

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

**FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF  
HIGHER EDUCATION "DON STATE TECHNICAL UNIVERSITY"**

**(DSTU)**

ACCEPTED

at a meeting of the Academic Council  
of university

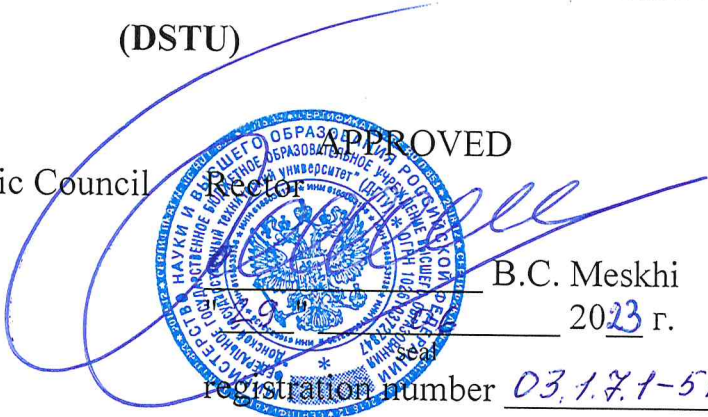
Protocol No. 12  
dated "29" 06 2023.

APPROVED

Recto

B.C. Meskhi  
2023 г.

registration number 03.1.7.1-518



**DESCRIPTION**

**Basic professional educational programme of  
higher education**

**Web-based information and analytical systems**

*(name of educational programme)*

**Web-based information and analytical systems**

*(the orientation (profile) of the educational programme is indicated)*

**09.03.02 Information Systems and Technologies**

*(the code and name of the training direction shall be indicated)*

**Full-time**

*form of education (full-time, part-time, distance learning)*

**2023**

*Year(s) of commencement of training*

**Agreed:**

Employer's representative  
or employers' associations  
IT Company «Sovtes» LLC  
General Director



Sotnichenko D. M.

2023.

**Agreed:**

Employer's representative  
or employers' associations  
«Modern Measuring Technologies» LLC  
General Director



Pomerov K.N.

"21"

16 Ростов на Дону 2023.

Rostov-on-Don  
2023

Документ подписан простой электронной подписью  
Информация о владельце:  
ФИО: Месхи Бесик Чохоевич  
Должность: Ректор  
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## Approval sheet for the TVET programme of study

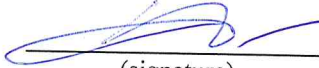
The basic professional educational programme of higher education in the direction of training "Information systems and technologies" and the profile "Web-oriented information-analytical systems" is developed by the graduating department "Information technologies".

The reviews of the representatives of the profile organisations are available at the graduating department "Information Technologies".

### THE DEVELOPERS OF OPOP

#### WO:

Head of educational programme

  
\_\_\_\_\_  
(signature) B.V. Sobol


Associate Professor

  
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Associate Professor

  
\_\_\_\_\_  
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Chairperson of the NMS for the  
USG(S)

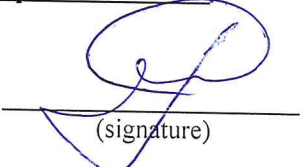
  
\_\_\_\_\_  
(signature) B.V. Sobol

Approved by the Faculty Council

Informatics and computer science

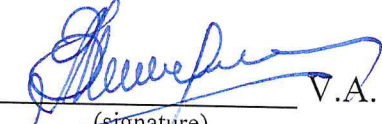
( name )

Dean


  
\_\_\_\_\_  
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#### AGREED:


Vice-Rector for Academic Affairs

  
\_\_\_\_\_  
(signature) V.A. Kolodkin

Chairman of the Student Council of  
DSTU

  
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(signature) T.V. Jurakova

Head of Academic Department

  
\_\_\_\_\_  
(signature) S.V. Nosachev

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## **Annotation**

### **of the main professional educational programme of higher education in the direction of training**

#### ***Level of education***

*bachelor's degree*

#### ***Profile:***

*Web-based information and analytical systems*

#### ***Name and code of an enlarged group of directions***

*09.00.00 Informatics and Computer Science*

#### ***Training direction:***

*09.03.02 Information Systems and Technologies*

***The volume of the educational programme is 240 w.l.***

***Term of education and forms of study under the educational programme - 4 years of full-time education***

***Qualification awarded to graduates - Bachelor's degree***

#### ***Concept of the educational programme***

*The educational programme is designed to train specialists in the field of information and communication technologies.*

*The aim of the programme is to prepare highly qualified and competent professionals in the fields of:*

- development, recovery and maintenance of requirements to software, automated information system during their life cycle;*
- creation, modification and maintenance of web-sites, corporate portals of organisations, multimedia and interactive applications, information resources.*

***Type (or type) of professional activity for which graduates are prepared - project activity***

#### ***Strategic partners of the programme (employers):***

- Soyuz Company Ltd;*
- Modern Measuring Technologies Ltd;*
- Cyberium Ltd;*
- FGUP VNII "Gradient";*
- Federal State Unitary Enterprise "Rostov-on-Don Research Institute of Radiocommunication";*
- "IC: Franchisee. Gandalf." Ltd*
- Datum Group Ltd;*
- 1-C CSU, DBI.*

## SUMMARY

### OF THE MAIN PROFESSIONAL EDUCATIONAL PROGRAMME OF HIGHER EDUCATION IN THE FIELD OF EDUCATION

**Level of education**

*Bachelor's degree*

**Degree programme profile:**

*Web-based information and analytical systems*

**Title and code of the broad field of education**

*09.00.00 Computer science and engineering*

**Degree programme:**

*09.03.02 Information systems and technologies*

**Workload (ECTS):** 240 credits**Duration and mode of study according to the degree programme**

*full-time study is 4 years*

**Qualification (degree)** *bachelor***Degree programme description**

*The educational programme is designed to train specialists in the field of information and communication technologies.*

*The purpose of the programme is to train highly qualified and competent specialists in the following areas:*

- development, restoration and maintenance of software requirements, automated information system throughout their life cycle;*
- creation, modification and maintenance of websites, corporate portals of organisations, multimedia and interactive applications, information resources.*

**Type(s) of professional activity(s):** *project type***Strategic partners of the programme (employers) -**

- Soyuz Company LLC;*
- LLC "Modern measuring technologies";*
- Siberium LLC;*
- FSUE VNII "Gradient";*
- FSUE "Rostov-on-Don Scientific Research Institute of Radio Communications";*
- IC: Franchisee LLC. Gandalf";*
- Datum Group LLC;*
- 1-With CSU, DBI.*

# **1 CHARACTERISTICS OF THE BASIC PROFESSIONAL EDUCATIONAL PROGRAMME OF HIGHER EDUCATION**

The basic professional educational programme of higher education, implemented in the direction of training 09.03.02 "Information systems and technologies" (profile "Web-oriented information-analytical systems") is a system of documents developed and approved at DSTU taking into account the needs of the regional labour market on the basis of the federal state educational standard of higher education in the direction of training 09.03.02 "Information systems and technologies", approved by the order of the Ministry of Education and Science of the Republic of Kazakhstan.

The educational programme regulates the goals, planned results, content, conditions and technologies of the educational process, evaluation of the quality of graduate training in this area of training and includes: curriculum, calendar study schedule, working programmes of academic disciplines (modules), practices and state final certification, working programme of education, calendar plan of educational work, forms of attestation of educational work and other materials that ensure the quality of training of students, as well as the required

## **1.1 Purpose and objectives of the TVET programme of study**

The main goal of the TVET is to train qualified personnel in the field of research, development, implementation and support of information technologies and systems through the formation of students' universal, general professional and professional competences in accordance with the requirements of the Federal State Standard of Higher Education, as well as the development of personal qualities (purposefulness, organisation, diligence, responsibility, communication, tolerance, general culture), allowing to implement the formed competences in professional activities.

TVET is aimed at documenting and methodological support for the implementation of the Federal State Educational Standards of Higher Education and on this basis the development of personal qualities in students, as well as the formation of universal, general professional and professional competencies that contribute to the successful activity in the field of training.

In the field of education, the aim of the TVET is to develop students' social and personal qualities: determination, organisation, diligence, responsibility, citizenship, communication, tolerance, and to improve their general culture.

In the field of education, the aim of the TVET programme is to:

- formation of graduates' competences necessary for professional activity in accordance with the FSES HE;
- formation of the ability to acquire new knowledge, psychological readiness to change the type and nature of their professional activity and provide graduates with the opportunity to continue their education;
- ensuring diversity of educational opportunities for students;

- ensuring the preparation of graduates capable of being flexible and active in changing labour market conditions for the fields of activity related to the competence of the Bachelor of Information Systems and Technologies.

The programme is implemented independently without using the network form.

The educational activities under the TVET programme of higher education are carried out in the state language of the Russian Federation.

### **1.2 Qualification awarded to a graduate**

In case of successful mastering of OPOPE, the graduate is awarded the qualification "Bachelor" in the direction of training 09.03.02 "Information Systems and Technologies".

### **1.3 Scope of the TVET programme**

The volume of the TVET is 240 credit units for the entire period of training in accordance with the Federal State Standard of Higher Education in this area of training and includes all types of classroom and independent work, practice and time allocated for quality control of the student's mastering of the TVET.

### **1.4 Term of education under the TVET programme of study**

The term of education in accordance with the Federal State Educational Standards of Higher Education in this field of study on a full-time basis is 4 years.

## **2 CHARACTERISATION OF GRADUATE'S PROFESSIONAL ACTIVITY**

### **2.1 Area(s) of professional activity and field(s) of graduate's professional activity**

Areas of professional activity and (or) spheres of professional activity, in which graduates who have mastered the Bachelor's programme can carry out professional activity: 06 Communication, information and communication technologies (in the field of research, development, implementation and maintenance of information technologies and systems).

Graduates may carry out professional activities in other fields and (or) spheres of professional activity, provided that the level of their education and acquired competences correspond to the requirements for the qualification of an employee.

### **2.2 Types (or kinds) of tasks and tasks of graduate's professional activity**

A graduate who has mastered the Bachelor's programme, in accordance with the type (types) of professional activity, on which the Bachelor's programme is focused, shall be ready to solve the following types of tasks:

*design:*

- creation, modification and maintenance of web-sites, corporate portals of organisations, multimedia and interactive applications, information resources (hereinafter - IR);

- development, recovery and maintenance of requirements for software (hereinafter - software), product, tool, software and hardware complex, automated information system or automated control system (hereinafter - system) during their life cycle;

- selection of initial data for design;
- modelling of processes and systems;
- calculation of ensuring safe living conditions;
- calculation of economic efficiency;
- development, co-ordination and issue of all types of project documentation;
- collection, analysis of scientific and technical information, domestic and foreign experience on the subject of research;
- participation in the work on conducting computational experiments to verify the mathematical models used.



## **2.3 Objects of the graduate's professional activity**

The objects of professional activity of graduates are: projects in the field of information technologies; analytical and information methods; web-interfaces of interactive applications and portals.

## **2.4 Description of labour functions in accordance with the professional standard (professional activity map)**

In accordance with the professional standard 06.035 "Web and multimedia applications developer" (Order of the Ministry of Labour and Social Protection of the Russian Federation N<sup>o</sup>44n from 18.01.2017, the graduate must master the following labour functions:

1. Management of works on creation (modification) and maintenance of information resources (IR):

- analysis and formalisation of requirements to the IR;
- D&I design;
- development of technical specifications for IR
- organisation of integration testing of the IR with external services and accounting systems;
- organisation of work to ensure safe operation of the IR.

In accordance with the professional standard 06.022 "System Analyst" (Order of the Ministry of Labour and Social Protection of the Russian Federation N 809n dated 28.10.2014 (ed. 12.12.2016)), the graduate must master the following labour functions:

1. Conceptual, functional and logical design of systems of medium to large scale and complexity:

- analysing the problem situation of stakeholders;
- development of business requirements for the system;
- system conceptualisation;
- development of technical specifications for the system;
- setting the task of developing requirements for system subsystems and their quality control.

## **2.5 Key partners of the educational programme**

The key partners (representatives of employer associations) involved in the formation and implementation of TVET are:

- Soyuz Company Ltd;
- Modern Measuring Technologies Ltd;
- Cyberium Ltd;
- FGUP VNII "Gradient";

- Federal State Unitary Enterprise "Rostov-on-Don Research Institute of Radiocommunication";
- OOO "1C: Franchisee. Gandalf."
- Datum Group Ltd;
- 1-C CSU, DBI.

The educational programme does not contain information constituting state or other secrets protected by law.

### **3 PLANNED RESULTS OF MASTERING THE BASIC PROFESSIONAL EDUCATIONAL PROGRAMME OF HIGHER EDUCATION**

The results of mastering the TVET are determined by the competences acquired by the graduate, i.e. his/her ability to apply knowledge, skills and personal qualities in accordance with the tasks of professional activity.

As a result of mastering this TVET programme, the graduate shall possess the following competences:

#### **universal competences (UC):**

- is able to search for, critically analyse and synthesise information, apply a systematic approach to solve problems (UK-1);
- is able to determine the range of tasks within the set goal and choose the best ways to solve them, based on the current legal norms and available resources and limitations (UK-2);
- is able to carry out social interaction and realise his/her role in a team (UK-3);
- is able to carry out business communication orally and in writing in the state language of the Russian Federation and foreign language(s) (UK-4);
- is able to perceive the intercultural diversity of society in socio-historical, ethical and philosophical contexts (UK-5);
- is able to manage his/her time, build and implement a trajectory of self-development based on the principles of lifelong learning (UK-6);
- is able to maintain an adequate level of physical fitness to ensure full social and professional activity (UK-7);
- is able to create and maintain in everyday life and in professional activity safe living conditions for the preservation of the natural environment, ensuring sustainable development of society, including in the threat and occurrence of emergencies and military conflicts (UK-8);
- is able to make informed economic decisions in various spheres of life (UK-9);

- is able to form an intolerant attitude towards manifestations of extremism, terrorism, corrupt behaviour and to counteract them in professional activities (UK-10).

**general professional competences (GPC):**

- is able to apply natural science and general engineering knowledge, methods of mathematical analysis and modelling, theoretical and experimental research in professional activity (OPK-1);
- is able to understand the principles of operation of modern information technologies and software tools, including those of domestic production, and use them in solving the problems of professional activity (OPK-2);
- is able to solve standard tasks of professional activity on the basis of information and bibliographic culture with the use of information and communication technologies and taking into account the basic requirements of information security (OPK-3);
- is able to participate in the development of technical documentation related to professional activities using standards, norms and rules (OPK-4);
- is able to install software and hardware for information and automated systems (OPK-5);
- is able to develop algorithms and programmes suitable for practical application in the field of information systems and technologies (OPK-6);
- is able to select platforms and hardware and software tools for the implementation of information systems (OPK-7);
- is able to apply mathematical models, methods and tools for designing information and automated systems (OPK-8).

**professional competences (PC):**

*project type of tasks:*

- ability to collect, systematise and analyse customer requirements and prepare design solutions for information systems development (PC-1);
- ability to analyse the subject area and perform conceptual design of information systems and their specialised analytical components (PC-2);
- ability to design and manage the development of information systems and their specialised analytical components (PC-3).

In accordance with the requirements, the indicators of achievement of universal, general professional and professional competences are established, which are formed in the document "Indicators of Competences Achievement".

## **4 REQUIREMENTS TO THE STRUCTURE OF THE EDUCATIONAL PROGRAMME**

### **4.1 Structure of the educational programme**

The structure of the educational programme includes the following blocks:

Block 1 «Disciplines (modules)».

Block 2 «Practice».

Block 3 «State Final Attestation».

Table 1 - Structure and scope of the programme

Programme structure		Requirement of FSES HE in w.l.
Block 1	Disciplines (modules)	at least 160
Block 2	Practice	at least 20
Block 3	State final attestation	at least 9
Scope of the programme		240

### **4.2 Block 2 «Practice»**

Block 2 «Practice» includes academic and industrial practice.

Types of learning practice:

Specific types of training practice are specified in the curricula.

Types of industrial practice:

Specific types of industrial practice are specified in the curricula.

When conducting practice by direct performance by students of certain types of work related to future professional activity, this type of practice is carried out in the form of practical training.

### **4.3 Block 3 «State Final Attestation»**

Block 3 "State Final Attestation" includes:

- fulfilment and defence of the final qualification work.

## **5 DOCUMENTS REGULATING THE CONTENT AND ORGANISATION OF THE EDUCATIONAL PROCESS IN THE**

# **IMPLEMENTATION OF THE VOCATIONAL EDUCATION AND TRAINING PROGRAMME**

## **5.1 Curriculum, academic calendar, work programmes of disciplines (modules), practical training, GIA programme and methodological materials**

The following components of TVET are available in the electronic information and education environment and on the official website of DSTU in the subsection "Education" corresponding to the level of education:

- description of the TVET programme;
- curricula;
- calendar training schedules;
- annotations to the working programmes of disciplines (modules), practices;
- working programmes of disciplines (modules), practices;
- of the state final attestation programme;
- methodological materials (including in the Electronic Library System of DSTU).

## **5.2 Assessment materials for disciplines (modules), practices, research work and state final certification**

Assessment materials for the TVET programme allow to assess the level of competences formed and are developed in accordance with the Regulations on assessment materials (assessment tools).

Assessment materials may contain: test tasks, control questions and standard tasks for practical and laboratory classes, written works, control works, colloquiums, preparation of reports, essays, speeches, preparation of reports, group and individual projects, credits and exams; tests and computer testing programmes; sample topics of term papers, essays, etc., as well as other forms of control, allowing to assess the degree of competence of students.

Assessment materials for the final (state final) attestation include a list of competences to be mastered by students as a result of the educational programme, description of indicators and criteria for assessing competences, as well as other materials necessary for assessing the results of the educational programme; methodological materials defining the procedures for assessing the results of the educational programme.

Evaluation materials for each discipline (module), practice, state final certification are stored as part of the educational programme in the structural unit of the university implementing the educational programme.

## **5.3 Methodological materials on disciplines (modules), practices, research work and state final certification**

Methodological materials represent a set of methodological materials on the discipline (module, practice, GIA), formed in accordance with the structure and content of the discipline (module, practice), used educational technologies and forms of organisation of the educational process.

Organisational and methodological materials (guidelines, recommendations) allow the student to optimally plan and organise the process of mastering the learning material.

Educational and methodical materials are aimed at mastering the content of the discipline (module, practice, research and development, state final attestation), as well as aimed at verification and appropriate assessment of the formation of competences of students at different stages of learning the training material.

Textbooks, study guides, teaching aids, teaching aids, workbook, practicals, task book, etc. are used as educational publications.

## **6 RESOURCE SUPPORT OF THE EDUCATIONAL PROGRAMME**

### **6.1 Educational, methodological and information support of the educational process in the implementation of the TVET programme of study**

The educational programme is provided with educational and methodical documentation and materials for all disciplines (modules), practices of the state final certification.

Implementation of the educational programme is provided by the access of each student to databases and library funds formed for the full list of disciplines (modules) of the educational programme. During independent training, students are provided with access to the Internet.

Each student during the entire period of training is provided with individual unrestricted access to one or more electronic library systems (electronic libraries) and to the electronic information and educational environment of the University. Electronic library system (electronic library) and electronic information and educational environment provide the possibility of access of a student from any point where there is access to the information and telecommunication network "Internet", both on the territory of the organisation and outside it.

The electronic information and educational environment of the University provides:

- access to the electronic library system;
- access to electronic educational resources and/or professional databases (collections of information resources by subject) in accordance with the content of the educational programme being implemented;
- access to the e-learning system providing interaction between teaching staff and students (personal accounts of students and teachers);

- access to the electronic timetable (electronic timetable means a service through which each student can find out his/her current timetable of classes and sessions);
- access to electronic portfolios of students;
- access to curricula, working programmes of disciplines (modules), practice programmes, electronic educational publications and electronic educational resources specified in the working programmes of disciplines (modules), practice programmes of the educational programme.

The functioning of the electronic information and education environment is ensured by appropriate means of information and communication technologies and qualification of employees using and supporting it.

Scientific and Technical Library of DSTU is equipped with the necessary telecommunication equipment, means of communication, electronic equipment, has free access to the Internet, uses Wi-Fi technology. For independent work of students there are 5 reading rooms for 720 seats, including 42 automated workplaces with access to the Internet and the electronic educational environment of the University.

The electronic library of the university, including access to resources, virtual services and information materials, is formed on the unified portal of the Scientific and Technical Library <https://ntb.donstu.ru/>, which can be accessed from the electronic information and educational environment of the university. On the website of the library the system of "Single Search Window" is formed, which combines the search of own and external resources of the Scientific and Technical Library.

Each student is provided with individual unlimited access (remote access), including in the case of e-learning, distance learning technologies, to the electronic library and electronic information and educational environment of the university, electronic library systems, modern professional databases and information reference systems, the composition of which is defined in the working programmes of disciplines and updated annually, to electronic information resources of NTB (<https://ntb.donstu.ru/content/elektronno-informacionnye-resursy> )

- EBS "University Library Online" (<http://biblioclub.ru> );
- EBS "IPRbooks" (<http://www.iprbookshop.ru> );
- EBS "Lan" (<https://e.lanbook.com> );
- EBS "Znaniy" (<http://znaniy.com> );
- EBS "DGTU" (<https://ntb.donstu.ru/ebsdstu> );
- Electronic Library of Dissertations of the Russian State Library (<https://dvs.rsl.ru> );
- information and reference system "Tehexpert: norms, rules, standards and legislation of Russia";
- information and educational system "Rosmetod" (<http://rosmetod.ru>), etc.

The library fund is staffed with printed publications at the rate of at least 0.25 copies of each of the publications specified in the working programmes of disciplines (modules), programmes of practical training per student from among

the persons simultaneously mastering the relevant discipline (module), undergoing the relevant practice (FSES 3++).

Students with disabilities are provided with electronic educational resources in forms adapted to their health limitations.

The collection of periodicals includes the following publications on TVET:

- electronic scientific journals on the NEB eLibrary platform (<https://elibrary.ru>);
- electronic scientific journals in the collection of EBS "Lan" (<https://e.lanbook.com/journals>);
- electronic scientific journals in the collection of EBS "IPRbooks" (<http://www.iprbookshop.ru/6951.html>);
- electronic scientific journals in the collection of EBS "University Library Online" (<http://biblioclub.ru>);
- electronic scientific journals in the Znanium EBS collection (<http://znanium.com>);
- specialised electronic periodicals in Tehekspert IIS;
- archive of scientific journals of the Non-commercial Partnership "National Electronic Information Consortium" (NP NEICON) (<http://archive.neicon.ru>);
- archive of periodicals on Elsevier's ScienceDirect platform (<https://www.sciencedirect.com>).

## **6.2 Staff support for the implementation of the TVET programme of study**

The qualification of DSTU teaching staff meets the qualification requirements specified in qualification handbooks and (or) professional standards (if any).

At least 60 percent of the number of university teaching staff involved in the implementation of the educational programme, and persons involved in the implementation of TVET on other terms (based on the number of substituted rates, reduced to integer values), must conduct scientific, educational and methodological and (or) practical work, corresponding to the profile of the discipline (module) taught.

At least 5 percent of the number of DSTU teaching staff participating in the implementation of the educational program, and persons involved by the university in the implementation of the master's degree program on other terms (based on the number of replacement rates reduced to integer values), must be managers and (or) employees of other organizations engaged in work in the professional field corresponding to the professional the activity for which graduates are preparing (have at least 3 years of work experience in this professional field).

Not less than 50 percent of the number of teaching staff of DSTU and persons involved in educational activities on other terms (based on the number of



substituted rates, reduced to integer values), must have an academic degree (including academic degree obtained in a foreign country and recognised in the Russian Federation), and (or) academic rank (including academic rank obtained in a foreign country and recognised in the Russian Federation).

### **6.3 Material and technical support of the TVET programme of study**

The University has a sufficient material and technical base, providing all types of disciplinary and interdisciplinary training, laboratory, practical and research work of students, envisaged by the curriculum, and complying with current sanitary and fire safety rules and regulations.

Special rooms are classrooms for lectures, seminars, course design (coursework), group and individual consultations, current control and interim certification, as well as rooms for independent work and rooms for storage and preventive maintenance of educational equipment. Special rooms are equipped with specialised furniture and technical means of training, which serve to present educational information to a large audience.

For lecture-type classes, sets of demonstration equipment and teaching aids are offered, providing thematic illustrations that correspond to the sample programmes of disciplines (modules), working programmes of disciplines (modules).

Specialised classrooms are equipped with appropriate laboratory equipment for practical, laboratory and other classes.

The rooms for independent work of students are equipped with computer equipment with the ability to connect to the Internet and provide access to the electronic information and educational environment of the organisation.

The University is provided with the necessary set of licensed and freely distributed software, including domestic software (the composition is defined in the working programmes of disciplines (modules), and is subject to updating (if necessary).

Students are provided with access (remote access), including in the case of e-learning, distance learning technologies, to modern professional databases and information reference systems, the composition of which is defined in the working programmes of disciplines (modules) and is subject to updating (if necessary).

## **7 CHARACTERISTIC OF THE SOCIO-CULTURAL ENVIRONMENT OF THE UNIVERSITY THAT ENSURES THE DEVELOPMENT OF UNIVERSAL COMPETENCES OF STUDENTS**

The sociocultural environment of the university is a set of conceptual, content, personnel, organisational and methodological resources aimed at creating a humanitarian environment in the educational institution, which ensures the development of universal competences of students.

The University carries out systematic work on the implementation of youth policy and educational work, the organisational structure of the educational process

- the Department for Educational Work and Youth Policy, the Department for Student Sports Development, as well as the Student Council, student associations and the Ombudsman for Student Rights - is effective.

Educational activities and extracurricular general cultural work at the University are organised in a number of directions:

1) "Civic and patriotic education". Meetings and festive mass events are organised and held on public holidays and memorable dates in Russian history: Defender of the Fatherland Day, Victory Day, Cosmonautics Day, etc. Open lectures, military sports games and film screenings are organised.

2) "Creative Education". The creative abilities of students are realised in creative groups operating in DSTU: Bravo studio theatre; Creative Centre of DSTU, within the framework of which such creative groups as the Theatre "Lis", pop group "Impulses", Theatre of modern choreography "Zodchie", exemplary folk choreographic ensemble "Imedi", dance theatre "Without Limits", dance group "D'angels", choreographic miniatures studio "Arabesque", vocal studio "New Generation", Don KVN Centre, etc. work.

3) "Cultural and moral education". A significant contribution to educational work is made by the Cultural Centre and the Scientific and Technical Library of the University.

The Cultural Centre forms a cultural and aesthetic environment at the University and instils in students the basics of corporate culture. This is facilitated by the fact that the main solemn events and holidays at the university are accompanied by the display of the university flag, listening and singing of the DSTU anthem, which was created on the initiative of the Cultural Centre.

The scientific and technical library regularly hosts book exhibitions, review lectures, literary and musical compositions that contribute to the cultural development of the student's personality and the prevention of negative social phenomena.

4) "Social interaction". DSTU students participate in volunteer groups and annual campaigns: "Backpack of Happiness"; "Days of Donor Adulthood"; "Father Christmas Bag", etc.

5) "Psychological Education". Active work and activities are carried out in the following areas: psychological education; comprehensive work on the socio-psychological adaptation of freshmen students; psychological diagnosis; group training work; psychological counselling and correction.

6) "Physical Education. The festival of student sports "Burevestnik", freshmen sports day, "Winter Cup of DSTU" rally, etc. are held.

The following student public organisations are successfully functioning at the University:

1. Student Council of DSTU, including student councils of dormitories;
2. Primary trade union organisation of DSTU students;

3. Volunteer centres: volunteer social work centre "Burning Hearts", volunteer centre "Zvezda", student psychological detachment "SoDeal";
4. Headquarters of student squads of DSTU;
5. DSTU Student Rights Ombudsman.

7) "Student Self-Governance". DSTU attaches special importance to the development of student self-governance, in which the Student Council of DSTU plays an important role. There are representatives of the Student Council at each faculty, in each dormitory and in each academic group.

An important role in the educational process is played by traditional mass events held by the University for the formation and development of corporate culture: Freshers' Day, Art Week, Tatiana's Day, Miss DSTU, etc.

An important role in the general cultural development of the university students is assigned to the Primary Trade Union Organisation of DSTU students, which unites the university students to implement the tasks set for it. Such tasks include: protection of professional, labour, socio-economic rights and interests of trade union members; providing trade union members with legal and social protection; negotiating with the university administration, conclusion of the collective agreement and its implementation, providing material and consulting assistance to trade union members, exercising public control over the work of the catering complex, etc.

The activities of the University History Centre are of great importance in educational work. Here one can get acquainted with the history and traditions of the university, learn a lot about outstanding people directly involved in many events: veterans of the Great Patriotic War, production leaders, graduates of the university.

The University has a Psychological Support Centre and a youth centre for prevention of negative phenomena "Quality of Life".

For recreation and sports, students and employees of the University are provided with the opportunity to visit sports facilities, including: DSTU sports and recreation complex with swimming pool, track and field arena, sports and recreation complex "Raduga", sports and recreation complex "Stroitel", recreation centre of DSTU on the left bank of the Don, sanatorium-preventorium "Zarya", DSTU equestrian club "Hod konem", aeronautics club "Don Sky", yacht club "Tikhiy Don" and other elements of sports infrastructure (large university gym, mini-football field, gyms in dormitories, billiard club, football field and obstacle course).

The university has created a socio-cultural environment necessary for the formation of civil, legal and professional position of complicity, readiness of all members of the team to communicate and co-operate, the ability to tolerantly perceive social, personal and cultural differences.

Information about extracurricular activities is posted on the university website. Social networks are actively used in this direction. Announcements about the events and their social significance are placed on the information boards of the faculty. Curators of groups and deputy deans acquaint students with the schedule of upcoming events and organise their participation.

### **7.1 Educational Work Programme. Calendar plan of educational work. Forms of attestation on educational work (for Bachelor's and Specialist's educational programmes)**

These documents are developed by the Department of Youth Policy. They are approved in accordance with the established procedure and kept as part of the TVET programme.

## **8 PECULIARITIES OF THE ORGANISATION OF THE EDUCATIONAL PROCESS FOR PERSONS WITH DISABILITIES**

DSTU has created special conditions for obtaining higher education under educational programmes for students with disabilities.

Special conditions for obtaining higher education under educational programmes by students with disabilities are understood as learning conditions, including the use of special educational programmes and methods of teaching and education, special textbooks, teaching aids and didactic materials, special teaching aids for collective and individual use, the provision of tutor services (from among faculty members), sign language interpreter, pedagogical psychologist, social pedagogue, who provide learning

Information about special conditions created for students with disabilities is available on the university website (<https://clck.ru/FJWKV> )

Education of students with disabilities can be organised both together with other students, and in separate groups or on an individual curriculum (on the basis of the student's application).

When teaching in separate groups of students with disabilities the number of groups - no more than 15 people.

The period of higher education on an individual plan for persons with disabilities can be increased, if necessary, but not more than by 1 year (Bachelor's degree, specialisation) or 6 months (Master's degree).

Material and technical support of the educational process:

1. For persons with hearing disabilities:

- availability of sound-amplifying equipment, multimedia and other technical means of receiving and transmitting information in accessible forms;
- the classroom for students with hearing impairment will be equipped with computer equipment, audio equipment (acoustic amplifier and speakers), video equipment (multimedia projector, TV set), electronic whiteboard, multimedia system.

2. For visually impaired persons:

- availability of electronic magnifiers, video magnifiers, non-visual information access programmes, speech synthesis programmes and other technical means of receiving and transmitting educational information in forms accessible to this category of students;

- in classrooms it is necessary to provide the possibility of viewing remote objects (text on the board, slide on the screen) using video magnifiers for remote viewing.

3. For persons with disabilities who have locomotor system disorders:

- availability of computer equipment with special software adapted for students with disabilities, alternative input devices and other technical means of receiving and transmitting educational information in forms accessible to students;
- using special features of the Windows operating system, such as an on-screen keyboard that can be used to enter text, customising Windows actions when you type using the keyboard or mouse.

Educational and methodical support of the educational process for students with disabilities provides:

1. Inclusion in the curriculum of specialised adaptation disciplines for the purpose of additional individualised correction of violations of learning and communication skills, professional and social adaptation. The set of these disciplines is determined based on the specific situation and individual needs of students with disabilities on the basis of the student's application.

2. In the educational process, socially active and reflective teaching methods and socio-cultural rehabilitation technologies should be widely used in order to assist in establishing full-fledged interpersonal relations with other students and creating a comfortable psychological climate in the student group.

3. providing students with disabilities with special printed and electronic educational resources in forms adapted to the limitations of their health (students with hearing impairment receive information visually, with visual impairment - audibly (using programmes - speech synthesizers).

4. Special workplaces for persons with disabilities are created for practical training, if necessary, in accordance with the nature of impairment and taking into account the professional type of activity.

5. For current progress control, interim and final attestation assessment materials are created, adapted for persons with disabilities and allowing to assess the level of formation of all competencies stated in the educational programme.

Form of current and interim attestation for students with disabilities is determined by the teacher in accordance with the Regulations on the current control and interim attestation of students. If necessary, a student with disabilities, taking into account his individual psychophysical characteristics is given the opportunity to pass interim certification orally, written on paper, written on a computer, in the form of testing, etc., or provided with additional time to prepare an answer.

## **9 REQUIREMENTS TO THE APPLIED MECHANISMS FOR ASSESSING THE QUALITY OF EDUCATIONAL ACTIVITIES AND TRAINING OF STUDENTS IN THE EDUCATIONAL PROGRAMME**

The quality of educational activities and training of students in the TVET programme is determined within the framework of the internal evaluation system,

as well as the external evaluation system, in which the University participates on a voluntary basis.

In order to improve the educational programme, DSTU engages employers and (or) their associations, other legal entities and (or) individuals, including teaching staff of the university, in regular internal quality assessment of educational activities and training of students in TVET.

Within the framework of the internal system of quality assessment of educational activities under the TVET programme of study, students are given the opportunity to assess the conditions, content, organisation and quality of the educational process as a whole and individual disciplines (modules) and practices.

External quality assessment of the educational activity of an educational programme within the framework of the state accreditation procedure is carried out to confirm the compliance of the educational activity of a TVET programme with the requirements of the Federal State Educational Standards of Higher Education, taking into account the relevant TVET.

External quality assessment of educational activities and training of students in the educational programme can be carried out within the framework of professional and public accreditation.