**Annotation of the programme**

**18.05.02 Chemical technology of modern energetics materials**

**(specialist programme)**

**Title of the programme:** Chemical technology of nuclear fuel cycle materials.

**Objectives of the programme:** providing basic humanitarian, social, economic, mathematical, natural-science and professional knowledge; specialists' training for successful work in the chosen field of the activity having the universal, subject and specialized competences promoting their professional activity and stability in the labour market.

**Terms of education**: at the full-time department – 5 years 6 months.

**Speciality chair:** Chemistry and technology of modern energetics materials (№ 10).

**Professional spheres:** development, design and operation of technological processes and equipment for material extraction of nuclear and fuel cycle from natural and technogenic raw materials; processing of spent nuclear fuel and radioactive waste; separation of easy elements isotopes and their application; radiation stability research of materials and radiochemical processes in coolants of nuclear power plants; development and operation of analytical control and radiation safety methods in installations connected with atomic energy use.

**Objects of the professional activity:** ores, concentrates and secondary raw materials containing uranium, zirconium, radioactive elements, rare metals of nuclear designation, natural and technogenic raw materials containing isotopes of easy elements, technological processes of their extraction, concentration and purification.

**Curriculum features:** subjects for graduates' training are provided in the curriculum for the following types of professional activity: production and technological, organizational and administrative, scientific and research, design.

Main basic and special subjects of the programme are a foreign language; mathematics; physics; informatics; bases of economics and production management; general, analytical, physical, organic and inorganic chemistry; chemistry of rare scattered and radioactive elements; engineering and computer graphics; nuclear power materials; processes and devices of chemical technology; technology of main materials of modern power and radiation safety basis; radiochemistry, equipment of rare elements productions, chemical reactors, radiochemical processing of irradiated nuclear fuel, modern problems of nuclear technology and others.

Specialists of such an activity are demanded and have competitive appeal.

**The list of enterprises for the practical training and graduates’ employment:** JSC "Engineering Plant", Electrostal; JSC "Novosibirsk Plant of Chemical Concentrates", Novosibirsk; JSC "Priargunsky Mining and Chemical Works", Krasnokamensk; JSC "Siberian Chemical Plant", Seversk; JSC "NIOST", Tomsk; JSC "Tomsk Petrochemical Plant", Tomsk; JSC "Mining and Chemical Combine", Zheleznogorsk; Seversk and Tomsk enterprises.