MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY

Occupational Safety and Physics Department
Engineering and Technology Faculty

MODULE SYLLABUS

Fundamentals of Occupational Safety and Health

Implemented in the “Veterinary medicine” Academic Program
Area of specialization H6 Veterinary medicine
at the first (bachelor's) level of higher education

Sumy-2025

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Module syllabus agreed at the Occupational Safety and Physics Department Meeting	Minutes No 11.06.2025р. .№ 10
	Head of Department _____ Svitlana Khursenko

Approved by:

Guarantor of the Academic program _ _____ _ ( )

Dean of the Faculty ( )

Syllabus review (attached) is provided by : (_)

(_)

Representative of the Department of Education Quality assurance, licensing and accreditation ( )

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Syllabus review data:

The academic year in which changes are made	The Academic program attachment number with changes description	Changes revised and approved		
		Minutes No and date of the department meeting	Head of Department	Guarantor of the Academic program

1. MODULE OVERVIEW

1.	Title	Fundamentals of Occupational Safety and Health			
2.	Faculty/Department	Engineering and Technology Faculty/ Occupational Safety and Physics Department			
3.	Type	selective			
4.	Program(s) to which module is attached (to be filled in for compulsory types)				
5.	Level of the National Qualifications Framework	6			
6.	Semester and duration of module	12			
7.	ECTS credits number	2,5			
8.	Total workload and time allotment	Directed study			Self-directed study
		Lectures	Practicals	Labs	
		2	-		43
9.	Type of control	credit			
10.	Language of instruction	English			
11.	Module leader	Khvorost T.V.			
12.	Module leader contact information	Occupational Safety and Physics Department, and the auditorium of the department 307m, khvorost.t83@gmail.com			
13.	Module description	The Basics of Occupational Health and Safety cover the theory and practice of protecting people from dangerous and harmful production factors, preserving safety and health during work. Provides general literacy in the field of safety: identification (recognition) of hazards, prevention of identified hazards by the mentioned concept of residual risk, and actions in emergencies.			
14.	Module aim	to train future specialists in skills and competencies to ensure effective management of labor safety and improve working conditions, taking into account the achievements of scientific and technical progress and international experience, as well as awareness of the inseparable unity of successful professional activity with mandatory compliance with all labor safety requirements.			
15.	Module Dependencies	is based on studied disciplines: physics, chemistry, life safety.			
16	The policy of academic integrity	Adherence to academic integrity in the course is based on the intra-university system of prevention and detection of academic plagiarism. The main requirements for the course include - links to sources of information in the case of the use of ideas, developments, statements, information;			

		providing reliable information about the results of their own educational (scientific, creative) activities, used research methods and sources of information. Verification of texts for uniqueness is carried out by the same means for all applicants. The applicant for higher education has the right to appeal the results of the assessment.
17	Link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=4012
	Key words	Hazard Identification, Risk Assessment, Personal Protective Equipment (PPE), Workplace Safety Standards, Occupational Diseases

1. CORRELATION BETWEEN MODULE LEARNING OUTCOMES (MLOs) AND PROGRAM LEARNING OUTCOMES (PLOs)

MLOs: On successful completion of the module the learner will be able to:	PLOs	**How assessed**
MLOs 1. Effectively use the provisions of regulatory and legal documents, and ratified international standards regulating working conditions in production. Use safety instructions in your activities, understand the level of responsibility for personal and collective safety, and the need for mandatory full implementation of all measures to guarantee occupational safety at workplaces		Discussion, group work Conducting a survey (testing)
MLOs 2. Implement safe technologies, choose optimal working conditions and modes, design and organize workplaces based on modern technological and scientific achievements in the field of occupational health and safety.		Discussion, group work
MLOs 3. Determine indicators of the microclimate of industrial premises, parameters of dustiness, and lighting of industrial premises and give an appropriate assessment of the impact of these parameters on the human condition, determine the general impact of sanitary and hygienic working conditions on the worker's body and prescribe possible measures to prevent their harmful effects.		Testing, defense of practical work
MLOs 4. To take care of personal and collective safety and to be aware of the necessity of mandatory implementation in full of all measures to guarantee labor safety at workplaces.		Conducting a survey (testing)

3. MODULE INDICATIVE CONTENT

Topics	Distribution of hours			Learning resources
	Directed study		Self-directed study	
	Lectures	Practicals		
Topic 1. The importance of safety and health Technological change, the risks, society's response, occupational safety and health			6	[1, 4]
Topic 2 Fundamental concepts and terms Why safety, Accidents, Injuries, and Losses, Accidents Defined, Incidents and Accidents, Types of Losses, unsafe acts and unsafe conditions, incident–injury relationships, incident, cost relationships, incident and accident theories, domino theory, multiple factor theories, energy theory, errors in management systems, single-factor theories, preventive strategies, severity, cost, combinations, the three es of safety, how safe is safe enough	2		6	[1, 4, 5]
Topic 3 General Principles Of Hazard Control Hazards and hazard control defined, Sources of hazards, Planning and Design, Communication, Principles of hazard control, Knowledge and Recognition of Hazards, Eliminate the Hazard, Reduce the Hazard, Eliminate the Hazard, Reduce the Hazard, Safety Devices, Warning Devices, Procedures ,Personal Protective Equipment, Environmental hazards, Effects, Information Requirements, Hazard Recognition, Instrumentation and Measurement, Hazard control models, First Aid and Emergency Action			6	[1, 5]
Topic 4 Visual Environment Illumination, Illumination and Lighting, Hazards, Color, Color and Safety, Color Standards, Signage, Signage and Safety, Signage Standards,			6	[1, 4, 5]
Topic 5 Fire protection and prevention Methods for controlling combustion and extinguishing fires, Products of combustion and their hazards ,Behavior of fire, General movement of hot gases and smoke, Vertical movement, Smoke produced, Fire hazards of			6	[1,5,6]

materials, Flammable and combustible liquids, Other materials, Identification of hazards of materials, Fire safety in buildings, Fundamentals site planning and accessibility, Separation of structures, Building construction, Structural integrity, Confinement, Fire load, Fire spread, Life safety, Human behavior in fires, General principles of life safety,				
Topic 6. A Comparative Legal Study of the European Union and China. General Principles and Legislative Aims. Detailed Norms and Open Norms. The Role of the Actors in Law Making. The Employer. Workers' Representatives. Enforcement Tools. Workers' Representatives.			6	[2]
Topic 7. First Aid Managing an incident. Action at an emergency,traffic incidents, fires, electrical incidents, water incidents, major incidents. Wounds and bleeding. Bone, joint and muscle injuries. Effects of heat and cold. Life-saving priorities. CPR for an adult.			7	[3]
Total	2		43	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
MLO 1	Teaching lecture material. Show examples of problem solving in lectures. Discussion, Brainstorming Work on practical classes. Conducting a survey (testing). Consultations	0,5	elaboration of lectures, performance of tasks which performance is begun at a practical lessons, study of material for independent work	11
MLO 2	Teaching lecture material. Show examples of problem solving in lectures. Discussion, Brainstorming Work on practical classes. Conducting a survey (testing). Consultations	0,5	elaboration of lectures, performance of tasks which performance is begun at a practical lessons, study of material for independent work	11
MLO 3	Teaching lecture material. Show examples of problem solving in lectures. Discussion, Brainstorming Work on practical classes. Conducting a survey (testing). Consultations	0,5	elaboration of lectures, performance of tasks which performance is begun at a practical lessons, study of material for independent work	11
MLO 4	Teaching lecture material. Show examples of problem solving in lectures. Discussion, Brainstorming Work on practical classes. Conducting a survey (testing). Consultations	0,5	elaboration of lectures, performance of tasks which performance is begun at a practical lessons, study of material for independent work	10

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

No	Summative assessment methods	Grades	Deadline
Autumn semester			
1.	Survey / Testing on processed topics	25	5, 9,14 week
2.	Multiple choice test	10	10
3.	Essay	15	15 week
	Total	50	

5.2.2. Grading criteria

Summative assessment method	Unsatisfactory	Satisfactory	Good	Excellent
Survey / Testing on processed topics	<14 Grades	15-17 Grades	18-21 Grades	22-25 Grades
	<60% correct answers	60-74 % correct answers	75-89 % correct answers	90-100 % correct answers
Multiple choice test	<4 Grades	5-6 Grades	7-8 Grades	9-10 Grades
	<60% correct answers	60-74 % correct answers	75-89 % correct answers	90-100 % correct answers
Essay	<7 Grades	7-10 Grades	10-13 Grades	14-15 Grades
	Task not completed	Most requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue	All requirements of the task are fulfilled	All requirements of the task are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered

5.3. Formative assessment

Formative exercises are designed to enable students to develop particular aspects of their learning, prior to summative assessments. Formative exercises are designed to help students use feedback and self-reflection to manage and develop their learning so that they can see how to improve their work.

No	Formative Assessment elements	Date
1.	Passing tests on midterm survey and modules, with feedback from the teacher	according to the schedule of the educational process
2.	Verbal feedback from the teacher during classes	during classes
3.	Consultations, verbal feedback from the teacher during working on Essay.	during classes
4.	Survey / Testing on processed topics (multiple choice test)	5, 9,14 week

Self-assessment can be used both an element of formative and summative assessment.

6. LEARNING RESOURCES

1. Mark A. Friend and James P. Kohn. (2023), Fundamentals of occupational safety and health. 8th ed. 569 p. Available at: https://boilersinfo.com/fundamentals-of-occupational-safety-and-health-8th-edition-2023/
2. Kai Liu (2018), Protection of Health and Safety at the Workplace A Comparative Legal Study of the European Union and China. 233 p. Available at: https://boilersinfo.com/protection-of-health-and-safety-at-the-workplace/
3. First Aid Manual Revised 10th Edition The Authorised Manual of St John Ambulance, St Andrew's First Aid and the British Red Cross. 290p. Available at: https://boilersinfo.com/first-aid-manual-revised-10th-edition/
4. Guidelines for Process Safety Knowledge Management. (2024) American Institute of Chemical Engineers New York, NY Available at: https://boilersinfo.com/guidelines-for-process-safety-knowledge-management/
5. Roger L. Brauer, (2006), Safety and Health. 2nd ed.,733 p.
6. Jeremy Stranks (2006)Health and Safety Pocket Book 1st ed. 458 p.
7. John Ridley (2008) Health and Safety in brief. 4th ed. 329 p.
8. http://www.ilo.org/global/lang--en/index.htm Офіційний сайт International Labour Organization