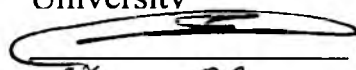


Educational Establishment
“Belarusian State Economic University”

APPROVED

First Vice-Rector of Educational
Institution “Belarus State Economic
University”

 E. Kireeva
«24» 06 2022
Registration № 5240-22/yz

HUMAN LIFE SAFETY

The Curriculum of the Educational Institution of Higher education in academic
discipline for the specialty

1-25 01 08 Accounting, analysis and audit (majors in)

1-25 01 03 World Economy

1-26 02 03 Marketing

The curriculum was compiled on the basis of a standard plan (registration number TD.0.4.006/type 2013).

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RECOMMENDED FOR APPROVAL BY

The Department of Physical Chemistry of Materials and Production Technologies of the educational establishment "Belarusian State Economic University" (Protocol No. 10, 11.05 2022);

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EXPLANATORY NOTE

The purpose of studying the discipline is to form a culture of life safety of future specialists based on a system of social norms, values and attitudes that ensure the preservation of their life, health and performance in conditions of constant interaction with the environment.

— mastering by students of the system of knowledge, skills, activities and rules of conduct aimed at forming the ability to prevent the impact of harmful and dangerous environmental factors or minimize its consequences for the preservation of life and health and ensuring normal living conditions;

— formation of a conscious and responsible attitude to health and life as enduring values; acquisition of skills in providing first aid to those affected in emergency situations, in case of accidents at work and at home in the presence of a threat to their lives before the arrival of an ambulance;

— mastering a set of knowledge about rational nature management and environmental protection, ways to achieve sustainable ecological and economic balance and measures to prevent environmental problems of the Earth's geospheres;

— development of the ability to exercise control over the rational use of thermal and electrical energy, to prevent its loss, to promote the introduction of energy-saving technologies in the production team and in everyday life.

The students will obtain **the knowledge of:**

– monitoring systems, methods of forecasting emergencies and measures to prevent them;

– ways of human survival and the conceptual foundations of the functioning of the economy in emergency situations;

– structure, tasks, functions of the state emergency prevention and response system and the civil defense system;

– fundamentals of human radiation safety and its survival in conditions of radioactive contamination;

– possible consequences for the economy of the country of emergency situations characteristic of the Republic of Belarus;

– the main instruments of the state environmental policy of the Republic of Belarus;

– economic mechanism of environmental protection and nature management;

the introduction of energy-saving technologies in the production team and in everyday life;

– theoretical foundations of occupational health, safety and fire safety;

- fundamental legislative and regulatory technical acts in the field of occupational safety and their application;
- principles of rationing and prevention of harmful and dangerous production factors;
- priority directions of energy saving in various spheres of public production.

The students will obtain **the ability to:**

- use methods of forecasting and assessing the situation in an emergency;
- work with dosimetric, chemical and environmental control devices, as well as with other equipment used in the monitoring and laboratory control network;
- to act correctly in emergency situations and make appropriate decisions;
- to carry out ecological and economic analysis and necessary calculations of economic indicators of anthropogenic impact on the environment, economic assessment of natural resources;
- to use the acquired knowledge and skills in further practical activities in order to ensure the implementation of the tasks of greening socio-economic development facing society;
- comply with workplace safety requirements, organize work on labor protection in structural divisions;
- to monitor compliance with the rules of labor protection and fire safety at workplaces, in structural divisions and in the course of work;
- to draw up local regulatory legal acts on labor protection (regulations on the duties of officials, instructions on labor protection, instructional programs, etc.);
- to use the principles of energy conservation in their practical activities;
- to carry out rationing and accounting of energy consumption in production;
- to carry out a technical and economic assessment of energy-saving measures;
- to carry out a technical and economic assessment of energy-saving measures.

The students will obtain **the skills in:**

- skills in carrying out measures to prevent emergencies;
- the content of the discipline "Without survival skills in emergency situations of peacetime and wartime";
- skills in carrying out measures to ensure the safety of the functioning of economic facilities in man-made, natural, environmental and biological-social emergencies;
- skills in the use of collective and individual protection against harmful and

dangerous industrial factors, primary fire extinguishing means;

– modern methods of energy efficiency and energy conservation management.

The safety of human life provides a relationship with such academic disciplines as "Economics of environmental management", "Protection of the population and facilities from emergency situations. Radiation safety".

Classroom work with students involves lecturing, conducting practical classes. The control of students' knowledge is carried out as a result of a survey, verification of solutions to economic situations, conducting intermediate control work.

The course takes the total of 102 academic hours, 68 of which are devoted to in-class activities. In-class activities include 34 academic hours of lecturing, 26 academic hours of practical, 8 academic hours of laboratory. The end-of-the-course assessment takes the form of a credit.

THE SYLLABUS

Topic 1. PROTECTION OF THE POPULATION AND FACILITIES FROM EMERGENCIES

1.1 The concept of emergencies, their classification and brief description. Definition of the concept of "emergency". Classification of natural and man-made emergencies depending on the territorial distribution, the amount of material damage, the number of people affected. The state system of prevention and liquidation of emergencies. Civil Defense of the Republic of Belarus. Notification of citizens about emergencies. Technical means of notification, equipment and means of informing officials.

Types of emergency warning signals and civil defense signals used the procedure for the population to act when receiving signals. The procedure for the actions of employees of organizations and the population in emergencies of a natural and man-made nature, in case of terrorist acts.

1.2 Training of the population in the field of protection from natural and man-made emergencies, civil defense. The rights and obligations of citizens in the field of protection from emergencies. Organization of training of personnel of organizations in the field of protection from natural and man-made emergencies, civil defense. Classification of natural emergencies by origin, their sources, causes of occurrence, brief description. Natural emergencies in the Republic of Belarus. Dangerous factors of natural emergencies.

1.3 Ensuring fire safety at industrial and civil facilities. Definition of the term "fire safety". Legislation of the Republic of Belarus in the field of fire safety. Fire safety systems (fire prevention system, fire protection system) and organizational and technical measures. Responsibilities of managers, employees of organizations and citizens in the field of fire safety. Training of officials, employees and citizens in fire safety rules. Planning of fire prevention measures. Ensuring fire safety during the operation of household electrical appliances. Fire and explosion prevention during operation of household gas equipment.

1.4 Ensuring safety in case of fires in buildings. The main causes of fires at industrial and civil facilities. Conditions that contribute to the occurrence of fires in the housing stock. Fire hazards.

1.5 The procedure for citizens' actions in case of fires in buildings. The procedure for the actions of managers, officials, employees and citizens in the event of a fire in industrial and civil buildings. Features of behavior in case of fire in multi-storey buildings, including buildings of elevated storeys. Primary fire extinguishing means. Purpose of technical means of fire protection. Rules for evacuation of people in case of fire.

1.6 Ensuring the safety of passenger transportation services on public transport. Legislation of the Republic of Belarus in the field of organization of safe transportation of passengers by public transport. Rights and obligations of the driver and passenger of public transport. Fire safety systems for urban automobile and electric (tram, trolleybus, metro) public transport. Organizational and technical measures, automatic fire extinguishing installations.

1.7 Procedure for passengers in case of dangerous accidents. The procedure for the actions of passengers of public urban transport (tram, trolleybus, bus) in case of an accident (collision, rollover, etc.). Recommendations for the actions of citizens in case of fire, the smell of smoke and burning in urban automobile and electric (tram, trolleybus, metro) public transport.

1.8 Prevention of emergencies at chemically hazardous facilities. Definition of the concept of "chemically hazardous object". Ensuring the safe operation of chemically hazardous facilities. Classification of organizations and territories by degrees of chemical hazard. Brief description of the most common hazardous chemicals (ammonia, chlorine, hydrogen cyanide).

1.9 The content of chemical protection measures. The main measures to prevent emergencies at chemically hazardous facilities. Organization and composition of chemical protection measures. Personal protective equipment to protect the human body when working in chemically hazardous conditions and in case of chemical contamination of the area.

1.10 Conditions requiring first aid. Measures to revitalize the body in case of respiratory and circulatory arrest. Definition of the concept of "first aid". A list of conditions requiring first aid. General principles of first aid to the affected in emergencies. Determination of signs of human life in the absence of consciousness. Respiratory and circulatory arrest. The concept of clinical death. The sequence of measures to revitalize the body. Measures to restore and maintain the patency of the respiratory tract. Mouth-to-mouth artificial respiration, closed heart massage.

1.11 First aid in case of electric shock, lightning. The effect of electric current on the human body. Factors affecting the outcome of electric shock. Local damage caused by exposure to electric current. The concept of electric shock. The sequence and content of first aid measures. Methods of releasing the affected person from the effects of electric current, personal safety measures. Features of damage by atmospheric electricity (lightning) during thunderstorms.

1.12 First aid for flame burns, frostbite, drowning. Flame burns, the sequence and content of first aid measures. Frostbite, first aid measures. Drowning. Types of drowning, features of first aid in case of true drowning.

1.13 First aid for wounds, external bleeding, and bone fractures. The basic rules and techniques of applying bandages. Features of first aid for penetrating chest wounds, rules for applying a sealing bandage. First aid measures for penetrating abdominal wounds. Temporary stop of external bleeding (finger pressure of the artery, pressure bandage, maximum flexion of the limb in the joint, application of a hemostatic tourniquet, etc.). Fractures, their types, features. Ensuring the immobility of limb bones in fractures with the help of improvised means.

Topic 2. RADIATION SAFETY

2.1 Radio ecological situation in the Republic of Belarus after the Chernobyl disaster. Analysis of the causes of the disaster, its development and elimination. The direction of the spread of the radioactive cloud and the nature of radioactive contamination of the territories of the Republic of Belarus. Radionuclide composition of precipitation. The half-life and a brief description of the main radionuclides. The division of territories into zones depending on the density of contamination with radionuclides. The Republic of Belarus is a zone of national radiation ecological disaster because of the Chernobyl disaster. Assessment of the economic damage caused to the country by the Chernobyl disaster.

2.2 Biological effects of ionizing radiation on the human body. The effect of various types of ionizing radiation on the body. Sensitivity of organs and tissues to the effects of ionizing radiation. The concept of the threshold level of radiation dose. Deterministic and stochastic effects of ionizing radiation on the body. Psychological problems related to the real or subjectively perceived danger of radiation exposure.

2.3 The main measures to protect the population from radiation exposure in case of accidents at nuclear power plants. Legislation of the Republic of Belarus in the field of radiation safety. Basic principles of radiation safety. Classification of measures to protect the population from synthetic radiation because of accidents at nuclear power plants. Urgent measures to protect the population: evacuation, decontamination of people, shelter, respiratory protection, blocking of the thyroid gland (iodine prophylaxis). Recommendations for limiting the consumption of potentially contaminated with radionuclides of food products. Long-term measures to protect the population: resettlement, protective measures in the agro-industrial complex, rehabilitation measures. Radiation monitoring and food control system.

2.4 Radiation control of the area and food. Development of practical skills of working with the device "Pine". Purpose and device of the device, preparation of the device for operation, operating procedure. Conclusions about the contamination of the studied surface and products.

2.5 Assessment of the radiation situation. Dosimeter RKS-107. Purpose and device of the device, operating procedure. Determination of surface contamination, volume (specific) activity of radionuclides in food products.

Topic 3. **FUNDAMENTALS OF ECOLOGY**

3.1 Earth's climate change. Destruction of the ozone layer. The impact of natural processes and anthropogenic activities on global climate change on the planet. The main technogenic sources of greenhouse gas emissions (carbon dioxide, methane, etc.) into the Earth's atmosphere. The essence of the "greenhouse effect". Direct and indirect effects of global warming on human health. The main reasons for the decrease in the total number of ozone molecules in the stratosphere. The state of the ozone layer at the current stage and the consequences of its destruction for human health.

3.2 Pollution of the air basin and the waters of the World Ocean and its impact on human health. Natural and anthropogenic sources of troposphere pollution. The main chemical elements and compounds polluting the atmospheric air, their role in the development of human diseases. Environmental problems of the use of fossil energy resources. Photochemical smog. Ways to solve the problem of environmental problems of the atmosphere in the world and in the Republic of Belarus. Anthropogenic sources of chemical pollution of rivers, lakes and reservoirs, influence human health.

3.3 The main polluting components of indoor air, their sources and role in the development of human pathology. Sources of chemical pollution of indoor air. Natural gas and its combustion products, influence human health. Tobacco smoke is the most powerful polluting component of the indoor environment. Biological factors of the indoor environment (micro-fungi, micro-mites, etc.), their impact on human health. Methods and means of improving the air environment of residential and industrial premises.

3.4 Environmental problems of nutrition. The main sources and consequences of drinking water pollution. Toxic chemical compounds formed during cooking. Metals whose content is controlled in international food trade. Substances used in agriculture (pesticides, growth stimulants of agricultural plants and animals, etc.), a role in human pathology. Sources of chemical and radioactive contamination of drinking water (nitrates, heavy metals, radon), consequences for human health.

3.5 Determination of the concentration of nitrate ions in food and water. Nitratometer PIAN-01. Purpose and device of the device. Preparation of the device for operation, electrodes for operation, the order of operation. Calibration

procedure. Determination of the concentration of nitrate ions, registration of the report.

3.6 Environmental problems of the use of natural resources and environmental protection. General characteristics of minerals of the Republic of Belarus. The Code of the Republic of Belarus on Subsoil. Ecological consequences of anthropogenic use of national natural resources. Organization of an environmental monitoring system and protection of natural resources. National Environmental Monitoring System (NSMOS). International activities of the Republic of Belarus in the field of environmental protection.

Topic 4. BASICS OF ENERGY SAVING

4.1 Energy and its types. Traditional methods of obtaining thermal and electrical energy. Energy sources. Fossil fuels, their characteristics and reserves in the Republic of Belarus. Energy, its types, advantages of electric energy. Traditional sources of electric energy: thermal (TPP), water flow energy (HPP), nuclear energy (NPP). Environmental problems of using traditional energy sources.

4.2 Unconventional and renewable energy sources. Brief description of unconventional energy sources (solar, wind, ocean tidal energy, geothermal energy). Environmental aspects of wind and hydropower development. The concept of bioenergy. The use of biomass energy in the world and in the Republic of Belarus. Biogas, the role of technology in solving global environmental problems.

4.3 Regulation, accounting and control over the consumption of thermal and electrical energy. Energy saving in everyday life. Definition of the concept of "energy saving". Legislation of the Republic of Belarus in the field of energy conservation. Automated energy management systems. Household appliances for regulating and accounting for consumed energy resources. Energy saving in residential premises and buildings, ways to reduce heat losses. Thermal modernization of buildings as one of the directions of energy saving. Improving the efficiency of heating systems. Rational use of electrical energy in everyday life.

Topic 5. LABOR PROTECTION

5.1 Legislation of the Republic of Belarus in the field of labor protection. Ensuring protection against dangerous and harmful production factors. Definition of the concept of "labor protection". The main directions of the state policy in the field of labor protection in the Republic of Belarus.

The Law of the Republic of Belarus "On Labor Protection". The right of an employee to labor protection. Obligations of the employer to ensure labor protection. The rights of the employer in the field of labor protection. Duties of an

employee in the field of labor protection. Instructions on labor protection. Responsibility for violation of labor protection legislation. The concept of hazardous and harmful production factors, their classification and brief description.

Safety of excavation and construction works in everyday life (labor safety during excavation, concrete and reinforced concrete, insulation, stone, finishing, installation works; safety of work at height, when using stairs, platforms, ladders, fences, using manual machines and tools, personal protective equipment of workers).

5.2 Prevention of AIDS and drug addiction. Social factors affecting the spread of HIV. Prevention of HIV infection. Prospects for specific HIV prevention. What is drug addiction? The effect of drug addiction on the human body. Causes of drug addiction. Prevention of drug addiction.

5.3 Protection from non-ionizing electromagnetic radiation. The main methods and means of protection against non-ionizing electromagnetic radiation. Natural and artificial sources of non-ionizing electromagnetic radiation. Biological effect of electromagnetic fields. The concept of electrical sensitivity of the human body. The main methods and means of protection against non-ionizing electromagnetic radiation. Mobile telephony as a source of radiation, measures to reduce the impact on the human body.

5.4 Research of working conditions at workplaces, in industrial premises. The purpose of the luxmeter Yu-116, the device and preparation of the device for operation, the order of operation. Purpose of the device NOISE-1M-30. The device, preparation for work and the order of work.

5.5 Protection against electric shock. Definition of the concept of "electrical safety". Dangerous and harmful effects of electric current on the human body. The most common causes of electric shock. Classification of premises according to the degree of danger of electric shock. Organizational and technical measures to ensure electrical safety. Technical methods and means of protection against accidental contact with live parts. Insulating protective equipment (basic and additional). Rules of electrical safety in the operation of household electrical appliances and electrical products.

5.6 Protection from dangerous and harmful factors when working on a personal computer. Types of dangerous and harmful factors when working on a personal computer, their impact on human health. Basic requirements for the organization of the user's workplace. Requirements for visual ergonomic parameters. Advantages of liquid crystal monitors. Electrical safety requirements under normal operating conditions of the computer and in an emergency. Methods and means of protection against electromagnetic radiation, increased noise and

vibration when working on a personal computer. Prevention of visual fatigue, excessive static load.

**INSTRUCTIONAL DESIGN CHART OF THE COURSE "HUMAN LIFE SAFETY"
FOR ALL SPECIALTIES
(FULL-TIME, FIRST STAGE OF HIGHER EDUCATION)**

| Topic Number | Topic Title | Number of Academic Hours | | | | | | | Miscellaneous | Forms of control |
|--------------|---|--------------------------|-------------------|----------|---------------------|-----------------------|-----|-----|---------------|------------------|
| | | Lectures | Practical Classes | Seminars | Laboratory Sessions | Controlled Self-Study | | | | |
| | | | | | | Lct | Prc | Lab | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | Topic 1. Protection of the population and facilities from emergency situations | | | | | | | | | |
| 1.1 | The concept of emergency situations, their classification and brief description | 2 | | | | | | | [1,8] | |
| 1.2 | Training of the population in the field of protection from natural and man-made emergencies, civil defense | 2 | | | | | | | [1] | |
| 1.3 | Ensuring fire safety at industrial and civil facilities | 2 | | | | | | | [4] | |
| 1.4 | Ensuring safety in case of fires in buildings | 2 | | | | | | | [4] | |
| 1.5 | Procedure of actions of citizens in case of fires in buildings | | 2 | | | | | | [1] | |
| 1.6 | Ensuring the safety of passenger transportation services on public transport | 2 | | | | | | | [4] | |
| 1.7 | Procedure of actions of passengers in case of dangerous accidents | | 2 | | | | | | [4] | |
| 1.8 | Prevention of emergency situations at chemically hazardous facilities | 2 | | | | | | | [1] | |
| 1.9 | Content of chemical protection measures | | 2 | | | | | | [1] | |
| 1.10 | Conditions requiring first aid. Measures to revitalize the body in case of respiratory and circulatory arrest | 2 | | | | | | | [7] | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------|---|---|---|---|---|---|---|---|---------|--------------|
| 1.11 | First aid in case of electric shock, lightning | 2 | | | | | | | [7] | |
| 1.12 | First aid for flame burns, frostbite, drowning | | 2 | | | | | | [7] | |
| 1.13 | First aid for wounds, external bleeding, bone fractures | | 2 | | | | | | [7] | control work |
| | Topic 2. Radiation safety | | | | | | | | | |
| 2.1 | Radio ecological situation in the Republic of Belarus after the Chernobyl disaster | 2 | | | | | | | [4] | |
| 2.2 | Biological effects of ionizing radiation on the human body | 2 | | | | | | | [4] | |
| 2.3 | Basic measures to protect the population from radiation exposure in case of accidents at nuclear power plants | 2 | | | | | | | [4] | control work |
| 2.4 | Radiation monitoring of the area and food | | | | 2 | | | | [1,2] | |
| 2.5 | Assessment of the radiation situation | | | | 2 | | | | [12] | |
| | Topic 3. Fundamentals of ecology | | | | | | | | | |
| 3.1 | Earth's climate change. Destruction of the ozone layer | | 2 | | | | | | [1] | |
| 3.2 | Pollution of the air basin and the waters of the World Ocean and its impact on human health | | 2 | | | | | | [12-14] | |
| 3.3 | The main polluting components of indoor air, their sources and role in the development of human pathology | | 2 | | | | | | [3] | |
| 3.4 | Environmental problems of nutrition. The main sources and consequences of drinking water pollution | 2 | | | | | | | [3] | |
| 3.5 | Determination of the concentration of nitrate ions in food and water | | | | 2 | | | | [3] | |
| 3.6 | Environmental problems of the use of natural resources and environmental protection | 2 | | | | | | | [3,12] | |
| | Topic 4. Basics of energy saving | | | | | | | | | |
| 4.1 | Energy and its types. Traditional methods of obtaining thermal and electrical energy. Energy sources | 2 | | | | | | | [2,10] | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-----|---|-----------|-----------|---|----------|---|---|---|-------|--------------|
| 4.2 | Unconventional and renewable energy sources | 2 | | | | | | | [6] | |
| 4.3 | Regulation, accounting and control over the consumption of thermal and electrical energy. Energy saving in everyday life. | | 4 | | | | | | [2,6] | |
| | Topic 5. Labor protection | | | | | | | | | |
| 5.1 | Legislation of the Republic of Belarus in the field of labor protection. Ensuring protection against dangerous and harmful production factors | 2 | | | | | | | [5] | |
| 5.2 | Prevention of AIDS and drug addiction | 2 | | | | | | | [7] | |
| 5.3 | Protection against non-ionizing electromagnetic radiation | | 2 | | | | | | [13] | |
| 5.4 | Study of working conditions at workplaces, in industrial premises | | | | 2 | | | | [11] | |
| 5.5 | Protection against electric shock | | 2 | | | | | | [5] | |
| 5.6 | Protection from dangerous and harmful factors when working on a personal computer | | 2 | | | | | | [11] | control work |
| | | | | | | | | | | |
| | Total hours | 34 | 26 | | 8 | | | | | Test |

**INSTRUCTIONAL DESIGN CHART OF THE COURSE “HUMAN LIFE SAFETY”
FOR ALL SPECIALTIES**

(CORRESPONDENCE FORM OF STUDY, THE FIRST STAGE OF HIGHER EDUCATION)

| Topic Number | Topic Title | Number of Academic Hours | | | | | | | Miscellaneous | Forms of control |
|--------------|---|--------------------------|-------------------|----------|---------------------|-----------------------|-----|-----|---------------|------------------|
| | | Lectures | Practical Classes | Seminars | Laboratory Sessions | Controlled Self-Study | | | | |
| | | | | | | Lct | Prc | Lab | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | Topic 1. Protection of the population and facilities from emergency situations | | | | | | | | | |
| 1.1 | The concept of emergency situations, their classification and brief description | 2 | | | | | | | [1,8] | |
| 1.2 | Training of the population in the field of protection from natural and man-made emergencies, civil defense | | | | | | | | [1] | |
| 1.3 | Ensuring fire safety at industrial and civil facilities | | 2 | | | | | | [4] | |
| 1.4 | Ensuring safety in case of fires in buildings | | | | | | | | [4] | |
| 1.5 | Procedure of actions of citizens in case of fires in buildings | | | | | | | | [1] | |
| 1.6 | Ensuring the safety of passenger transportation services on public transport | 2 | | | | | | | [4] | |
| 1.7 | Procedure of actions of passengers in case of dangerous accidents | | | | | | | | [4] | |
| 1.8 | Prevention of emergency situations at chemically hazardous facilities | | | | | | | | [1] | |
| 1.9 | Content of chemical protection measures | | | | | | | | [1] | |
| 1.10 | Conditions requiring first aid. Measures to revitalize the body in case of respiratory and circulatory arrest | | | | | | | | [7] | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------|---|---|---|---|---|---|---|---|---------|--------------|
| 1.11 | First aid in case of electric shock, lightning | | 2 | | | | | | [7] | |
| 1.12 | First aid for flame burns, frostbite, drowning | | | | | | | | [7] | |
| 1.13 | First aid for wounds, external bleeding, bone fractures | | | | | | | | [7] | control work |
| | Topic 2. Radiation safety | | | | | | | | | |
| 2.1 | Radio ecological situation in the Republic of Belarus after the Chernobyl disaster | | | | | | | | [4] | |
| 2.2 | Biological effects of ionizing radiation on the human body | | | | | | | | [4] | |
| 2.3 | Basic measures to protect the population from radiation exposure in case of accidents at nuclear power plants | 2 | | | | | | | [4] | control work |
| 2.4 | Radiation monitoring of the area and food | | | | | | | | [1,2] | |
| 2.5 | Assessment of the radiation situation | | | | 2 | | | | [12] | |
| | Topic 3. Fundamentals of ecology | | | | | | | | | |
| 3.1 | Earth's climate change. Destruction of the ozone layer | | 2 | | | | | | [1] | |
| 3.2 | Pollution of the air basin and the waters of the World Ocean and its impact on human health | | | | | | | | [12-14] | |
| 3.3 | The main polluting components of indoor air, their sources and role in the development of human pathology | | | | | | | | [3] | |
| 3.4 | Environmental problems of nutrition. The main sources and consequences of drinking water pollution | | | | | | | | [3] | |
| 3.5 | Determination of the concentration of nitrate ions in food and water | | | | | | | | [3] | |
| 3.6 | Environmental problems of the use of natural resources and environmental protection | | | | | | | | [3,12] | |
| | Topic 4. Basics of energy saving | | | | | | | | | |
| 4.1 | Energy and its types. Traditional methods of obtaining thermal and electrical energy. Energy sources | | | | | | | | [2,10] | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-----|---|----------|----------|---|----------|---|---|---|---------|--------------|
| 4.2 | Unconventional and renewable energy sources | | | | | | | | [6] | |
| 4.3 | Regulation, accounting and control over the consumption of thermal and electrical energy. Energy saving in everyday life. | | | | | | | | [2,6] | |
| | Topic 5. Labor protection | | | | | | | | | |
| 5.1 | Legislation of the Republic of Belarus in the field of labor protection. Ensuring protection against dangerous and harmful production factors | | | | | | | | [5] | |
| 5.2 | Prevention of AIDS and drug addiction | | | | | | | | [7] | |
| 5.3 | Protection against non-ionizing electromagnetic radiation | | | | | | | | [13] | |
| 5.4 | Study of working conditions at workplaces, in industrial premises | | | | 2 | | | | [11-14] | |
| 5.5 | Protection against electric shock | | | | | | | | [5] | |
| 5.6 | Protection from dangerous and harmful factors when working on a personal computer | | | | | | | | [11] | control work |
| | | | | | | | | | | |
| | Total hours | 6 | 6 | | 4 | | | | | Test |

**INSTRUCTIONAL DESIGN CHART OF THE COURSE "HUMAN LIFE SAFETY"
FOR ALL SPECIALTIES
(FOR THE CORRESPONDENCE FORM OF HIGHER EDUCATION (SOKR. TERM.)
THE FIRST STAGE OF HIGHER EDUCATION)**

| Topic Number | Topic Title | Number of Academic Hours | | | | | | | Miscellaneous | Forms of control |
|--------------|---|--------------------------|-------------------|----------|---------------------|-----------------------|-----|-----|---------------|------------------|
| | | Lectures | Practical Classes | Seminars | Laboratory Sessions | Controlled Self-Study | | | | |
| | | | | | | Lct | Prc | Lab | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | Topic 1. Protection of the population and facilities from emergency situations | | | | | | | | | |
| 1.1 | The concept of emergency situations, their classification and brief description | | | | | | | | [1,8] | |
| 1.2 | Training of the population in the field of protection from natural and man-made emergencies, civil defense | 2 | | | | | | | [1] | |
| 1.3 | Ensuring fire safety at industrial and civil facilities | | | | | | | | [4] | |
| 1.4 | Ensuring safety in case of fires in buildings | | 2 | | | | | | [4] | |
| 1.5 | Procedure of actions of citizens in case of fires in buildings | | | | | | | | [1] | |
| 1.6 | Ensuring the safety of passenger transportation services on public transport | | | | | | | | [4] | |
| 1.7 | Procedure of actions of passengers in case of dangerous accidents | | | | | | | | [4] | |
| 1.8 | Prevention of emergency situations at chemically hazardous facilities | | | | | | | | [1] | |
| 1.9 | Content of chemical protection measures | | | | | | | | [1] | |
| 1.10 | Conditions requiring first aid. Measures to revitalize the body in case of respiratory and circulatory arrest | | 2 | | | | | | [7] | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------|---|---|---|---|---|---|---|---|---------|--------------|
| 1.11 | First aid in case of electric shock, lightning | | | | | | | | [7] | |
| 1.12 | First aid for flame burns, frostbite, drowning | | | | | | | | [7] | |
| 1.13 | First aid for wounds, external bleeding, bone fractures | | | | | | | | [7] | control work |
| | Topic 2. Radiation safety | | | | | | | | | |
| 2.1 | Radio ecological situation in the Republic of Belarus after the Chernobyl disaster | | | | | | | | [4] | |
| 2.2 | Biological effects of ionizing radiation on the human body | 2 | | | | | | | [4] | |
| 2.3 | Basic measures to protect the population from radiation exposure in case of accidents at nuclear power plants | 2 | | | | | | | [4] | control work |
| 2.4 | Radiation monitoring of the area and food | | | | | | | | [1,2] | |
| 2.5 | Assessment of the radiation situation | | | | 2 | | | | [12] | |
| | Topic 3. Fundamentals of ecology | | | | | | | | | |
| 3.1 | Earth's climate change. Destruction of the ozone layer | | | | | | | | [1] | |
| 3.2 | Pollution of the air basin and the waters of the World Ocean and its impact on human health | | | | | | | | [12-14] | |
| 3.3 | The main polluting components of indoor air, their sources and role in the development of human pathology | | | | | | | | [3] | |
| 3.4 | Environmental problems of nutrition. The main sources and consequences of drinking water pollution | | | | | | | | [3] | |
| 3.5 | Determination of the concentration of nitrate ions in food and water | | | | | | | | [3] | |
| 3.6 | Environmental problems of the use of natural resources and environmental protection | | | | | | | | [3,12] | |
| | Topic 4. Basics of energy saving | | | | | | | | | |
| 4.1 | Energy and its types. Traditional methods of obtaining thermal and electrical energy. Energy sources | | | | | | | | [2,10] | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-----|---|----------|----------|---|----------|---|---|---|---------|--------------|
| 4.2 | Unconventional and renewable energy sources | | | | | | | | [6] | |
| 4.3 | Regulation, accounting and control over the consumption of thermal and electrical energy. Energy saving in everyday life. | | 2 | | | | | | [2,6] | |
| | Topic 5. Labor protection | | | | | | | | | |
| 5.1 | Legislation of the Republic of Belarus in the field of labor protection. Ensuring protection against dangerous and harmful production factors | | | | | | | | [5] | |
| 5.2 | Prevention of AIDS and drug addiction | | | | | | | | [7] | |
| 5.3 | Protection against non-ionizing electromagnetic radiation | | | | | | | | [13] | |
| 5.4 | Study of working conditions at workplaces, in industrial premises | | | | | | | | [11-14] | |
| 5.5 | Protection against electric shock | | | | | | | | [5] | |
| 5.6 | Protection from dangerous and harmful factors when working on a personal computer | | | | | | | | [11] | control work |
| | | | | | | | | | | |
| | Total hours | 6 | 6 | | 2 | | | | | Test |

**INSTRUCTIONAL DESIGN CHART OF THE COURSE "HUMAN LIFE SAFETY"
FOR ALL SPECIALTIES**

**(FOR THE CORRESPONDENCE FORM OF HIGHER EDUCATION (SOCR. TERM OF STUDY ON THE BASIS OF
HIGHER EDUCATION) THE FIRST STAGE OF HIGHER EDUCATION)**

| Topic Number | Topic Title | Number of Academic Hours | | | | | | | Miscellaneous | Forms of control |
|--------------|---|--------------------------|-------------------|----------|---------------------|-----------------------|-----|-----|---------------|------------------|
| | | Lectures | Practical Classes | Seminars | Laboratory Sessions | Controlled Self-Study | | | | |
| | | | | | | Lct | Prc | Lab | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | Topic 1. Protection of the population and facilities from emergency situations | | | | | | | | | |
| 1.1 | The concept of emergency situations, their classification and brief description | 2 | | | | | | | [1,8] | |
| 1.2 | Training of the population in the field of protection from natural and man-made emergencies, civil defense | | | | | | | | [1] | |
| 1.3 | Ensuring fire safety at industrial and civil facilities | | | | | | | | [4] | |
| 1.4 | Ensuring safety in case of fires in buildings | | 2 | | | | | | [4] | |
| 1.5 | Procedure of actions of citizens in case of fires in buildings | | | | | | | | [1] | |
| 1.6 | Ensuring the safety of passenger transportation services on public transport | | | | | | | | [4] | |
| 1.7 | Procedure of actions of passengers in case of dangerous accidents | | 2 | | | | | | [4] | |
| 1.8 | Prevention of emergency situations at chemically hazardous facilities | | | | | | | | [1] | |
| 1.9 | Content of chemical protection measures | | | | | | | | [1] | |
| 1.10 | Conditions requiring first aid. Measures to revitalize the body in case of respiratory and circulatory arrest | | | | | | | | [7] | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------|---|---|---|---|---|---|---|---|---------|--------------|
| 1.11 | First aid in case of electric shock, lightning | | | | | | | | [7] | |
| 1.12 | First aid for flame burns, frostbite, drowning | | | | | | | | [7] | |
| 1.13 | First aid for wounds, external bleeding, bone fractures | | | | | | | | [7] | control work |
| | Topic 2. Radiation safety | | | | | | | | | |
| 2.1 | Radio ecological situation in the Republic of Belarus after the Chernobyl disaster | | | | | | | | [4] | |
| 2.2 | Biological effects of ionizing radiation on the human body | 2 | | | | | | | [4] | |
| 2.3 | Basic measures to protect the population from radiation exposure in case of accidents at nuclear power plants | 2 | | | | | | | [4] | control work |
| 2.4 | Radiation monitoring of the area and food | | | | | | | | [1,2] | |
| 2.5 | Assessment of the radiation situation | | | | 2 | | | | [12] | |
| | Topic 3. Fundamentals of ecology | | | | | | | | | |
| 3.1 | Earth's climate change. Destruction of the ozone layer | | 2 | | | | | | [1] | |
| 3.2 | Pollution of the air basin and the waters of the World Ocean and its impact on human health | | | | | | | | [12-14] | |
| 3.3 | The main polluting components of indoor air, their sources and role in the development of human pathology | | | | | | | | [3] | |
| 3.4 | Environmental problems of nutrition. The main sources and consequences of drinking water pollution | | | | | | | | [3] | |
| 3.5 | Determination of the concentration of nitrate ions in food and water | | | | | | | | [3] | |
| 3.6 | Environmental problems of the use of natural resources and environmental protection | | | | | | | | [3,12] | |
| | Topic 4. Basics of energy saving | | | | | | | | | |
| 4.1 | Energy and its types. Traditional methods of obtaining thermal and electrical energy. Energy sources | | | | | | | | [2,10] | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

| | | | | | | | | | | |
|-----|---|----------|----------|--|----------|--|--|--|---------|--------------|
| 4.2 | Unconventional and renewable energy sources | | | | | | | | [6] | |
| 4.3 | Regulation, accounting and control over the consumption of thermal and electrical energy. Energy saving in everyday life. | | | | | | | | [2,6] | |
| | Topic 5. Labor protection | | | | | | | | | |
| 5.1 | Legislation of the Republic of Belarus in the field of labor protection. Ensuring protection against dangerous and harmful production factors | | | | | | | | [5] | |
| 5.2 | Prevention of AIDS and drug addiction | | | | | | | | [7] | |
| 5.3 | Protection against non-ionizing electromagnetic radiation | | | | | | | | [13] | |
| 5.4 | Study of working conditions at workplaces, in industrial premises | | | | | | | | [11-14] | |
| 5.5 | Protection against electric shock | | | | | | | | [5] | |
| 5.6 | Protection from dangerous and harmful factors when working on a personal computer | | | | | | | | [11] | control work |
| | | | | | | | | | | |
| | Total hours | 6 | 6 | | 2 | | | | | Test |

METHODOLOGY OUTLINE

Methodological recommendations on the organization of independent work of students in the academic discipline "Human life safety"

In mastering the knowledge of the discipline, an important stage is the independent work of students. It is recommended to budget time for independent work on average 2-2.5 hours for a 2-hour classroom lesson.

The main directions of the student's independent work are:

- * initially a detailed introduction to the curriculum of the discipline;
- * familiarization with the list of recommended literature on the discipline as a whole and its sections, its availability in the library and other available sources, study of the necessary literature on the topic, selection of additional literature;
- * study and expansion of the lecturer's lecture material through special literature, consultations;
- * preparation for practical classes according to specially developed plans with the study of basic and additional literature;
- * preparation for the implementation of diagnostic forms of control (tests, test papers, oral surveys, etc.);
- * preparation for the test.

READING SOURCES (BOOKS IN RUSSIAN)

Main:

1. Balashenko, S. A. Environmental law: textbook for students of institutions of higher education in the specialties "Jurisprudence", "Economic law", "Political science (in areas)" / S. A. Balashenko, T. I. Makarova, V. E. Lizgaro. - 2nd ed., reprint. - Minsk : Higher School, 2021. - 398, [1] p. (Vulture RB) – (in Russian).

2. Bosak, V. N. Human life safety : textbook for students of institutions of higher education in the specialties of the profiles "Pedagogy", "Art and design", "Humanities", "Communications. Right. Economy. Management. Economics and organization of production" / V. N. Bosak, Z. S. Kovalevich. - Minsk : Higher School, 2016. - 335 p. : ill. (Vulture RB) – (in Russian).

3. Vershina, G. A. Labor protection : textbook for students of institutions of higher education in the areas of education "Economics and organization of production", "Transport" and "Transport activity" / G. A. Vershina, A.M. Lazarenkov. - Minsk : IVC of the Ministry of Finance, 2017. - 511 p. : ill. (Vulture RB) – (in Russian).

4. Gusentsov, A. O. Fundamentals of first aid / A. O. Gusentsov. - 5th ed. - Minsk : Amalfea, 2021. - 45 p. : ill. – (in Russian).

5. Basic safety measures and rules of conduct in natural, man-made and social emergencies: a manual for students of higher education institutions studying in the specialties of the profiles "Pedagogy", "Art and Design", "Humanities", "Communication. Right. Economy. Management. Economics and organization of production (except for the direction of education "Economics and organization of production")", "Social protection" / [V.I. Dunai et al.] ; Belarusian State University - Minsk : BSU, 2016. - 150, [1] p. (Vulture UMO) – (in Russian).

6. Labor protection : workshop : textbook for students of higher education institutions in agricultural specialties / [A.S. Alekseenko et al.]. - Minsk : IVC of the Ministry of Finance, 2017. - 189, [2] p. : ill. (Vulture RB) – (in Russian).

Additional:

7. Makatsaria, D. Yu. Human life safety : workshop : textbook for students of institutions of higher education in the specialties "Legal support of public security", "Legal support of operational investigative activities" / D. Yu. Makatsaria ; M-in internal affairs Rep. Belarus, UO "Mogilev Institute of Internal Affairs Rep. Belarus". - Mogilev : Mogilev Institute of the Ministry of Internal Affairs, 2017. - 187 p. : ill. (Vulture RB) – (in Russian).

8. Legal security in the territories of radioactive contamination: a textbook for students of institutions of higher education in the specialties "Political Science", "Jurisprudence", "Economic law" / [S. A. Balashenko et al.]; edited by S. A. Balashenko. - Minsk : Higher School, 2017. - 223 p. (Vulture RB) – (in Russian).

9. Prishchepa, I. M. Human life safety: a textbook for students of higher education institutions in the specialties of the profiles "Pedagogy", "Art and Design", "Humanities": [with QR codes and elements of augmented reality] / I. M. Prishchepa, V. A. Klyuev, A. N. Dudarev. - Minsk : Higher School, 2020. - 327, [1] p. : ill. (Vulture RB) – (in Russian).

10 Korzh, V. A. Labor protection : a textbook for training on labor protection of managers and employees of organizations of all forms of ownership and industry orientation in the system of vocational training, retraining and advanced training / V. A. Korzh, A.V. Frolov, A. S. Shevchenko ; under the general ed. of A.V. Frolov. - Moscow : KNORUS, 2016. - 424 p. - (Bachelor's degree. FGOS 3+) – (in Russian).

11. Melnikov, V. P. Life safety : textbook / V. P. Melnikov. — Moscow : COURSE : INFRA-M, 2022. — 400 p. - ISBN 978-5-906818-13-3. - Text : electronic. - URL: <https://znanium.com/catalog/product/1073011> (accessed: 30.03.2022). – Access mode: by subscription – (in Russian)..

12. Prudnikov, A. N. Design features of potentially dangerous objects: an educational and methodical manual / A. N. Prudnikov, V. F. Pozdnyakov. - Mogilev : Belarusian-Russian University, 2021. - 276 p. – (in Russian).

13. Prudnikov, S. P. Protection of the population and territories from emergency situations : textbook / S. P. Prudnikov, O. V. Sheremetova, O. A. Skrypnichenko. – 2nd ed., ispr. and add. - Minsk : RIPO, 2020. – 257 p. : ill., Table. – Access mode: by subscription. – URL: <https://biblioclub.ru/index.php?page=book&id=599795> (accessed: 30.03.2022). – Bibliogr. in the book – ISBN 978-985-503-981-6. – Text : electronic. – (in Russian).

14. Radiation and chemical safety : a textbook for students studying in the bachelor's degree 20.03.01 "Technosphere safety" / E. Yu. Guzenko, M. N. Shaprov, I. S. Martynov [et al.]. - Volgograd : FSBEI VO Volgograd State University, 2019. - 88 p. - Text : electronic. - URL: <https://znanium.com/catalog/product/1087881> (accessed: 30.03.2022). – Access mode: by subscription. – (in Russian).

CURRICULUM APPROVAL PROTOCOL

| Corresponding academic course title | Name of the Department | Suggested changes in the syllabus content | Decision taken by the department that developed the syllabus (date and protocol number) |
|-------------------------------------|--------------------------|--|---|
| Philosophy | Department of Philosophy | No changes <i>Dr. A. A. Fairbar</i> | Protocol No <u>10</u> dated <u>05.11.05.2022</u> |
| | | | |

CURRICULUM AMENDMENTS

| Number | Amendments to the curriculum | Amendment Rationale |
|--------|------------------------------|---------------------|
| | | |
| | | |
| | | |

The curriculum is reviewed and approved by the department _____

_____ (protocol number _____ , _____).

Name of the Department

Head of the Department

(Research degree, academic title)

(signature)

(Initials Surname)

APPROVED BY

Dean

(Research degree, academic title)

(signature)

(Initials Surname)