

Catalogue of educational programmes: Construction. Road and bridge construction

Mode of study:intramural / intramural-distanceLanguage of study:RussianEnglish, accompanied by an interpreter (on request)

No.	Code	Name of the programme	Educational programme	Short summary	Category of listeners	Period of study	Cost in USD
1.	4.1.01	Bricklayer	Vocational courses	As a result of the educational programme mastering, you will be competent in: laying and repairing masonry structures of buildings; foundation; assembly of precast concrete and reinforced concrete structural elements; installation of window and door frames and blocks; installation of partition walls made of bricks and various slabs.	Employees of organizations, enterprises	from 1 month	200
2.	4.1.02	Painter, plasterer, tiler	Vocational courses	As a result of the training, you will know: the purpose and application rules of tools, devices when performing painting, plastering and tile works; the titles and types of paints, varnishes, enamels, primers, putties and their properties; the methods of painting and plastering simple surfaces; the types and purpose of cladding. As a result of the training, you will be able to: prepare surfaces for painting, plastering and facing; apply plasters when leveling surfaces in certain places; prepare surfaces and perform simple painting work on colouring decorations; perform solid leveling of surfaces with finishing mortar (one-coat work); perform sorting and laying ceramic, glass, asbestos-cement and other tiles by size, colour and grade.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	110
3.	4.1.03	Adjuster of sanitary- engineering systems and equipment	Vocational courses	As a result of the training, you will know: the types and purpose of sanitary- engineering materials and equipment; the grades of pipes, fittings, adapter fittings, plumbingware and fasteners; the purpose of bench work tools; the methods of measuring the diameter of pipes, fittings, plumbingware and leak-proofing materials. As a result of the training, you will be able to: dismantle individual pipeline units (during installation); install and seal fixtures for appliances and pipelines; complete pipes and adapter fittings of the dropping pipes; perform installation of a water supply, heating, sewerage system using metal and polymer pipes; install and connect sanitary-engineering and heating appliances.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	200

4.	4.1.05	Worker for complex maintenance and repair of buildings and structures	Vocational courses	As a result of the training, you will know: the fundamentals of repair and construction works and methods of their implementation; the types of materials; the purpose and arrangement of tools, fixtures, machines, mechanisms and equipment in the course of work. As a result of the training, you will be able to perform: a periodic inspection of the technical condition of the maintained buildings, structures, equipment and mechanisms, their maintenance and routine repairs with the implementation of various types of repair and construction works (plastering, painting, wallpapering, concreting, carpentry, joinery, etc.); routine repairs and maintenance of central heating systems, water supply, sewerage, gas supply, drain sewage system, heat supply, ventilation, air conditioning and other equipment, mechanisms and structures with performance of plumbing, soldering and welding works; installation, dismantling and routine repairs of electrical systems and electrical equipment with performance of electrical works.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	225
5.	4.1.06	Electrician for repair and maintenance of electrical equipment	Vocational courses	As a result of the training, you will know: the design and principle of operation of maintained electric motors, generators, switchgear equipment, electrical networks and electrical appliances, oil switches, fuses, electric contactors, batteries, controllers, mercury and silicon rectifiers, other electrical equipment and electrical appliances; the design and purpose of starting and control devices; the methods for high voltage wires replacing, splicing and soldering. As a result of the training, you will be able to perform: load leveling of electrical equipment; repair, charging and installation of explosion-proof fittings; the making off, splicing, insulation and soldering of wires and cables with voltage over 1000 V; maintenance and repair of solar and wind power plants with capacity over 50 kW; repair, inspection and maintenance of electrical equipment with performing the tasks of disassembly, assembly, adjustment and maintenance of electrical appliances.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	200
6.	4.1.07	Electric and gas welder	Vocational courses	As a result of the training, you will know: the arrangement of serviced electric welding and plasma cutting machines, gas welding equipment, automatic machines, semi-automatic devices and a plasma torch; the requirements for the weld and surfaces after air planing; the methods for selecting electrode grades depending on steel grades; the rules for preparing parts and assemblies for welding and sealing; the basic technological methods of welding and surfacing of parts made of various steels, cast iron, non-ferrous metals and alloys; the cutting mode and gas consumption during oxygen and gas-electric cutting. As a result of the training, you will be able to perform: a manual arc, plasma, gas welding, automatic and semi-automatic welding of articles made of sectional steel, non-ferrous metals and alloys, pipelines made of carbon steels; oxygen plasma straight-line and curvilinear cutting in various positions of metals, parts made of carbon and alloy steels, non-ferrous metals and alloys.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	225
7.	4.1.08		Vocational	As a result of the training, you will know: the arrangement of used welding	Youth and adults	from 1	200
		welder on	courses	machines, semi-automatic devices, plasma torches and power supply equipment;		month	

		automatic and semi- automatic machines		the properties and purpose of welding materials; the main types of welded seams control; the rules for setting welding modes according to specified parameters. As a result of the training, you will be able to perform: automatic and semi- automatic gas-shielded welding of parts and assemblies made of carbon and structural steels using a continuous electrode wire; automatic and mechanized welding of assemblies, parts, structures and pipelines made of carbon and structural steels using a plasma torch; building-up of simple and medium complexity parts and assemblies.	Employees of organizations, enterprises Teachers, masters of industrial training		
8.	4.1.09	Mechanized priming, painting, rough puttying, grinding when performing finishing painting works in construction and repair. Methods and techniques for working with equipment	Vocational courses	As a result of the training, you will know: the types of airless application devices, their features, technical characteristics by the example of Storch, Hayvest devices; the types of guns and nozzles for various equipment and materials; the types and kinds of consumables and component parts; the techniques for applying primer, paint and putty; the techniques for smoothing putty with two-handed Storch putty knifes; the techniques for various types of putty. As a result of the training, you will be able to: choose the type and kind of apparatus, components and consumables for performing a specific type of painting work (priming, painting, rough puttying, grinding); perform a high-quality application of primer, paint, putty with airless application devices (Airless), perform a high-quality grinding of putty in a mechanized way.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 day	90
9.	4.1.10	Training in safe working methods and techniques of on "TYPHOON" universal road repair unit	Vocational courses	As a result of the training, you will know: the purpose, main characteristics, principle of operation of "Typhoon" universal road repair unit; BIS-310M-01 machines for patching asphalt concrete pavements; the characteristics of the main materials and mechanisms used. As a result of the training, you will be able to: correctly inspect and ensure a safe work on "Typhoon" universal road repair unit and BIS-310M-01 asphalt patching machine.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 day	40
10.	4.1.11	Performance of welding and soldering works for joining products made of metals and polymers	Vocational courses	As a result of the training, you will be able to perform: socket and butt-seam welding of polymer pipes; soldering of copper pipes with soft solders; mechanized welding of plates and pipes.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 day	100
11.	5.1.05	Planning the configuration of washrooms,	Vocational courses	As a result of the training, you will know: the arrangement and principle of operation of sanitary systems in washrooms; the installation rules of water supply,	Students of secondary specialized / higher	from 1 day	150

		taking into account the joint work of the components		sewerage and ventilation systems for their optimal operation; the norms and requirements for drinking water; the sanitary equipment used for washrooms. You will be able to select the optimal operation of sanitary systems and plan the arrangement of washrooms.	education institutions, young scientists Employees of organizations, enterprises Teachers, masters of industrial training		
12.	6.1.01	Electrician for repair and maintenance of electrical equipment	Vocational courses	As a result of the training, you will be able to: perform work at power plants, transformer electrical substations; conduct an audit of transformers, switches, disconnectors and drives to them; regulate the load of electrical equipment installed in the serviced area; carry out maintenance and repair of solar and wind power plants with capacity over 50 kW; repair, inspect and maintain electrical equipment with disassembly, assembly, adjustment and maintenance of electrical appliances, electromagnetic, magnetoelectric and electrodynamic systems; lay cable connections and wiring; charge batteries; check the markings of simple wiring and schematic circuit diagrams; identify and eliminate failures, malfunctions and damage to electrical equipment with simple switching circuits.	Students of secondary specialized / higher education institutions, young scientists Employees of organizations, enterprises Teachers, masters of industrial training	from 1 day	130
13.	6.1.02	Electrician for repair and maintenance of electrical equipment	Vocational courses	As a result of the training, you will be able to: perform work at power plants, transformer electrical substations; conduct an audit of transformers, switches, disconnecting switches and drives to them; regulate the load of electrical equipment installed in the serviced area; carry out maintenance and repair of solar and wind power plants with capacity over 50 kW; repair, inspect and maintain electrical equipment with disassembly, assembly, adjustment and maintenance of electrical appliances, electromagnetic, magnetoelectric and electrodynamic systems; lay cable connections and wiring; charge batteries; check the markings of simple wiring and schematic circuit diagrams; identify and eliminate failures, malfunctions and damage to electrical equipment with simple switching circuits.	Youth and adults	from 1 month	170
14.	7.1.01	Working with OKO-2 Georadar	Vocational courses	As a result of the training, you will know: a georadar operation principles and use specification. You will be able to perform search for local objects, engineering structures investigation and data processing.	Youth and adults	from 1 year	140
15.	7.1.02	Working with Trimble S6 Robotic Tachometer	Vocational courses	As a result of the training, you will know: a tachometer operation principles and use specification; a tachometer installing rules at the observation site, taking readings; technologies for setting out the design of engineering structures; the rules and procedure for conducting control checks of the constructions' horizontal and vertical position. You will be able to a range of field works with a tachometer; carry out geodetic preparation of the facilities project and works when setting out the project.	Youth and adults Students of secondary specialized / higher education institutions, young scientists	from 1 week	140

16.	7.1.03	Working with Trimble Dini M3 Tachometer	Vocational courses	As a result of the training, you will know: a tachometer operation principles and use specification; a tachometer installing rules at the observation site, taking readings; technologies for setting out the design of engineering structures; the rules and procedure for conducting control checks of the constructions' horizontal and vertical position. You will be able to a range of field works with a tachometer; carry out geodetic preparation of the facilities project and works when setting out the project.	Employees of organizations, enterprises Youth and adults Students of secondary specialized / higher education institutions, young scientists Employees of organizations,	from 1 week	125
17.	7.1.04	Working with Trimble Dini Digital Level	Vocational courses	As a result of the training, you will know: a level operation principles and use specification; the rules for installing a level at the observation site, taking readings; technologies for setting out the design of engineering facilities. You will be able to: keep to a range of field rules and structures' position checking procedure; carry out geodetic preparation of the facilities project and works when setting out the project	enterprises Youth and adults Students of secondary specialized / higher education institutions, young scientists Employees of organizations, enterprises	from 1 week	125
18.	7.1.05	Working with ZDL 700 Digital Level	Vocational courses	As a result of the training, you will know: a level operation principles and use specification; the rules for installing a level at the observation site, taking readings; technologies for setting out the design of engineering facilities. You will be able to: keep to a range of field rules and structures' position checking procedure; carry out geodetic preparation of the facilities project and works when setting out the project	Youth and adults Students of secondary specialized / higher education institutions, young scientists Employees of organizations, enterprises	from 1 week	125
19.	7.1.06	Geodetic Data Processing in Credo_DAT Programme	Vocational courses	As a result of the training, you will know: the methods and techniques for automated processing of geodetic measurements; the features of the field data collection technology and field coding capabilities in CREDO. You will be able to use modern computer technologies, CREDO software tools for processing field geodetic measurements and creating a digital terrain model for engineering purposes	Youth and adults Students of secondary specialized / higher education institutions, young scientists	from 1 week	120

20.	7.1.07	Top-Road Bridges Diagnostics	Vocational courses	As a result of the training, you will know: the main stages of the top-road bridges diagnostics. You will be able to determine the strength characteristics of the bridge structural elements using ONIKS-2.6 appliance, the presence and depth of cracks using Pulsar-2.1 appliance, the probability of reinforcement corrosion in reinforced concrete elements using ARMcor-1 appliance, the location and diameter of reinforcing bars, as well as the size of the concrete cover using Profometr PM-600 appliance, processing of the obtained data during the measurement.	Employees of organizations, enterprises Youth and adults Students of secondary specialized / higher education institutions, young scientists Employees of organizations, enterprises	from 1 week	195
21.	4.2.01	Bricklayer	Retraining	This educational programme will allow you, having a labour qualifications, to be retrained in a new blue-collar occupation. As a result of the educational programme mastering, you will be competent in: laying and repairing masonry structures of buildings; foundation; assembly of precast concrete and reinforced concrete structural elements; installation of window and door frames and blocks; installation of partition walls made of bricks and various slabs.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	130
22.	4.2.02	Painter	Retraining	As a result of the training, you will know: the arrangement and operation rules of the equipment used (spray guns, compressors, oil-water separators, etc.); the ways of preparing surfaces for various classes of finishes; methods of coloring products made of various materials; the modes of drying (polymerization) of paint and varnish coatings; the requirements for the preparation of building structures' surfaces and products for painting and gluing. As a result of the training, you will be able to perform: application of paints and varnishes on the surface of parts and products; cleaning of painted surfaces from corrosion, scale, fouling, old paintwork using hand-held electric and pneumatic tools; puttying, grinding puttied surfaces, priming and painting with a brush, roller, a paint sprayer; making simple stencils; selection of color according to given samples.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	90
23.	4.2.03	Adjuster of sanitary- engineering systems and equipment	Retraining	As a result of the training, you will know: the types and purpose of sanitary- engineering materials and equipment; the grades of pipes, fittings, adapter fittings, plumbingware and fasteners; the purpose of bench work tools; the methods of measuring the diameter of pipes, fittings, plumbingware and leak-proofing materials. As a result of the training, you will be able to: dismantle individual pipeline units (during installation); install and seal fixtures for appliances and pipelines; complete pipes and adapter fittings of the dropping pipes; perform installation of	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	130

				a water supply, heating, sewerage system using metal and polymer pipes; install and connect sanitary-engineering and heating appliances.			
24.	4.2.04	Worker for complex maintenance and repair of buildings and structures	Retraining	As a result of the training, you will know: the fundamentals of repair and construction works and methods of their implementation; types of materials; purpose and arrangement of tools, fixtures, machines, mechanisms and equipment in the course of work. As a result of the training, you will be able to perform: a periodic inspection of the technical condition of the maintained buildings, structures, equipment and mechanisms, their maintenance and routine repairs with the implementation of various types of repair and construction works (plastering, painting, wallpapering, concreting, carpentry, joinery, etc.); routine repairs and maintenance of central heating systems, water supply, sewerage, gas supply, drain sewage system, heat supply, ventilation, air conditioning and other equipment, mechanisms and structures with performance of plumbing, soldering and welding works; installation, dismantling and routine repairs of electrical systems and electrical equipment with performance of electrical works.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	140
25.	4.2.05	Electrician for repair and maintenance of electrical equipment	Retraining	As a result of the training, you will know: the arrangement and principle of operation of maintained electric motors, generators, switchgear equipment, electrical networks and electrical appliances, oil switches, fuses, electric contactors, batteries, controllers, mercury and silicon rectifiers, other electrical equipment and electrical appliances; the design and purpose of starting and control devices; the methods for high voltage wires replacing, splicing and soldering. As a result of the training, you will be able to perform: load leveling of electrical equipment; the repair, charging and installation of explosion-proof fittings; making off, splicing, insulation and soldering of wires and cables with voltage over 1000 V; maintenance and repair of solar and wind power plants with capacity over 50 kW; repair, inspection and maintenance of electrical equipment with performing the tasks of disassembly, assembly, adjustment and maintenance of electrical appliances.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	130
26.	4.2.06	Electric and gas welder	Retraining	As a result of the training, you will know: the arrangement of serviced electric welding and plasma cutting machines, gas welding equipment, automatic machines, semi-automatic devices and a plasma torch; the requirements for the weld and surfaces after air planing; the methods for selecting electrode grades depending on steel grades; the rules for preparing parts and assemblies for welding and sealing; the basic technological methods of welding and surfacing of parts made of various steels, cast iron, non-ferrous metals and alloys; the cutting mode and gas consumption during oxygen and gas-electric cutting. As a result of the training, you will be able to perform: a manual arc, plasma, gas welding, automatic and semi-automatic welding of articles made of sectional steel, non-ferrous metals and alloys, pipelines made of carbon steels; the oxygen plasma straight-line and curvilinear cutting in various positions of metals, parts made of carbon and alloy steels, non-ferrous metals and alloys.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	140

27.		Electric welder on automatic and semi- automatic	Retraining	As a result of the training, you will know: the arrangement of used welding machines, semi-automatic devices, plasma torches and power supply equipment;	Youth and adults	from 1 month	130
			d	the properties and purpose of welding materials; the main types of control of welded seams; the rules for setting welding modes according to specified parameters.	Employees of organizations, enterprises		
		machines		As a result of the training, you will be able to perform: automatic and semi- automatic gas-shielded welding of parts and assemblies made of carbon and structural steels using a continuous electrode wire; automatic and mechanized welding of assemblies, parts, structures and pipelines made of carbon and	Teachers, masters of industrial training		
				structural steels using a plasma torch; building-up of simple and medium complexity parts and assemblies.			
28.	4.3.01	Bricklayer	Advanced training	This educational programme will allow you, having a blue-collar occupation "Bricklayer", to improve your labour qualifications. As a result of the educational programme mastering, you will be competent in: laying and repairing masonry structures of buildings; foundation; assembly of precast concrete and reinforced concrete structural elements; installation of window and door frames and blocks; installation of partition walls made of bricks and various slabs.	Youth and adults Employees of organizations, enterprises	from 1 month	100
					Teachers, masters of industrial training		
29.	4.3.02	Painter	Advanced training	As a result of the training, you will know: the arrangement and operation rules of the equipment used (spray guns, compressors, oil-water separators, etc.); the ways of preparing surfaces for various classes of finishes; the methods of coloring products made of various materials; the modes of drying (polymerization) of paint and varnish coatings; the requirements for the preparation of building structures' surfaces and products for painting and gluing.	Youth and adults Employees of organizations, enterprises	from 1 month	60
				As a result of the training, you will be able to perform: application of paints and varnishes on the surface of parts and products; cleaning of painted surfaces from corrosion, scale, fouling, old paintwork using hand-held electric and pneumatic tools; puttying, grinding puttied surfaces, priming and painting with a brush, a roller, a paint sprayer; making simple stencils; selection of color according to given samples.	Teachers, masters of industrial training		
30.	4.3.03	Adjuster of sanitary- engineering systems and equipment	Advanced training	As a result of the training, you will know: the types and purpose of sanitary- engineering materials and equipment; the grades of pipes, fittings, adapter fittings, plumbingware and fasteners; the purpose of bench work tools; the methods of measuring the diameter of pipes, fittings, plumbingware and leak-proofing materials. As a result of the training, you will be able to: dismantle individual pipeline units (during installation); install and seal fixtures for appliances and pipelines; complete pipes and adapter fittings of the dropping pipes; perform the installation of a water supply, heating, sewerage system using metal and polymer pipes; install and connect sanitary-engineering and heating appliances.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 2 weeks	100

31.	4.3.05	complex maintenance and repair of	complex maintenance and repair of buildings andtraining construction works and methods of their implementation; the types of materials the purpose and arrangement of tools, fixtures, machines, mechanisms and equipment in the course of work. 	complex training maintenance and repair of		Youth and adults Employees of organizations, enterprises	from 1 month	110
		structures		the technical condition of the maintained buildings, structures, equipment and mechanisms, their maintenance and routine repairs with the implementation of various types of repair and construction works (plastering, painting, wallpapering, concreting, carpentry, joinery, etc.); routine repairs and maintenance of central heating systems, water supply, sewerage, gas supply, drain sewage system, heat supply, ventilation, air conditioning and other equipment, mechanisms and structures with performance of plumbing, soldering and welding works; installation, dismantling and routine repairs of electrical systems and electrical againment with performance of algoritical works.	Teachers, masters of industrial training			
32.	4.3.06	Electrician for repair and maintenance of electrical equipment	Advanced training	equipment with performance of electrical works. As a result of the training, you will know: the design and principle of operation of maintained electric motors, generators, switchgear equipment, electrical networks and electrical appliances, oil switches, fuses, electric contactors, batteries, controllers, mercury and silicon rectifiers, other electrical equipment and electrical appliances; the design and purpose of starting and control devices; methods for high voltage wires replacing, splicing and soldering. As a result of the training, you will be able to perform: load leveling of electrical equipment; repair, charging and installation of explosion-proof fittings; making off, splicing, insulation and soldering of wires and cables with voltage over 1000 V; maintenance and repair of solar and wind power plants with capacity over 50 kW; repair, inspection and maintenance of electrical equipment with performing the tasks of disassembly, assembly, adjustment and maintenance of electrical appliances.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	100	
33.	4.3.07	Electric and gas welder	Advanced training	As a result of the training, you will know: the arrangement of serviced electric welding and plasma cutting machines, gas welding equipment, automatic machines, semi-automatic devices and a plasma torch; the requirements for the weld and surfaces after air planing; the methods for selecting electrode grades depending on steel grades; the rules for preparing parts and assemblies for welding and sealing; the basic technological methods of welding and surfacing of parts made of various steels, cast iron, non-ferrous metals and alloys; the cutting mode and gas consumption during oxygen and gas-electric cutting. As a result of the training, you will be able to perform: a manual arc, plasma, gas welding, automatic and semi-automatic welding of articles made of sectional steel, non-ferrous metals and alloys, pipelines made of carbon steels; oxygen plasma straight-line and curvilinear cutting in various positions of metals, parts made of carbon and alloy steels, non-ferrous metals and alloys.	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	110	
34.	4.3.08	Electric welder on	Advanced training	As a result of the training, you will know: the arrangement of used welding machines, semi-automatic devices, plasma torches and power supply equipment;	Youth and adults	from 1 month	100	

		automatic and semi- automatic machines		the properties and purpose of welding materials; main types of control of welded seams; the rules for setting welding modes according to specified parameters. As a result of the training, you will be able to perform: automatic and semi- automatic gas-shielded welding of parts and assemblies made of carbon and structural steels using a continuous electrode wire; automatic and mechanized welding of assemblies, parts, structures and pipelines made of carbon and structural steels using a plasma torch; building-up of simple and medium complexity parts and assemblies.	Employees of organizations, enterprises Teachers, masters of industrial training		
35.	4.5.01	Industrial and civil construction. Construction and operation of buildings and structures	Secondary vocational education	Qualification: construction technician	Youth and adults Employees of organizations, enterprises Teachers, masters of industrial training	from 1 month	1650
36.	4.5.02	Equipment and technology of welding production	Secondary vocational education	Qualification: construction technician	Youth and adults	from 1 year	1650
37.	7.5.01	Industrial and civil construction (production activity)	Secondary vocational education	Upon completion of the training programme, the qualification of a construction technician is awarded. You will know: the classification of construction materials, their properties, scope of use, rules for acceptance and storage; the structures of civil, industrial and agricultural buildings and the basics of their design; the classification and mechanical-and-physical properties of soils; the fundamentals of foundations calculation; the geodetic instruments and pegging-out in the construction of buildings and structures; the types and purpose of the main construction machines, equipment and mechanized tools.	Youth and adults Students of secondary specialized / higher education institutions, young scientists Employees of organizations, enterprises	from 1 week	1650