2020. - 109 p. - electronic. - The book is in the premium version of EBS IPR BOOKS. - ISBN 978-5-4497-0516-7, unlimited copies 3. Mandra,, A. G. Informatics and information technologies: laboratory workshop / A. G. Mandra, A. V. Popov, A. I. Dyakonov. - Informatics and Information Technology, 2026-09-20. - Electron. Dan. (1 file). - Samara: Samara State Technical University, EBS DIA, 2020. - 64 p. - electronic. - The book is in the premium version of EBS IPR BOOKS. - ISBN 2227-8397, unlimited copies 4. Tsvetkova, A. V. Informatics and information technologies Electronic resource: Textbook for free software / A. V. Tsvetkova. - Informatics and Information Technology, 2020-08-30. - Saratov: Scientific book, 2019. - 190 p. - The book is in the premium version of EBS IPR BOOKS. - ISBN 978-5-9758-1891-1, unlimited copies
additional literature	1. Modern information technologies Electronic resource: Collection of works based on the materials of the 3rd interuniversity scientific and technical conference with international participation September 29, 2017 / V. I. Volovach [and others]; ed. V. M. Artyushenko. - Korolev: Scientific consultant, Moscow State Technical University, 2017. - 191 p. - The book is in the premium version of EBS IPR BOOKS. - ISBN 978-5-9500999-7-7, unlimited copies 2. Modern multimedia information technologies Electronic resource: textbook / S.S. Mytko / D.A. Repechko / A.P. Alekseev / A.R. Vanyutin / I.A. Korolkova. - Modern multimedia information technologies, 2019-05-25. - Moscow: SOLON-PRESS, 2017. - 108 p. - The book is in the basic version of EBS IPRbooks. - ISBN 978-5-91359-219-4, unlimited copies 3. Modern information technologies Electronic resource: textbook / S.S. Mytko / D.A. Repechko / I.A. Korolkova / A.R. Vanyutin / A.P. Alekseev; ed. A.P. Alekseev. - Samara: Volga State University of Telecommunications and Informatics, 2019. - 101 p. - The book is in the basic version of EBS IPRbooks., Unlimited copies 4. Adler, Yu.P. Statistical process control. "Big data" Electronic resource: textbook / E.A. Chernykh / Yu.P. Adler. - Statistical process control. Big Data, 2019-09-01. - Moscow: MISiS Publishing House, 2016. - 52 p. - The book is in the basic version of EBS IPRbooks. - ISBN 978-5-87623-969-3, unlimited copies